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ORIGINAL LECTURES.

LECTURES ON SOME MEDICAL SUBJECTS.

By F. C. SKEY, F.R.S.,
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Gentlemen,—Circumstances have limited my opportunities of instruction. I purpose in the few lectures I shall deliver to discuss such principles of Medicine as may prove useful to you, which involve the essence, if I may so term it, of Medical and Surgical practice, and the assent to and adoption of which appear to my judgment indispensable to success in the treatment of disease. If these principles are based on error, you will readily detect it, and they will present themselves as so many rocks and shoals in your future career to be avoided as dangerous. If sound, you will approve and adopt them. I adopt them because I am satisfied, theoretically, they are based on sound views of the animal economy; and practically I find them in a pre-eminent degree more successful in the treatment of disease, than that founded on the more generally adopted principles, which refer so large a proportion of examples to what is termed *inflammation* and its supposed consequences.

It is a prevailing error among the unthinking members of our Profession which refers all examples of redness of vessels to inflammation. No term can be more inappropriate. The ancient definition of inflammation is founded on truth, and will hold true to the end of time; but it is rendered absurd by the practice of the modern school. In the too frequent employment of the name we forget the conditions essential to it. The arterial and capillary systems perform their healthy functions so long only as they retain the normal influence of the nerves supplying them, whether locally or generally. If the supply of nervous influence fails, the capillary system of a part loses its healthy tone, and the vessels locally dilate. At the same time they lose the power of propulsion, and there arises of necessity a local remora or arrest of the circulation, and, as a matter of course, the part becomes red. Is this inflammation? Yes, in the judgment of many, it is termed a form or variety of inflammation, not strict or positive, but inflammation of an asthenic type, although it fails in three of the four conditions essential to true inflammation, and exhibits redness only, wanting pain, heat, and swelling.

Now these examples of local congestion or plethora of vessels are yet in the present day confounded with true inflammation, and are treated by what we term antiphlogistic agents — viz., general and local bleeding, purgatives, diaphoretics, and the suspension of food. True inflammation is not so commonly seen as you may imagine; and inasmuch as local redness does not involve all the required signs of heat, redness, pain, and swelling which that state requires, it cannot be true inflammation, and there is no difficulty in proving that the treatment usually adopted in true inflammatory diseases is especially objectionable and injurious in this. There is another variety of so-called inflammation, in the mouths of a large number of us called chronic; what it means is somewhat difficult to define, but we employ it rather to conceal a difficulty than to expound it. There are two principles on which this congested condition of the blood-vessels may be treated—

1. Blood may be taken locally; the system may be lowered by salines, as they are termed, by purgatives and diaphoretics. This treatment by local depletion would lead to the inference that the blood is at fault and should be removed.

2. The blood in these vessels may be forced onwards by giving increased action to the heart, by the resort to agents that tend to restore the healthy tonic condition, or, at all events, to give force to the capillary system of the affected part. This latter is termed the tonic treatment of disease—a principle, I consider, based on a sound view of the functions of the animal economy, and which formed the staple of my treatment during the period in which I was attached to this Hospital as Surgeon, and for many years prior. If this principle be sound, treatment by depletion in any form must be an error, and therefore injurious, and that it is injurious I have not a doubt. I can speak with some confidence, for I have tried both. In the history of the human mind there is no operation more difficult than that of divesting it of early impressions inculcated by authority and confirmed and established by time. Convictions increase in strength as we get older, for the habit of examining the one side of a question only, and of conforming to all its requirements, has assumed a settled, permanent form, and with the multitude engaged in the practice of our Profession there is no adequate motive to enter on a path of inquiry which may tend to unsettle the convictions of their past lives. Some fifteen years since I had a succession of cases of severe congestion—that is, redness, not inflammation—accompanying wounds caused by operations, cases of mammary cancer or other tumours removed by the knife, amputations, hernia, etc. These cases exhibited on the third or fourth day congestion of the vessels around the wound, which often extended and led to abscesses, and occasionally to death. It was called erysipelas, having the feature of redness only in common with that disease; but it was not erysipelas: in truth, it was a far more formidable condition. I ordered every patient after undergoing any serious operation, treatment by stimulants. I gave two tablespoonsful of brandy and two of water every four hours, to be continued for one, two, or more days. From that date I never lost a patient from this cause, and rarely did any unhealthy condition of the affected region present itself.

Now observe this feature in the treatment by stimulants. If these examples of local congestion of the blood-vessels partook of the nature of inflammation, you, I am sure, will concur with me in considering this treatment a blunder. If stimulants be inadmissible in the treatment of inflammation, the treatment should have proved injurious. This it did not do, but, on the contrary, effected early and curative results; therefore the disease was not that of inflammation. What is true of the local is equally true of the general.

The late Mr. Jones, of Jersey, was a remarkably successful operator, and in reference to his cases of operation for the excision of joints (considered to be diseased) he operated on a succession of more than twenty-five without the loss of a single case, while in England at the same date the mortality was always great, recovery being rather the exception, and not the rule. What was the secret of this? Was it fresher air, or different management? I made the inquiry, and learnt that Mr. Jones invariably gave every patient on whom he operated at least a pint of port wine on each of the two days following the operation, and he acknowledged to me that he owed the treatment which had been attended with such remarkable results, to his observation of the success that had attended my treatment in St. Bartholomew's Hospital. I have found this combined tonic and stimulating treatment eminently successful, and so convinced am I of its value that, if I were told it had been less successful in the hands of others, I should feel assured it had never been fairly tried. In no disease is the application of this principle more valuable than in every variety of abscess, whether chronic or acute, and especially perhaps the latter. Let us take a common example. In two or three weeks after her confinement a lady has a milk abscess. You are called to attend her, and on examination you find a firm lump in the substance of the breast, involving perhaps one-third of its circumference. It is painful and heavy. The diagnosis is clear enough; it is the induration of an incipient abscess. What is your treatment? I will tell you. You think you can disperse it. Impossible. You order two or three grains of calomel with some colocynth or other purgative; you follow this up with salines, a class of drug that I consider more than any other displays the vacillation and uncertainty of the Practitioner; and you order leeches, about eight or ten in number, and warm fomentations and poultices to be applied to the breast. All these remedies are resorted to under the impression that you can obtain absorption of this solid mass. But the attempt fails: it always has failed; it always must fail; and yet it is nearly always attempted. Doubtless the leeches relieve the pain of distension, and that is all; but this good does not counterbalance the injurious effects consequent on the loss of blood required in the body for the most important of purposes. At the Examination Board of the College of Surgeons, this question as to the treatment of the early stage of a mammary abscess has been for years a critical question of mine. The reply has been invariably "leeches, fomentations, poultices, purgatives, salines." Does this reply indicate more of knowledge or of ignorance? Such is our Profession among the multitude, deny it who can Now, before I tell you what is right to be done, let me make a remark or two in passing. This lady's condition is marked by great debility. You will find on inquiry either that she had a "hard time," as it is called, that she lost blood largely during the birth of her child, or that subsequently to her confinement she has been the subject of some debilitating cause, such as diarrhœa, loss of food, or fatigue of body or mind, or some other depressing influence has drawn largely on her physical strength. It is owing to this depressing influence that she is the subject of this painful disease. Had the weakness not existed, she would have escaped milk abscess.

You do not find milk abscess or any other form of abscess in a person of vigorous circulation. It is the product of weakness, whether constitutional or the result of accident. For evidence of the truth of this fact, examine her pulse. Is it firm? Will it bear the pressure of the finger without stopping it? Is it moderate in the number of its beats? Is it at or under 70? No; it is at 80, or 90, or more; it is weak, easily compressed by the finger; it may be large, and full, and rounded, or it may be small; but be it one or the other, it is stopped by slight additional pressure of the finger. Either the blood is deficient in quantity, or the heart fails in power—probably both. And in this condition of the system, with indications of debility perfectly palpable before you, you appeal to the great British panacea for four-fifths of all diseases, and you prescribe for your patient calomel and colocynth, leeches, salines, and fomentations. Then, in my capacity of examiner, I generally proceed thus—Very well; and now tell me on what principle and for what purpose you administer these agents. Let us begin with the calomel. What object have you in view? To regulate the secretions. What secretions? The liver. What has the secretion of the liver to do with an abscess of the breast? Do you necessarily infer disordered liver because the mammary gland is the seat of abscess? Can any opinion be more irrational? I often marvel at the wonderful faith exhibited by Medical men in the influence of these "secretions," as though the liver, the most inoffensive organ in the whole body, was the centre or focus of all its maladies. Well! the calomel and the other depressing agents do their work, and what are the consequences? The patient is weaker; whatever nourishment remained in the body is taken from it. The supply of food is arrested. Salines follow, and draw on the circulation yet more positively, and there remains the tumour as at first. The pulse is now 90 or 100, and weaker. The appetite for food is gone, and in order to obtain sleep, which is incompatible with her present condition of weakness, you are compelled to resort to sedatives at night. Against these troubles which have interrupted the natural progress of the malady the constitution struggles, and in due course of time the mass suppurates, but not healthily. It softens in the centre only, and points, and you puncture it. The quantity of matter that escapes is small in proportion to the solid mass it leaves behind, and weeks elapse before this patient is restored to health.

Such is briefly the history of an ordinary case of mammary abscess; the practice adopted is general, though happily for humanity not invariable, and I protest, as a Hospital Surgeon whose opportunities of observation have not been inconsiderable, against such principles of treatment as irrational and preposterous, which arrest the functions of Nature in her attempt to bring this disease to an early and curative crisis, by the adoption of a false and radically unsound doctrine of the old school of Medicine, that all diseases partake of the character of inflammation, and are controlled by depletive agents. Now let us take another view of this subject; examine the evidence closely and think for yourselves. Your first object is to look for the cause of disease. If you find by inquiry and observation that mammary abscess prevails only in weakly persons as I have stated, that the subjects have been ill-fed or are in impaired health, that they have a weak pulse and bad appetite for food, what treatment would you select, supposing that in such a weakly condition of the health no abscess existed? Would you not adopt a tonic treatment? Would you not administer wine and bark and nutritious food, even though, true to your early impression, you threw in an occasional aperient under the title of an alterative? Well, then, can the presence of incipient abscess of the breast, itself a mere symptom with many others, and which owes its existence to debility and debility alone, as the primary cause—can the presence of mere abscess justify you in the adoption of remedies which tend to increase the very evil you are endeavouring to counteract? You want to give strength, and you add to the weakness. You would not prescribe calomel without the abscess; why do you prescribe it with abscess? You may reply that you hope to carry off the abscess by purgation. But this is a delusion. What ground have you for hoping to carry off the abscess by purgation? Have you observed one single example in the course of years in which the employment of calomel, etc., has cured, or even reduced in size, an abscess of the breast? No! You have not seen it, nor will you see it until Nature abandons her own laws to oblige you. Now, gentlemen, if you could see this picture as I have sketched it, you would shrink from the folly that prevails so largely in the Profession on this matter. You may argue in justification that you have attended lectures on the practice of Surgery, and that you have been taught it. Very probably you have; but who taught the lecturers? Believe me, the sooner you unlearn these errors the better both for your patients and your own credit, and for the honour of our Profession.

Presuming these principles to be unsound, however generally adopted, for that is no conclusive evidence in their favour, let us now consider the subject from an opposite point of view.

I assume a state of debility at starting. If you doubt my title to do so, observe and inquire. Inquire of men largely engaged in the practice of midwifery, Are strong and healthy, or are weakly, women more liable to mammary abscess during lactation? You will receive but one reply. If, then, weakness prevail in the system so universally before the occurrence of the abscess, there is no escaping the inference that the weakness is *the cause* of the abscess, for you do not meet with cases of abscess in strong, healthy women, but it selects for its victims the poor, ill-fed, and impoverished. One of the worst cases I ever saw was that of a young woman in St. Bartholomew's Hospital whose husband struggled to support a family of seven persons on about as many shillings a week. This woman was confined with twins, which she half nourished on a daily allowance of half a pint of bad beer, and for which misery the funds of St. Bartholomew's Hospital duly did penance. You see, then, distinctly enough both *cause* and *effect*. The cause is debility—the effect is abscess, commencing in a deposit of a large mass of coagulated fibrin. Now, which do you select for treatment, the cause of the disease or the effect? If the effect, you leave the cause untouched for the production of another abscess. It is quite true that under some exceptional circumstances, by reason of an urgent necessity, we are compelled to direct our remedial powers against effects which imperil important structures, and even life itself; but that necessity does not hold in the case of a mammary abscess, which is an evil on a smaller scale. Should we not consider the abscess as a mere symptom of debility in common with other symptoms, such as a weak pulse, a hot skin, loss of appetite and sleep, constipated bowels, headache, if it exist, etc.? And would you for a moment think of treating these symptoms individually? No. Then why treat the abscess, itself a mere symptom, and most especially when such treatment, itself essentially and radically false to the principles of sound pathology, drives you to the resort to remedies which, while they aggravate the evil of the cause by reducing the strength to a yet lower level, leave the effect untouched? Is this wisdom or folly?

Now let me ask this important question—Can any evil result to the constitution from leaving the abscess alone? I mean, as a local affection, can it do harm? I do not refer to it as a source of constitutional irritation—that is an evil which calls for aid—but is it probable that the health can suffer from its absorption, supposing such a local change possible? Assuredly not. Then it is obvious that the local affection which cannot be got rid of by the means suggested, or by any other means that the ingenuity of man has yet discovered, should be let alone, and that the influence of the curative art should be directed to the constitutional health as the primary cause of the derangement.

And here, in all humility and in the candid acknowledgment of our impotence to deal with disease excepting through the hand of Nature, let us look to the real philosophy of our art and throw ourselves on her ample resources for such aid as man cannot command, but which Nature is always willing to afford. Let us endeavour to restore the constitution to that condition of health and vigour it possessed before the crisis occurred which led to all this mischief, and, depend upon it, in obedience to a great law of Nature, which takes cognisance of all disease with a view to remove it when removable, you will find your tumour gradually disappear, or it will pass quickly through those changes essential to recovery, whether by gradual absorption or by rapidly formed but limited suppuration, the one or the other alternative depending on the early or late resort to rational treatment.

This treatment is essentially tonic in its character. Its object, as I have above stated, is the employment of such medicinal and dietetic agents as tend to restore the constitution to a condition of health and vigour. This is all we can pretend to do, and, rely upon it, Nature will do the rest. I do not say exclude all local treatment. Doubtless a few leeches may relieve the pain, and fomentations or poultices may in some slight degree contribute to the same end; but these agents are not, critically speaking, curative—they palliate symptoms only—and as pain is an evil, and itself, when severe, a source of prostration, the Surgeon may justly combat it by such remedies as do not draw on the circulation and thus reduce the vital powers of the body.

There are two agents, in addition to good nourishment, especially applicable to the treatment of a case of this kind—bark and wine. There is an inferior class of remedies, but of the same character, such as bitter infusions — cascarilla, gentian, and the like, and the varieties of infusions of malt. There is no comparison between the virtues of the two classes, but as poor persons cannot afford wine, they may afford good beer, of which the strongest is the most efficient; but among medicaments cinchona bark has no rival. In all cases of abscess bark is invaluable. It promotes suppuration when suppuration is inevitable, and it checks suppuration in the exhausting action of chronic abscess. It promotes appetite, and gives vigour to the system beyond any other known tonic, and it is only on this principle that it carries our patients rapidly through the different stages of disease. I prefer the simple tincture of bark, and I recommend you to administer it in full doses of from one to three drams twice a day. For adults I generally recommend a dessert-spoonful, and not less, and I have not observed that its employment in such doses demands the corrective influence of either purgative or alterative medicine; but on the contrary, as I refer any temporary torpidity of the actions of the alimentary canal to the want of that vigour of system, and to that only, which the bark is capable of correcting, so as a rule, subject of course to occasional exceptions, I leave the bowels alone. I have a very limited faith in the cathartic system. In this I know I am un-English; but I am content to live under the obloquy. On the subject of wine I have no intention of entering on the question how far alcohol is a source of strength or of nutrition. As an ingredient in the diet scale of the invalid, it is indispensable; and there is a very important rule of conduct as regards its administration, the knowledge of which I am most anxious to impress on your minds, and which involves a principle that cannot fail to obtain your concurrence on a closer observation of the nature of disease and the remedies pertinent to it. The prominent rule I allude to is this:—Administer wine or alcohol in quantity regulated by its effects on the system, and not in any fixed quantity determined by usage. A gentleman with a weak pulse is told by his Physician to take wine freely, and he indulges in a bottle of claret at and after dinner, and by so doing he considers himself to have obeyed the injunction of his Medical adviser. Now, I shall select port wine as the standard by which I regulate the advice I give under the above circumstances; and I am of opinion that for the purposes of health three glasses of wine is the maximum quantity that, taken at any one time, can be serviceable. All beyond this answers the purpose of luxury and nothing more, and is more or less injurious. Suppose a person of abstemious habits takes a glass of wine, being much fatigued from exercise, how long will he continue to feel the benefit of it? Possibly, at the outside, two hours or less. The wine did good service at the time; but the effect has passed entirely away. If this person be subject to a renewal of the fatigue, he can take a second glass at the expiration of two hours on the same conditions, and so on. He has in his fatigue the equivalent to disease, and he takes the restorative—with this result, that, having consumed five or six glasses of wine, he is not conscious, judging from his sensations, that he has taken any. If this law be founded in truth, I say administer wine frequently in moderate quantities, or in immoderate quantities if they are required. You can judge for your patient what quantity he can take and what he requires, and I say unhesitatingly, when required, the more he takes the better and the sooner he will be well, which, I presume, is the object to be attained. Judge the quantity of wine then required by its effects, and do not administer it in given quantities. I consider wine indispensable in the tonic treatment of disease. It should be administered in moderate quantities at short intervals. If too short, the effect of the wine will prove cumulative, and reaction will follow. The art of administering alcohol, whether in the form of wine or brandy, is learnt by observation of its effects on each individual; and be assured of this, that the quantity consumed with impunity, be it large or small, is the gauge of its want by the system of that person.

During the last forty years the treatment of disease has undergone great and important changes, and up to a later date the use of wine was very exceptional. I do not overstate the case when I affirm that within the period I have mentioned the consumption of wine and brandy in the London Hospitals has increased fourfold; and I may here relate an anecdote which confirms the above statement. It has, I believe, been before published, but I deem it right to bring it again under your notice. In the year 1848 the treasurer of the Hospital commented on the quantity of wine I ordered for my patients. He said the Hospital could not warrant the large expense. I inquired the number of patients—550; and the wine consumed was three pipes per annum. I told the worthy treasurer that the consumption of wine quite surprised me; that I could not understand how my colleagues could manage their cases, for that I could not treat Hospital cases without wine; and I assured the treasurer I would do my best, for the credit of the Hospital, to raise the consumption of port wine from three pipes a year up to thirteen, and that nothing less would satisfy me or my convictions. Twelve years elapsed, when I was again addressed by the successor of the then treasurer on some matters connected with the diet scale of the Hospital. On inquiry into the consumption of port wine, he appealed to the Apothecary, who, referring to his wine book, announced the quantity annually consumed to be thirteen pipes! I was on the previous occasion the great delinquent, but now, as the treasurer declared, "You are all nearly equally bad, although *you* still head the list." And the same change in the treatment prevails more or less in every Hospital in London. Although this employment of stimulants and tonics at the expense of depletive agents has become so prominent a feature in modern practice, it does not appear to have exercised much influence on the theory of disease as taught in the schools, nor on the practice of the Profession among the community.

ORIGINAL COMMUNICATIONS.

AMPUTATION AT THE HIP-JOINT.

By J. FAYRER, M.D., F.R.S.E.,
Surgeon Medical College Hospital, Calcutta.

M., a Hindoo, aged 25, a resident of Jorasankore, was admitted into the Medical College Hospital, under the care of Dr. Fayrer, on October 6, 1865, suffering from a swelling on the lower two-thirds of the thigh. He stated that the disease appeared about seven months before; and he attributed its commencement to the entrance of a thorn into his knee about five years ago, a portion of which he declared had never been extracted. A month before admission he sustained an injury to the part affected by a fall. On the above date the glands of the groin were slightly indurated, and the pulsation of the femoral distinct. The patella was pushed downwards and inwards, and the tumefaction was above the situation of the knee-joint. The circumference of the limb where the swelling was most marked was $14\frac{3}{4}$ to 15 inches, and higher up $13\frac{1}{2}$ inches. The growth continued to extend, and the patient had fever occasionally; the pulse at the wrist was very small and almost imperceptible, a condition which might have been congenital. When the operation was had recourse to less than one third of the limb remained uninvolved, and there was evidence that the growth was spreading most rapidly. Still he had rallied during his detention in Hospital, and certainly appeared to have gained strength. In fact, his constitutional state was better than when he first came under treatment; and though thin and emaciated he scarcely possessed the countenance and expression of a person suffering from advanced cancer.

January 15, 1866.—This morning at 8.30 or 9 a.m., assisted by Dr. Partridge, who controlled the femoral artery; Dr. Ewart, who managed the limb; Dr. Cornish; Mr. Rafter, the House-Surgeon; my assistant, Baboo Gopal Chunder Roy, and the dressers, I amputated the right lower extremity at the hip-joint. I made the antero-posterior flaps, entering the knife midway between the anterior superior spinous process of the ileum and the tuberosity of the ischium, the point emerging at the root of the scrotum; it opened the capsule of the joint as it transfixed the limb. Dr. Ewart then depressed the limb, when the ligament was further divided, and also the round ligament with the point of the catlin. The head of the bone was now everted, and the knife passed behind the trochanter preparatory to the cutting of the posterior flap. The limb was disarticulated in thirty seconds. The bleeding points (including the femoral vein, which bled freely) were all secured. About a dozen ligatures were applied; he was very low; still, his pulse—almost imperceptible at the wrist when he was placed upon the table—did not sink much lower during the operation. On the whole, he bore this severe ordeal well; he lost about sixteen ounces of blood, and that was chiefly venous; he did not lose a drop from the femoral artery. Brandy and ammonia were given freely, and he was put to bed with hot bottles; and when I left him a quarter of an hour after he was in bed, he had rallied considerably.

The patient was a very feeble and emaciated creature, and, as remarked in the historical narrative, he had a peculiarly weak radial pulse, probably from some defect in the size of the vessels, as well as great constitutional debility from the disease. He had improved somewhat in general health during the last few days in Hospital, and it appeared to me that this offered him the best chance of life; for the disease was so rapidly extending that it hardly admitted of delay; and, moreover, there seemed to be no reasonable prospect of any further improvement taking place. I therefore determined, in consultation with, and with the sanction of, the above-mentioned gentlemen, to attempt the operation. We were all agreed that it offered the best, if not the only, chance of saving the life of the patient. I performed it, though it appeared possible that he might sink under the operation. The result showed that he bore it better than could have been expected, and his condition after the amputation was really very little worse in respect of strength than before it.

5 p.m.—I find the patient with a feeble pulse as before, and a look of languor, and half stupid, probably from the amount of brandy given during the day alternately with beef tea. He is to be closely watched and kept warm with hot bottles and blankets. On the whole his condition is so far favourable. I directed the same care to be taken throughout the night. Less brandy and more food was to be administered—such as soup, milk, and sago. I drew off the contents of the bladder with the catheter.

16th.—Dr. Ewart has furnished me with the following account of the tumour:—"On making a longitudinal section of the growth down to the periosteum, and in the mesial line, it was found to consist of soft brain-like material. The muscles and connective tissue had either been displaced or partially destroyed by the development and extension of the disease. A thin lamina of muscle in process of cancerous degeneration was found overlying the body of the morbid mass; and only thinly expanded portions of connective tissue, giving support to the nutrient or feeding blood-vessels, surrounded the provinces of medullary growth into which the tumour was divided. The preparation has been injected to show this disposition of its constituents.

"The juice composing by far the largest portion of the growth was almost exclusively made up of cell formations of a fusiform, angular, caudate, or irregular shape, with single or double nuclei and granular contents. Some of these nuclei, with their respective cells, were observed to be undergoing constriction in their centres preparatory to ultimate division and proliferation. Some were almost but not quite divided, whilst others were inferred to have just undergone perfect separation from the apparent attachment or adhesion of their nuclei to the cell walls at the supposed point of division, and from the close apposition of these cells at this part. There were many free nuclei in the granular plasma.

"A longitudinal section of the femur in its whole length illustrated healthy bone and periosteum. The patella was destroyed."

Jan. 16.—Patient has slept at intervals during the night from the opiate administered to him. There is some venous oozing. I pressed out from the wound a quantity of bloody serum. Tongue dry; pulse feeble, 128 or more. 3 p.m.—Pulse rapid and very weak; he has taken his food freely; give him an opiate.

17th.—His tongue is dry; pulse 140, and feeble; bowels have not acted; the stump looks well; no bleeding; no discharge; has taken his food freely; temperature 101°; let him have an aperient enema; continue the nourishment.

18th.—He is in much the same state; tongue dry; pulse 120; towards evening it rose to 140 or more, and the temperature to 104° and 106°, but he has had no rigors. Four ligatures came away from the outer angle of the wound, from which a fœtid discharge issues. I washed it out, by means of a syringe, with Condy's solution. Give him less brandy and more nourishment, if he can take it.

19th.—He is much the same to-day; tongue red and dry; discharge from the wound is thin and fœtid; a part of the flaps has healed by adhesion; pulse 120 to 140; thirst great; had something like a rigor yesterday; bowels rather confined; takes his nourishment well.

20th.—More ligatures came away to-day; tongue still dry; pulse 130; thermometer in the axilla in the evening was 105°, whilst the pulse was 140; he takes his nourishment freely; had another enema; discharge increasing—it is thin, fœtid, and flaky; continue all as yesterday.

21st.—Much the same; two more ligatures came away; bowels still confined; had an enema; he is now taking mineral acid, stimulants, quinine, and nutrients; discharge rather better, but still fœtid; top of the stump looks pretty well; tongue is still quite dry; pulse 130 to 140; temperature in the evening 104° to 105°.

24th.—Patient is much the same since last report; pulse has never been below 120; temperature remains at 104°, but it is more equable throughout the day; discharge more healthy; flaps look well, being studded with florid granulations; some more ligatures have come away, but the principal ones still remain; he has taken his food, stimulants, and tonics well; bowels have been moved pretty naturally; continue all as before.

26th.—He is not worse; pulse rather slower; temperature about the same, but there is a tendency to diarrhœa.

27th.—Wound looks doubtful, and not so florid; pulse has been below 120, but the temperature continues high; discharge much the same as yesterday; he has had five stools, and is weaker; ordered arrowroot with brandy, chicken-broth, and a simple astringent of chalk and catechu; he is also to drink milk and lime-water frequently, and to be moved into another ward; he is evidently in a precarious condition, being so feeble.

28th.—Patient is not so well; bowels moved five times; he is very weak; stimulants and dressing as usual.

29th.—There was some oozing of blood yesterday from the posterior portion of the stump; it was stopped by pressure; it recurred in the night, and was not arrested, as the officer on duty was afraid to disturb the clots. When I saw him he was very low; the stump was opened, six or eight ounces of clot removed, and pressure applied to the femoral artery; patient sank half an hour after; this loss of blood was fatal to him in his feeble and exhausted condition.

Dr. Ewart has supplied me with the subjoined description of the post-mortem revelations and microscopical appearances:—"Lungs: Both organs were hypostatically congested, and studded with nodules of brain-like substance, somewhat softer in consistence than that which constituted the growth on the thigh. The greater number of these varied from the size of a pea to that of a kidney bean. A few were not larger than a pin's head, and two or three exceeded the size of a pigeon's egg. In the interior of the lungs these isolated growths were spherical or spheroidal in shape, from their having met with tolerably equal resistance to their expansion or reproduction on every side; whereas on the surface they were flattened or button-shaped, from the interrupted mechanical pressure they must have been subjected to during each rhythm of the respiration. Internally, the growths appeared to have originated between the pulmonary lobules, and as they increased in size to have pushed the contiguous air-cells aside in every direction, causing the complete destruction of those adjacent to the morbid mass, and compression and obliteration of those more distantly situated. Externally, the growths seemed to have commenced chiefly in the same manner, and also in the connective tissue interposed between the lungs and the visceral layer of the pleura. But here the production of new cancerous matter has been mainly directed towards the surface—away, in fact, as far as possible from the vitally important air-cells. This compensatory process is well illustrated in one mass as large as a pigeon's egg suspended from the inferior margin of the middle lobe of the right lung, and maintained in position by the investing pleura. Though the cancerous mass has manifestly commenced in the interlobular structure, at first displacing, then compressing, and ultimately causing absorption and destruction of the parietes of many cells, yet the subsequent or later reproduction of new cell-growing material has almost entirely taken place in a centrifugal direction from the lung—in that line of direction in which it doubtless met with the least vital resistance. The superficially situated nodules are covered with congested or inflamed pleura. The left pulmonary pleura is universally covered with a lamina of straw-coloured aplastic lymph. At the base of this lung a triangular portion about two inches by three is consolidated, dead or dying from pyæmic capillary embolism. In the centre there was a small nodule of cancerous material and a patch of pulmonary tissue infiltrated with sanies, and probably dead; whilst further outwards the exudation, though sanious, was less aplastic in character. Around the circumference of this there was an intensely congested areola. The bronchial glands examined were free from cancerous infiltration. The numerous brain-like growths consisted of nothing but a granular matrix, free proliferating nuclei, fusiform, ovoid, elongated, caudate, and a few endogenous cells with nuclei and more or less granular contents. There was no tendency to fibrillation. The pyæmic-looking patch at the margin of the base of the lung was infiltrated with putrid sanies, containing a great quantity of granules. Heart.—This organ was small and fatty. The fat granules and oil globules occupied both the exterior and interior of the sarcolemma. The degenerative change was most advanced in the anterior wall of the right ventricle. There was a dark-coloured clot prolonged from the right ventricle into the pulmonary artery and its ramifications. A white dull-coloured antimortem clot existed in the left ventricle. External Iliac Vein and Artery.—In the external iliac artery there was a plug of red-coloured fibrine extending in an upward direction to the orifice of the circumflexa ilii. The corresponding iliac vein has a reddish-coloured clot in it, tapering off at the proximal extremity; not so pinkish as that in the artery. Acetabulum and Ileum.—The acetabulum is almost wholly denuded of articular cartilage, and rather roughened. On section this carious or necrosed condition is seen to be quite superficial. The rest of the bone is seen on section to be perfectly healthy. A quantity of fœtid pus was found in the pelvic cavity, just above the acetabulum and beneath the pelvic fascia."

The recurrence of the carcinoma in the lungs is very interesting, and I am inclined to think, from the appearance, that it was all subsequent to the amputation. Death was caused by exhaustion, due to the combination of pyæmia, of which there were evident signs, with the original disease, medullary cancer.

I am indebted to Professor Ewart for this elaborate account of the pathological condition of the limb and of the organs after death.

THE CAUSE OF CHOLERA.

By RICHARD NEALE, M.D., Lond, etc.

Late of Java.

In the *Medical Times and Gazette*, June 16, 1866, in a suggestive paper upon the "Treatment of Cholera," Dr. Johnson states,—"A specific poison enters the blood. This is as nearly certain as any proposition in pathology can be." Is this so, I would ask? During a severe epidemic of cholera that visited Java in 1864, I was forcibly struck with the close resemblance, in many respects, between the cholera cases and those of severe remittent fever, *quoad* the nervous elements of the diseases, and felt that those who believed the proximate cause of cholera and of malarial fevers to consist in functional disorders of the sympathetic system, had strong grounds for their belief.

The question, however, arises, is this functional disorder of the sympathetic, supposing it to exist, in itself the cause, or the result of, the blood poisoning, which all are agreed does exist?

The fact that cholera, in its early stage, is so generally under control, while, if elimination has gone on for some time, treatment is often of so little avail, might rather lead one to believe that deranged nervous function is the primary cause of the disease, and if so, then the theory of its treatment would rest on other basis than that of elimination.

St. John's-wood, N.W., June 19.

The death of M. Fournier Deschamps, an eminent Practitioner of Paris, is announced. Also of Madame Dupuytren, widow of the illustrious Surgeon.

CASE OF SEVERE INJURY OF THE HEAD—MORPHIA INJECTIONS—RECOVERY.

By NATHANIEL ALCOCK,

Assistant-Surgeon 35th (Royal Sussex) Regiment.

The following case of severe injury of the head, although presenting nothing novel in its occurrence or its consequences, is, I think, worthy of record, since during its treatment the administration of narcotics by subcutaneous injection, as recommended by Dr. Charles Hunter, was followed by the most beneficial, in fact, almost magical results:—

Sergeant B——, 35th Regiment, on January 24, fell from a ladder through a space of about fifteen feet to a bricked floor. The point of his right shoulder and one side of his head touched the ground almost simultaneously. He was brought to Hospital in a state of insensibility and with a jagged scalp wound over the right lambdoidal suture, exposing the bone. Complete unconsciousness continued for several hours, and then merged into a state of sluggishness, from which he could be aroused by shaking, but only to elicit incoherent replies. His pupils were natural in size, but sluggish. A dose of calomel was ordered to be laid on the back of his tongue, a large turpentine enema to be given, and cold lotion to be kept to his head.

On the following morning, though ignorant of the nature or cause of his accident, he was sensible to present objects, and could answer questions coherently, but concluded each reply with a peevish complaint of the pain in the front of his head and in his shoulder. His tongue was dry, with a dark coating in the centre; his eyes were somewhat injected, and his bowels obstinately costive. A full dose of calomel and jalap with another turpentine enema, was ordered, and, failing in effect, a dose of castor oil was given in the evening. In addition to this, three leeches were applied to each temple, and a full dose of tinct. hyoscyami administered at night.

On the next morning the bowels were moved freely, and from the effect of the hyoscyamus, he passed a quiet night, having remained in a state of torpidity, but without obtaining any refreshing sleep.

He was more excited than on the previous day, complained incessantly and fretfully of his pains, and insisted on being allowed to dress himself for the purpose of going on guard. The cold lotion was continued, saline mixture given during the day, and hyoscyamus as before at night.

On the next, or third, morning since the accident, although apparent rest had been procured by the hyoscyamus, the symptoms continued as before, with the exception of being rather intensified. No evidence of compression had set in, nor could inflammation of the brain have come on without a still greater exacerbation of symptoms. The case was clearly one of extreme functional irritability, resembling in many features delirium tremens, and the indication as clearly was to procure rest to the brain without, if possible, the expense of previous excitement, and without arresting the functions of the digestive canal, the absorptive powers of which were evidently, from the state of the tongue and appetite, as much in abeyance as those of excretion which it had been so difficult to arouse. I determined on administering morphia by the hypodermic method, and accordingly injected one-third of a grain of acetate of morphia into the outside of the injured arm. In fifteen minutes he dozed, and slept subsequently for two hours.

When I visited him four hours afterwards, he, instead of fretfully complaining as heretofore, expressed himself as being much better, quite free from pain in his arm, which he raised from the bed of his own accord, and greatly relieved from the intense frontal agony from which he had previously suffered. Equal to the bodily benefit was that to his mind, which he could now use more at will, to connect his ideas, and to recollect the incidents previous to his accident, of the actual occurrence of which, however, he still remained oblivious.

On the following morning the frontal pain had recurred to some extent, but his tongue was more moist and clean, and his digestive functions were recovering. In the evening he was low spirited and weaker than before, owing to the subsidence of the fictitious strength of irritability. I repeated the injection of one-third of a grain of morphia, and ordered three ounces of wine to be added to the chicken broth and sago, of which his diet previously consisted.

On the following, or fifth, morning since the accident he was much improved, having had a quiet night and slept healthily. I increased his wine to five ounces, directed him to have strong beef-tea during the day, and repeated the morphia injection in the evening. On the sixth morning he was so cheerful and so free from any untoward symptom that I considered him to be convalescent. The scalp wound was all but healed.

February 15.—Although still somewhat shaken by the accident and unfit to return to his duty, which would necessitate a certain amount of exposure to the sun, he has nevertheless been quite free from all cerebral symptoms since the last entry, and is steadily regaining his strength.

Mooltan, India.

CASE OF GASTRIC ULCER TREATED BY HYPODERMIC INJECTION—RECOVERY.

By GEORGE WILLIS, M.D.

Seeing in one of the Medical papers that a committee is formed in London to investigate the uses of hypodermic injections, and also meeting by accident last week on the West Midland Railway an engine-driver who, I think, may be safely said to owe his life to this means of treatment, I am induced to give my notes of the case and the result.

Six years ago C. L., then aged 50, stated to me he had suffered all his life at times from dyspepsia, which was always relieved by a little suitable treatment; that he had never been confined to his bed until January 7 of that year for a single day. On that day he was seized with terrible pain in the stomach and vomiting, which state of things lasted for three months, and kept him in bed.

In the March following he had a hæmorrhage from the stomach of about two quarts, and for fourteen days after this he was treated by beef-tea and wine injections. On April 23 I first saw the case, which I at once recognised as one of gastric ulcer. So great was the irritability of the stomach at that time, and so acute the agony, that not even milk and lime-water in the smallest quantities could be borne or retained. I tried large doses of opium, creosote, bismuth, glycerine, kino, etc.—all were rejected almost as soon as swallowed.

In this state he was seen in consultation by Dr. William Willis (late of the Middlesex Hospital, but now in Japan), and it was decided to use morphia hypodermically, to soothe his transit from this world rather than in the hope of cure. He had beef-tea injections, with eggs and brandy; the morphia injection eased his pain and induced sleep.

A trial was now made at the end of a week of a little milk, and it was found that a cupful would keep down and not cause very great pain if preceded by the morphia injection, which was of a strength equivalent to three grains of the salt.

This treatment was continued daily for above a year, and the diet was bread, milk, gruel, and occasionally a little fish. At the end of a year the man left his bed and came daily to our Dispensary for his treatment, which was now reduced to two grains; so cadaverous was his aspect, that people turned round in the street to look at the almost corpse-like man feebly moving along. He used to say, in his Staffordshire accent, when holding out his skinny fore-arm for the injection, "I am like a babby wanting his mammy."

At this time he began the use of beef-tea and mutton-broth, but the pain and vomiting invariably returned if by any chance the injection was unduly delayed. For another year he gradually improved in health—his digestion became better. At the end of this year the daily hypodermic injection was only the equivalent of one grain of morphia, and six months later he was able to do without it altogether, but took especial care in his diet. He had so far recovered in strength, looks, and flesh, that a few months afterwards he got employment at his old work, and reported of himself the other day that he had enjoyed perfect health for more than three years; that he could eat any sort of food and in full quantities; usually ate beef twice a day, and took two or three pints of beer. He has grown very ruddy and stout, weighing nearly twelve stones, though when he left his bed he hardly weighed eight.

The only medicine taken by the mouth during his illness was a dose of salts and magnesia once a week, for without this his bowels never acted. On a few occasions an injection of atropine was substituted for the morphia in a moderately large dose, and then it never relieved pain. On one occasion the fourth of a grain produced very alarming symptoms, and was never repeated. During twenty years I never saw a more satisfactory case or one that brought more credit to treatment, and I only hope that such a valuable mitigation of suffering may never fall into disuse. I may add that it is now the only solace of a man dying of cancer of the rectum, and he requires six grains of morphia daily.

Monmouth.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

RUPTURED POPLITEAL ARTERY AND VEIN—AMPUTATION—LIGATURE OF FEMORAL AND SUBSEQUENTLY OF EXTERNAL ILIAC ARTERY FOR SECONDARY HÆMORRHAGE—RECOVERY.

(Under the care of Mr. POLAND.)

[Notes furnished by Mr. Wright and Mr. Savage.]

In the "Guy's Hospital Reports," third series, vol. vi., 1860, will be found some very interesting cases by Mr. Poland on rupture of the popliteal artery, with some valuable remarks on the treatment of such cases.

J. T., aged 40, admitted November 25, 1865. About ten minutes before admission was carrying a heavy sack of wheat, when he slipped and fell on his back, the sack falling upon his right thigh. He felt something give way just below the ham; and a swelling at once appeared behind the knee, and in the upper part of the calf. He was unable to rise without assistance, but could straighten the leg.

On Admission (4.45 *p.m.*).—The whole leg and popliteal region were very tense and hard and somewhat shiny. No pulsation could be felt in the tibial arteries; the femoral pulsated feebly. At 6 p.m. he was examined by Mr. Poland; the leg was numbed. Mr. Poland ordered it to be wrapped in cotton wadding. 9.30 p.m.—Leg less tense; he has been suffering severe pain. Temperature of affected leg slightly increased. Ordered one grain of opium.

November 26 (2nd day) 10 a.m.—Has not slept; but the leg is less painful; its temperature higher than that of the left.

27th (3rd day).—The right leg still continues warm; he suffers but little pain.

28th (4th day).—Toes of right foot colder than those of left.

29th (5th day).—Toes somewhat dusky in colour. A mottled appearance exists about the ankle and lower part of the calf. He has lost all sensation at the toes, which are quite cold. There is a great deal of ecchymosis under the knee; he still suffers but little pain, and passes good nights.

December 1 (7th day).—Gangrene advancing up the foot. Mr. Poland proposed amputation above the knee, but the patient would not consent.

2nd (8th day).—A few vesicles have appeared over the ankle. He still feels no pain, and says he is in excellent health.

5th (11th day).—The thigh was amputated a little below the centre by Mr. Poland, by means of a long anterior and short posterior flap; the latter was infiltrated with blood. Ordered—Tinct. opii ʒss.; ex aquæ ℥j., h.s.s. Brandy, 6 ozs.; porter, 2 pints.

6th (12th day).—Patient very comfortable. Ordered—Quinine mixture three times a-day; mutton chop daily.

8th (14th day).—There is a fœtid discharge of decomposing blood from the outer corner of the stump. Flaps partly united.

9th (15th day).—All strapping and sutures removed; carbolic acid lotion applied. He feels well, and suffers but little pain.

16th (22nd day from accident; 11th from amputation).—The ligature upon the femoral artery in the stump came away to-day. At midnight alarming hæmorrhage came on, and by Mr. Poland's advice the femoral artery, which appeared healthy, was tied at the junction of the upper with the middle third.

19th.—Not so well; has symptoms of constitutional disturbance. Ordered—Brandy, 12 ozs.

26th.—About the same. Brandy, 6 ozs.; port, 8 ozs.

January 1 (38th day from accident; 16th from ligature of femoral artery).—The ligature from the femoral artery came away this morning. At 7 p.m. severe hæmorrhage came on. As the blood flowed equally from the wound made in tying the femoral artery and from the end of the stump, it was judged expedient by the House-Surgeons (in Mr. Poland's absence) to tie the external iliac artery, which was accordingly done by Mr. Edwin Burrell (House-Surgeon). To discontinue the brandy.

3rd.—Is in a low pyæmic condition. Ordered: Tinct. ferri mur., ♏xx.; mist. quin., ℥i., ter die. Three eggs; brandy four ounces.

21st.—The ligature from the external iliac artery came away—*i.e.*, on the twentieth day after its application.

31st.—He has been lately mending rapidly. A little arterial bleeding from the wound over the external iliac artery occurs this morning, as he is on the bed-pan. Ordered: Plumbi acet., gr. ij.; pulv. opii, gr. ss., 3tis horis. Tinct. ferri sesquichlor., ʒss.; quin. sulph., gr. ij.; tinct. opii, ♏xv.; sp. chloroformi, ♏xx.; aq. menth. pip., ℥ij., ter die sumend. Brandy eight ounces.

February 1.—Some more bleeding at 7 a.m., and again about noon. It comes on when he is coughing or straining.

2nd, 11 a.m.—Has lost a little blood twice this morning. 4 p.m.—Lost more blood, and is faint.

3rd, 10.30 a.m.—Has lost a large quantity of blood during the night and morning; appears to be sinking. 12.35 p.m.—He seems moribund; there is scarcely any pulse perceptible; breathing slow and noisy; forehead and extremities cold. After his head is lowered he seems relieved.

4th.—No bleeding since yesterday. He is very weak, but rational; suffers from sickness. Ordered: iced milk, in very small, often-repeated doses.

5th.—No bleeding nor sickness.

6th.—He is much stronger. The bleeding and sickness has both been arrested.

March 13.—Since February 3 no hæmorrhage has occurred, and he has been gradually convalescing. Feels strong, sleeps well, and enjoys a good appetite. There is now a portion of necrosed bone, partly covered by granulations, protruding through the anterior flap, which otherwise is healed. The wound made for the ligature of the femoral is quite repaired; that for the ligature of the external iliac is all but healed.

On examination of the amputated limb, the anterior crucial ligament was found ruptured, and the posterior injured. The popliteal artery was completely torn through, just beneath the heads of the gastrocnemius muscle, and its ends separated about an inch. The vein was also ruptured on its posterior aspect at a point opposite the arterial lesion. The nerves were entire.

ST. BARTHOLOMEW'S HOSPITAL.

ACUTE LARYNGITIS — TRACHEOTOMY — RECOVERY.

(Under the care of Mr. PAGET.)

THESE cases are valuable, as they direct attention to the important question whether chloroform should be given or not during tracheotomy. Some Surgeons think that it may be injurious by adding to the already existing impurity of the blood; but in Mr. Paget's wards the rule is to give it if there is time for its administration. We have often seen it used, and in the large majority of cases have observed that while it affords great help to the operator by preventing the struggling of the patient, it has no ill effect whatever on the respiration. In one set of cases—namely, that in which spasm of the laryngeal muscles predominates, as a cause of dyspnœa, over mechanical obstruction (by false membrane, or otherwise)—chloroform, by removing spasm at the larynx, is productive of the most marked relief. It is not, however, always well borne where the dyspnœa is chiefly mechanical, and that this should be so is to be explained by the fact that while it spoils some air, as no doubt it does under all circumstances, it cannot, as it does where dyspnœa is spasmodic, increase the quantity of air which gains admission into the lungs. It would appear proper to try, in every case in which the patient is still alive to pain, how chloroform is borne, for its advantage to the operator can scarcely be over-estimated; and when it is carefully given, should it disagree with the patient, this will be discovered before any mischief has been produced.

H. K., aged 24, a boatman at Putney, came to the Hospital on February 9, breathing with great difficulty, and with the peculiar sound characteristic of mischief about the larynx strongly marked. His skin was cool; pulse 84, and of fair volume; respiration 16 per minute. He said that two days previously, while at work, he had an attack of sore throat, to which he was very subject, and that this had rapidly become worse. No history of syphilis could be obtained. He was sent to bed, and ordered to have eighteen leeches applied to the front of the larynx, to inhale steam through a flannel respirator, and take an aperient pill.

10th.—He was rather better, and said that he felt much relief from the leeches. The bowels had acted once, but not very freely.

11th.—Had a better night, and was rather improved. Ordered by Mr. Paget to have five grains of calomel directly, and a compound senna draught at bed time.

12th.—After a bad night he was not so well. To have liq. am. acet., c. vin. ant. pot.-tart. ʒj., tertiis horis, and twelve leeches applied over the larynx.

13th.—During the night he was in such difficulty of breathing that tracheotomy appeared almost necessary, but towards the morning he improved very much, and in the forenoon was tolerably comfortable.

14th.—Was much better. Ordered liq. am. acet., c. tinct. scillæ ♏xv., morphiæ acetatis gr. $\frac{1}{8}$, 6tis horis.

16th.—Difficulty of breathing had almost wholly passed off. To take quinine.

19th.—Allowed to be up a short time; he persisted in being near the window, although cautioned not to expose himself to cold.

20th.—Was not so well, and was therefore ordered to remain in bed and to have a blister over the larynx.

28th.—Had been doing well. To take potass. iodidi gr. viij. 6tis horis.

March 1.—Appeared to have renewed his cold; he became suddenly worse, and after having had a bad night was in as great trouble as when first admitted; to have ten leeches over the larynx, and to return to the inhalation of steam through a flannel respirator. 11 p.m.—During the afternoon he had had some sudden and severe exacerbations of dyspnœa, and, within the previous hour, one which almost proved fatal; he was now in extreme dyspnœa; tracheotomy was therefore performed by Mr. Bloxam, Mr. Paget's House-Surgeon; little chloroform was given, and the operation was completed as quickly as was consonant with the safety of the patient; there was very little hæmorrhage; great relief followed the operation, and the man soon went to sleep. From this time he had no check in his recovery, and was discharged, still wearing the canula, twenty-nine days subsequently.

SYPHILITIC LARYNGITIS—TRACHEOTOMY—RECOVERY.

(Under the care of Mr. PAGET.)

J. H., aged 36, came on foot to the admission office on May 29, and on his arrival was found suffering great laryngeal dyspnœa. The skin was perspiring, hands cold and clammy, pulse 86, of fair volume; respiration 10 per minute, and with no pause between inspiration and expiration; recession of the supra-clavicular and intercostal spaces very marked. He confessed to have had syphilis twenty years previously, and had since that time suffered from occasional sore throat, and a troublesome cough. Had latterly been an out-patient under Dr. Edwards, who had prescribed for him liq. hydrarg. bichlor. ʒss. ter die. On admission he was ordered to inhale steam through a flannel respirator, and to remain in bed. At 2 p.m. he was seen by Mr. Paget, who ordered that tracheotomy should be at once performed should any change for the worse take place. 11 p.m.—Had had no sleep, and was now very restless; had had several attacks of spasmodic dyspnœa, but these were not of a severe character.

30th, 3 a.m.—It was necessary to resort to tracheotomy, for the patient had been in great dyspnœa all night, and was becoming steadily worse, and any attempt which he made to swallow was followed by spasm of the laryngeal muscles. Chloroform having been administered, Mr. Bloxam proceeded to operate, using a blunt knife for exposing the trachea after the skin and cervical fascia had been divided; hæmorrhage was very slight.

31st.—The man experienced immediate relief after the insertion of the canula, and slept for some hours; ordered by Mr. Paget a nutritious diet and six ounces of wine daily.

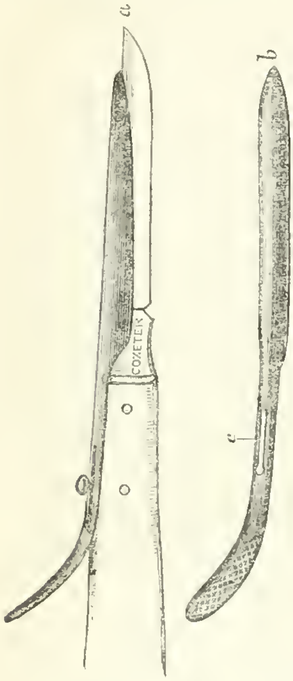
June 1.—Was rather feverish, with pulse 100 and respiration 28, but this condition seemed to be the result of his previous labour of breathing and his loss of rest. Both canulæ were removed in order that the wound, which looked rather unhealthy, might be thoroughly cleansed. On examining the chest some slight scattered crepitation was found at the posterior part of the base of the right lung; for this he was ordered a mustard poultice.

June 23.—From the date of the last note the patient has gone on well. His general health has much improved, but he is still obliged to wear the canula.

THE MIDDLESEX HOSPITAL.

A NEW INSTRUMENT FOR TRACHEOTOMY.

We may here notice an ingenious little instrument which has been contrived by Mr. Worthington, late House-Surgeon to the Middlesex Hospital. Its object is to facilitate what often proves one of the most difficult steps in tracheotomy—the introduction of the canula into the trachea. It consists of an ordinary scalpel, on the back of which lies a closely fitting, deeply grooved steel director (Fig. *a*). This director is adjusted by means of a slit (*c*), into which a button on the handle of the scalpel projects. During the early stages of the operation, and when the trachea is being opened, the director lies withdrawn upon the scalpel, as in Fig. *a*; but when the cut in the trachea has been made, and while the point of the scalpel is still in its canal the director is pushed down beyond the point of the scalpel and detached from it (which is done very easily when the dilatation in the slit *c* is opposite the button) and left in the trachea where it serves as a guide either for the introduction of the canula or for the subsequent enlargement of the cut in the trachea, should the one first made be of insufficient length. This instrument is so simple in its construction, and so easily managed, and aims at obviating what is often such a serious difficulty, that we have no doubt many Surgeons will find advantage from its use.



KING'S COLLEGE HOSPITAL.

FOREIGN BODIES IN THE BLADDER.

We report this week two interesting cases of foreign bodies in the bladder which have lately occurred in the practice of the Hospital, and the methods adopted in both instances of removing them. Pieces of bougie or of catheters have been occasionally met with, and have in some instances been spontaneously expelled, but such articles as tobacco pipes, pencils, or, as in the unprecedented case under Mr. Smith's care, a glass flower tube, are rare. In Mr. Smith's patient it was the second time an operation had to be resorted to, for on a former occasion the patient had introduced a piece of tobacco-pipe into the urethra. The man stated on both occasions that the pipe and the flower stem were introduced by himself as he had a "stoppage in his water." The urethra, however, happened to be unusually large and dilatable, and even when the tube was in it, notwithstanding its lip, the urine passed tolerably freely.

Many extraordinary substances might be enumerated as forming nuclei of urinary calculi both in the male and female bladder, introduced for a morbid sort of gratification. Sir William Fergusson informed us that he once crushed a large piece of sealing-wax in the female bladder. In Mr. Smith's case the difficulty of the operation was greatly increased, as the glass tube had become so disposed in the bladder as to lie completely across it, and he was afraid that the string was too rotten to allow of much traction being made upon it, and by this means to bring the tube to the neck of the bladder. Moreover, owing to the nature of the foreign body, the use of forceps might only have made the operation more complicated.

GUTTA-PERCHA BOUGIE IN THE BLADDER—REMOVAL.

(Under the care of Sir WM. FERGUSSON.)

S. C., a strong, healthy-looking man, had had a stricture of the urethra for upwards of nine years, and had been in the habit of passing a gutta-percha bougie upon himself. About six months ago, whilst using some little force in withdrawing the bougie, it broke, and about five inches of it remained in the bladder. Attempts were made to remove it by one of the Surgeons at St. Bartholomew's Hospital by means of the lithotrite, but were unsuccessful. It had set up great irritation in the bladder, and the mucous lining was evidently much inflamed. A prostatic abscess formed some time ago opening into the urethra.

On June 16 Sir William Fergusson removed the portion of the bougie by the operation for lateral lithotomy; it had become broken into three pieces, one fracture probably having been made during the operation. Its surface was in no way coated with any calcareous matter, a point to which Sir Wm. Fergusson called attention, as it would be thus the more readily passed over in sounding, the characteristic ring of the staff upon it being absent.

18th.—Feels very comfortable; pulse 85; water comes both by wound and urethra.

19th.—Tongue slightly furred; began to vomit last night; abdominal tenderness; no rigors; pulse 86.

27th.—Penis swollen and tender; complains of pain in the perineum, and there is considerable tenderness in the lower part of hypogastric region; urine deposits a thick cloud of mucus, carrying down with it large quantities of triple phosphate; pulse 88.

28th.—Same condition; urine very offensive and ammoniacal. Bladder washed out with warm water.

29th.—Very weak; tongue dry; pulse 90, small.

30th.—Pulse scarcely felt at wrist; extremities cold; no pain anywhere; died at 4 p.m.

Post-mortem Forty-eight Hours after Death.—Penis and scrotum of a dark purple colour. Abdomen contained eight or ten ounces of a thin brownish fluid. Those coils of small intestine which were in immediate relation to the bladder were very much injected with blood, but there were no patches of coagulated lymph upon them. Pus was infiltrated into the areolar tissue, extending from the fundus of the bladder round the rectum and in front of the great vessels as high as the superior attachment of the mesentery, also between the layers of peritoneum forming the mesocæcum and descending mesocolon. The descending colon was mottled with patches of pus, which were beneath the serous covering of the bowel. Kidneys large, dark-coloured, and congested; lobules well marked in patches, whilst in other parts they were obliterated. The fibrous capsule was easily stripped from the surface of the kidney, leaving it smooth. Pelvis and ureters congested. Bladder: Coats enormously thickened; pus deposited in the cellular tissue surrounding it and beneath the pelvic fascia. Ureters much congested. Pus was found in the substance of the bladder. Patches of ecchymosis in the mucous membrane, which was ulcerated in some places and much congested. The opening of the wound into the bladder was nearly united.

(We are indebted to Mr. R. H. Robinson for the notes of this case.)

GLASS FLOWER TUBE IN THE BLADDER—REMOVAL.

(Under the care of Mr. HENRY SMITH.)

Robert R., aged 22, was admitted on the evening of June 14, having passed into his urethra a glass flower-tube about four inches in length, and about the size of a No. 11 catheter, slightly flattened, and having a tolerably broad lip round the upper extremity. He had taken the precaution of tying a piece of string around it, and this was hanging from the urethra on admission. The tube could be felt in the urethra, as it had not passed into the bladder. This man, about two years ago, introduced a piece of tobacco-pipe per urethram; this was crushed by the operation of lithotrity by Mr. Smith.

On the following afternoon (15th) Mr. Smith proceeded to operate as follows:—Introducing the left forefinger into the rectum he cut down upon the perineum half an inch above the anus, and opened the urethra as far back as possible, a grooved staff having previously been passed into the bladder.

The finger then dilated this opening, and the staff was removed. Mr. Smith's object was next to get hold of the string and bring it out through the perineal wound; this was effected after some little trouble by the introduction of a blunt hook, by which, as it were, he fished out the string. Guided by this held in his right hand, he introduced the left forefinger slowly into the bladder, dilating the parts as he proceeded. The foreign body was now felt lying quite across the bladder, which was empty and contracted. Mr. Smith dared not use any forceps for fear of breaking the glass tube, and he was therefore compelled to trust to his own hands; but by cautiously manœuvring with the left forefinger in the bladder and the string in the right hand (which happily did not give way) he succeeded in turning the glass round endways, and brought it away without any fracture.

He left the Hospital, quite well, June 30.

SYDNEY INFIRMARY.

FIBRO-CYSTIC TUMOUR OF LOWER JAW—REMOVAL OF RIGHT HALF OF LOWER MAXILLA—RECOVERY.

(Under the care of P. S. JONES, M.D. Lond., F.R.C.S Eng.; Honorary Surgeon to the Sydney Infirmary, South Australia.)

Geo. W., aged 41, carpenter, was admitted into the Sydney Infirmary under my care, on November 28, 1864. When a boy he received a blow upon the right side of the lower jaw, and ever since has had a round lump about the size of a marble in that situation. About four years since, he received a violent blow from a man's fist upon the site of the small tumour, which began at once to enlarge, but was not painful. Eight months later, when the mass was about the size of an orange, it was tapped by a Surgeon in the country, and four ounces of bloody serum drawn off. He says that at this time, after a hard day's work or on taking cold, he suffered much pain in it. At this time also, the lower part of the mass gradually became of a bony hardness. A year later most of the teeth on this side dropped out. Twice within the last two years the swelling has been tapped and injected with some irritant fluid, causing considerable suppuration and some diminution in its size for a time.

State on Admission.—Patient is thin, but of healthy aspect. He has large whiskers, but these fail to hide a large swelling on the right side of the lower jaw and involving the whole of this half of the bone. The skin over the tumour, which is as large as the closed fist, is quite healthy, freely moveable, and free from all puckering. In parts the mass is quite soft, and gives to the finger the sensation of fluid; in other places it is of a bony hardness. There are several plates of bony or cartilaginous substance to be felt, and on making any firm pressure on them a crackling is felt and heard. At the lower edge of the tumour, which reaches the level of the thyroid cartilage, a hard angular piece of bone is felt. On looking into the mouth, the whole right ramus, from the right lateral incisor tooth to the last molar, is seen to be occupied by a solid mass, which encroaches considerably upon the floor of the mouth, reaching at least half way across, and pushing the tongue to the left. All the lower teeth upon this side are gone, and the mass prevents the opposed teeth upon the other side from meeting. No enlargement of lymphatic glands can be detected. General health is good. A microscopic examination of the fluid removed from one of the cysts by tapping revealed nothing but blood corpuscles. My diagnosis was non-malignant tumour, in part cystic—possibly an enchondroma. With the consent and assistance of my colleagues, I proceeded to remove the entire right half of the jaw on January 4, 1865. Chloroform having been administered, I made a crescentic incision, commencing just below the angle of the jaw, and terminating within half an inch of the corner of the mouth. Subsequently, in consequence of the great size of the tumour, the incision had to be carried through the lip. The upper and lower flaps were then dissected up. In raising the lower flap, great care had to be exercised in consequence of the depth to which the tumour extended into the neck. Several small vessels had to be tied. I next extracted the right lateral incisor tooth, and sawed through the bone at this spot. The bone was sawn through again behind the tumour about half an inch from the condyle, it being found impossible to disarticulate whilst the tumour was *in situ*. The mass now separated from its bony connexions was carefully dissected out and removed. The disarticulation of the condyle and small portion of ascending ramus attached to it was effected without injuring the internal maxillary artery. The large cavity left by the removal of the tumour was lightly stuffed with lint, and the edges of the flaps united by several silver-wire sutures. On the second day after the operation two of the sutures were removed, and on the third day the remainder, the greater part of the incision having united by the first intention. He took three ounces of brandy daily for a few days, and beef-tea *ad libitum*. A chlorinated soda wash for the mouth he found very comforting. Fresh lint saturated in this lotion was introduced into the cavity daily for a few days. He rapidly regained the power of masticating, and on the twenty-fourth day eat boiled mutton for his dinner. A small part of the incision remained open, discharging a little pus for three months after the operation, at the end of which time a very small piece of bone came away, and the wound quickly healed perfectly. The last time I saw him, about the end of June, his whiskers were beginning to grow again, and the only perceptible sign of the operation he had gone through, and the loss of bone he had sustained, was a slight scar in his lower lip. Nature had filled up the gap in his mouth in a most marvellous manner. He was in perfect health, and could masticate any kind of food.

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Medical Times and Gazette.

SATURDAY, JULY 7.

THE ROYAL COLLEGE OF SURGEONS.

It is not from any feeling of animosity that we so frequently revert to the shortcomings of the College of Surgeons, and the necessity for "new blood" in the Council. The influence which that body exercises on the Profession in England is still paramount, and so long as that influence is badly used, it is our duty to comment on it. For more than sixty years the College has held an almost despotic sway over the education of the masses in the Profession. Unluckily, while that sway was so powerful, the interests of the governing body in the College were divided; the Hunterian Museum and the education of the Profession were placed at the same time under its control. Would that it could point with the same pride to the state of the Profession as it may justly do to the condition of the Museum! But the Museum was to be supported out of the fees of the candidates for the diploma; it would not do to repel candidates by over-strictness of requirements or severity of examinations. The way to the diploma was to be smoothed over in order that the Museum might flourish.

And smooth indeed was the path to the diploma; an attendance, nominal or real, on lectures and Hospital practice, a couple of months' work with a "grinder," a half-hour's oral examination on Anatomy and Surgery, and the student was converted into a qualified Surgeon. We say advisedly "a nominal attendance." The examiners were all Hospital Surgeons, and they knew that whatever might be the case with regard to Anatomy, the other subjects, and especially clinical studies, were ignored by the majority of their pupils; and yet for years they took no step to remedy this. There has been a change in this of late; but the system which was referred to in the letter of Mr.

De Morgan, which we published last week, remains unchanged. The examinations are limited to Anatomy, Physiology, and Surgery; on all the other subjects which we might suppose to be essential, as they form a part of the curriculum, the student may be, and very often is, profoundly ignorant. Even the changes which have been made of late are in some respects good, but are damaging in others. The examinations in Anatomy and Physiology are held at the end of the second winter session, the intention being that the third winter may be given up to clinical work. These examinations are practical. The student has the subject before him, and mere parrot work will not suffice. In so far they are improvements. But the plan does not work well, taken as a whole. The student neglects the Hospital during all the latter half of his second winter, because he is working for this pass examination; and he entirely neglects his anatomy during the remainder of his time, because he has no longer the fear of the examiners before his eyes. Unluckily while he forsakes his anatomy he does not work clinically, for the examiners have not yet adopted the true means of testing a man's fitness to practise Surgery—putting him face to face with real live patients, and seeing what he knows about them, and how he would handle them. There are many difficulties, it is said, in the way. Certainly—there is always a difficulty in getting out of a groove; but the University of London has done it, and the College of Physicians has done it. What would be required would be a staff of examiners who could give the time and labour—and hard labour it is—for a fair remuneration. The students could be very easily distributed amongst the eleven Hospitals in London.

But this would necessitate the alteration of the whole system, and we are hardly sanguine enough to hope as yet for such Spartan resolution in the Council. It is the duty of the Council—a duty which it owes to the public and the Profession—to ensure a fitness to practise Surgery in all to whom it gives a licence. It is in vain to point to the curriculum and say we give the opportunity to all of acquiring all necessary information. The Council gives a guarantee that the knowledge has been actually gained, and if it fails to put that to the test it deceives the public and lowers the Profession. Far better to do away with the curriculum—to tell the student to get his knowledge how he likes and where he likes, but to make him prove by a rigorous practical and theoretical examination that he really is a competent man. It would make the student more of a man and less of a parrot. It would tend to develope his mind, which in the present day is sadly in danger of being so cramped by forms as to be unfit to exert itself. All this is yet far distant. What a blessing would the College confer—the greater because so little hoped for—if, regardless of numbers, it would earnestly strive to make its diploma a guarantee of competency!

"THOU, NATURE, ART MY GODDESS!"

The great Lord Bacon, in his essay on the Advancement of Learning, and again in his *Novum Organon*, cautions his disciples against those false notions which most readily beset the human mind and hinder it from perceiving truth. To these false notions he gives the well-known name of "Idols"—that is to say, delusions or phantoms, for such is the real meaning of εἴδωλον.(a) Of such phantoms, some, he tells us, are inherent in humanity itself; some belong to individuals, and differ with each man's mental peculiarities; a third class arises out of the conditions under which man converses with his fellow-creatures; for as the mechanism of such converse is *language*, so the use and interpretation of words are often "a wonderful obstruction to the mind." Those phantoms "which have entwined themselves round the understanding from the association of words and names are," says Lord Bacon, "the most troublesome of all. For men imagine that their reason governs words, whilst, in fact, words react upon the understanding. Words are generally framed in a mere popular sense, and define things by broad lines obvious to the vulgar mind; but when a more acute understanding, or more diligent observation, is anxious to vary those lines, and to adapt them more accurately to nature, words oppose it." Such phantom words are of various sorts, but so far as they concern us at present (to quote again from Lord Bacon) "they are the names of things which have no existence"—as, for instance, "fortune, the *primum mobile*, the planetary orbits, the element of fire, and the like fictions, which owe their birth to futile and false theories."

Now, at the present day, 250 years after Lord Bacon wrote, it is clear that the minds of some even of our own brethren are not emancipated from the phantoms he wrote of. Words are as tyrannical as ever; and matters have come to this pass, that if cholera should invade us, some poor creatures may be dosed with purgatives, not from any reason, nor from experience, but because it is "Nature's own treatment;" because it seconds the "efforts of Nature," or follows the "*vis medicatrix naturæ*." It may be really, therefore, a matter of life or death to some of us just to inquire what such an argument is worth. If we are told that "Nature" bids us purge, let us ask what this Nature is. Is she a reality, or is she a phantom—one of the *idola fori*, or "phantoms of the market," which Lord Bacon bids us beware of?

Now, the phantom word Nature may be used in at least twenty different senses, good or bad, useful or absurd. It may mean existences the most opposite. Sometimes it is used as a decent veil under which to speak of the Creator; sometimes, again, of the totality of things created. For our present purpose, however, and so far as the word tyrannises over the Practice of Medicine, there are four totally different senses in which it is used.

First of all, it is used to signify creation or created things generally, animate and inanimate. Secondly, things as they are, uninfluenced by any control, whether of intellect or conscience. Thirdly, things as they ought to be. And fourthly, it is used to signify not things at all, but a kind of superintending power or goddess which knows right from wrong, which is capable of acting or not acting, according to circumstances;—which has will, judgment, and capacity of action. We surely, then, have a right, before we swallow the black dose which we are told Nature prescribes for us, to ask, which Nature?

Children born out of wedlock are called "natural,"

> "Who, in the lusty stealth of *Nature*, take
> More composition and fierce quality
> Than doth within a dull, stale, tired bed,
> Go to creating a whole tribe of fops
> Got 'tween asleep and wake."(b)

But, if a father, obeying the "law of Nature," get a son and call him "natural," why is a son who naturally wishes his father dead, in order that he may have means for similar natural pleasures, to be called "unnatural"?

> "*Edmund*. I have often heard him maintain it to be fit, that sons at perfect age and fathers declining, the father should be as ward to the son, and the son manage his revenue.
>
> "*Glocester*. O villain, villain! abhorred villain! *unnatural*, detested, brutish villain!"

Now, if in a matter of morality we are to follow Nature, which Nature shall it be—the Nature which says follow your lusts, or which says check them?

So, again, in matters of fact. Some people tell us that it is "natural" to drink water and nothing else; others, that it is "natural" to eat vegetables only. But do they ever tell us whether they would like the tough, bitter, austere fruits and vegetables which "Nature" presents us, or may their celery and lettuce be bleached by art? may their apples and peaches be made plump and luscious? may their rams and bulls be converted into wethers and oxen, and their cocks into capons?

(a) Cf. οἴδαμεν ὅτι οὐδὲν εἴδωλον ἐν κόσμῳ—"We know that an idol is nothing in the world."—*St. Paul.*

(b) King Lear, act i., sc. 2.

Devotees as they pretend themselves of Nature, they know better than to refuse the aid of art, for in good truth art is part of man's nature.

> " Nature is made better by no mean,
> But Nature makes that mean: so that o'er art
> Which you say adds to Nature, is an art
> That Nature makes. . . There is an art
> Which does mend Nature—change it rather: but
> *The art itself is Nature.*"(a)

We repeat what we have said once before—in morals conscience is the judge by which Nature's promptings must be tried; in Physic, reason and experience. If those spontaneous processes, or natural promptings—or, in other words, if leaving a patient alone and letting him have what he likes—are shown by experience to lead to a happy result, be it so; or if experience shows that diarrhœa and cholera are best treated by purgatives, we will obey. But if experience shows otherwise, let us control Nature. In every case, reason and experience are called in to decide whether the "natural" (*i.e.*, the existing) process is a salutary one. We are told to purge in cholera, because it is Nature's own mode of relief. She knows that the blood is poisoned, and opens the bowels to let the poison run out. *Quære:* Why does she lock the bowels up in Colica Pictonum? Is that part of a process of cure? If we are not to stop the "natural" purging in cholera, why do we dare unstop the "natural" constipation in painter's colic? Anyhow, the end and glory of man is to reign over Nature; to gain that "empire over creation," as Lord Bacon phrases it, the means whereto are the Arts and Sciences.

We must, as conductors of a Medical journal, hunt out and suppress error as it comes to light; and if there be any amongst us simple enough to propound a doctrine of the ruling of "Nature," and simple enough to believe it, we may save some lives by showing them that the phantoms which oppress their understanding, and the means of emancipation, were well known to those great masters of human nature, Bacon and Shakspeare.

INSANITY IN FRANCE.

The development of madness amongst the inhabitants of any country is a subject which deserves the fullest investigation. Official records both in France and England show that year by year madness is spreading—so far, at least, as can be judged from the increasing number of patients coming under observation in the institutions appointed for their reception. Speaking generally, it is within our experience that the notion of diseased minds becoming more common than they formerly were, is very widely entertained; and perhaps we may trace this belief in some measure to statements which have been made by Lord Shaftesbury, who is the Chairman of the English Lunacy Commissioners, to the effect that the high pressure at which business affairs are now conducted, and the immense amount of speculation going on, conduce to the development of a state of mental and nervous excitement subversive of the equilibrium of nature. Is it a fact capable of substantial proof that, *cæteris paribus*, insanity is increasing? Granting the augmented residents in asylums, do they increase in a corresponding ratio with the general population either of this or any other country, and to what extent is that increase affected by the undoubted disposition towards a more ample provision for humane and charitable purposes now manifested happily in all the chief states of Europe? These are very important questions to be determined, and all observations which will help us to a clearer conception of the points of difficulty involved will be properly appreciated by those interested in the subject.

Unfortunately, our own Lunacy Commissioners, for some reason or other, hardly ever venture in their reports beyond a stereotyped meagreness of detail which deprives them of value; and they are aptly characterised by a French writer as *un peu trop concises encore.* In this respect they show very disadvantageously by the side of such elaborate and really excellent productions as the recently-published Report to the Emperor from M. Armand Béhic, the Minister of Agriculture, Commerce, and Public Works, entitled *Statistique des Asiles d'Aliénés de* 1854 *à* 1860. The Minister has the advantage of a most able collaborateur in M. Legoyt, whose *Etude de la Folie en France* is full of most interesting matter touching *une maladie qui soulève les problèmes les plus ardus de physiologie et même de psychologie.*

Before analysing the details relating to the patients under treatment in asylums, it is important to arrive at some idea of the progress which insanity is making amongst the French people *en masse*, because the results in the former case would depend on the relative amount of asylum accommodation if it were desired to institute a comparison with other countries. There is, of course, great difficulty in obtaining returns approaching to any degree of exactness of the number of persons of unsound mind. For many cogent reasons we should naturally expect an understatement; and not the least of these is the dislike of families to have it publicly known that any of their members are afflicted with a malady so painful in its results to every one concerned. The influences which would militate against a correct return in one country would probably, however, have equal weight in another; so the force of comparison is unaffected. Taking, then, the three last census enumerations in France, very striking deductions follow from the facts thence derived. In 1851 there were in the aggregate 44,970 persons suffering under one or other kind of mental disorder; in 1856 the number rose to 60,290; and in 1861 it was still further raised to 84,214. The ratio of increase was 34 per cent. in the first quinquenniad, and 39 per cent. in the second. Dividing the insane into two classes, a very remarkable difference is apparent; for while the inmates of asylums increased 51 per cent. in ten years, the *malades à domicile* increased at the rate of 118 per cent. M. Béhic believes that the augmentation *énorme et vraiment inexplicable* of those living at home is due rather to omissions in former inquiries and increased care taken at the last census than to any such actual increase of the malady as the foregoing figures would imply, more especially *lorsqu'il est notoire que beaucoup d'aliénés indigents autrefois conservés par leurs familles sont aujourd'hui placés dans les asiles.*

But in order to measure more accurately the progress of insanity, we must take into account the growth of the population out of which the cases at the different periods occurred. Thus in 1851 there was 1 insane person to every 796 of the population of the empire; in 1861 the proportion was 1 to every 444 persons, which is equivalent to an increase of 83 per cent. in the ten years. The inmates of asylums increased 87 per cent. in the same period, and the difference between these two ratios comes very near to the ascertained increase of the French population in the ten years.

Now we are well aware that much may be said against accepting these deductions as to the rapid development of insanity in France, and we should not, therefore, make them the basis of any comparison with other states, did we not believe that, for the reasons already adverted to, the margin of error is universal.

The English Lunacy Commissioners report that on Jan. 1, 1864, they were "concerned more or less in the welfare of 44,695 persons of unsound or defective intellect," 38,154 of whom were located in asylums, workhouses, etc., and 6541 were living with relatives or in lodgings. Allowing for cases not coming under the cognisance of the Commissioners, we may estimate the total number of insane to have been at that period in round numbers about 45,000. This would give one insane to every 450 of the entire population, which is, therefore, a little more favourable than the most recent estimate for

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(a) Winter's Tale, act iv., sc. 3.

France. Mr. Lutwidge, one of the Lunacy Commissioners, in his evidence before the Select Committee on Lunatics in 1859, stated that the ratio of the insane to the gross population was at that time one to every 520 persons; consequently, there has been an increase of 15 per cent. in the ratio during the five years since 1859. Here, then, we find that, taking the nearest approximate period of five years, the relative increase of population and insanity in the two countries will stand thus:—In France the population increased 2 per cent., and in England 5 per cent.; the numbers insane in France increased 40 per cent., and in England 21 per cent.; the ratio of insane to population in England was 15 per cent., and in France 37 per cent. Therefore, if these figures are worth anything at all, they clearly show that, after allowing somewhat for the greater accuracy of M. Béhic's returns, mental disorders are being reproduced twice as fast in *la belle France* as amongst the inhabitants of this island. At any rate, it is certain that the comparison is more equitable than any which can be drawn from the insane under treatment in institutions, inasmuch as the amount of asylum accommodation is not equally distributed. In France, for instance, they have only one asylum for every 370,000 of the population, but in England there is one to every 125,000 persons; and this disparity would, one might suppose, tell strongly in favour of France as tending to repress the numbers coming under treatment.

We hold, then, that the increase or diminution of the patients under restraint is no fair test of the actual movement of insanity; it may, and no doubt does, simply imply an increased disposition towards humane administration, or the reverse. So when M. Béhic tells us that in 1836 the ratio of inmates to the total population was as one to 3024, whilst in 1861 it was as one to 1214, and that, therefore, the population increased only 10 per cent. in the interval, whilst the inmates increased 172 per cent., we accept the statement, but it proves nothing more than that the authorities have recognised their duty of providing increased accommodation since 1836. Both in the English and French asylums the annual rate of increase of the inmates has declined in the last ten years, and probably for the same reason — namely, that the room available for new patients in both countries is pretty well exhausted. At the end of 1860 there were but 1321 vacant places in all the French asylums, and the recently issued report of the English Commissioners(a) shows that not above 1000 more patients could be received in the public institutions. Indeed, we notice that in Devon the total accommodation is put for 673 patients, yet the actual inmates number 690. In Kent they appear to have more than 100 patients in excess of their accommodation, and the same incongruity is shown in two other counties. There are, however, instances in the same tabular arrangement suggestive of loose supervision, and it is possible the facts we have quoted are not strictly accurate. M. Béhic shows that the rate of increase in the admissions has decreased very considerably; and in England the numbers themselves fell from 9243 in 1860 successively to 8955, 8803, 8588 in 1863. It is true they rose again to 9367 in 1864, and to 10,341 in 1865, but nobody can doubt that this sudden increase was due to extended accommodation rather than to any sudden manifestation of mental aberration in excess of the ruling average. May we, however, venture to suggest to the Lunacy Commissioners that such an increment should have been referred to by them, and some explanation of its cause given? It is, perhaps, good in a general way that people should have to find out many things for themselves, but in a matter where mistaken conjecture might lead to very erroneous inference, the fullest information is desirable. *Verbum sap.*

Next week we hope to analyse still further M. Béhic's very interesting report. When a foreign official condescends to give us enlightenment which we look for in vain nearer home, we cannot do less than pay him the compliment of carefully investigating his conclusions, especially when they relate to a malady which, for aught we know, may perchance befall journalist or readers indiscriminately.

WANTED! MORE HOSPITALS FOR DISEASE OF THE HEART.

"Artium magister venter!"—Persius.

We have seen a copy of a peculiarly snuffling, canting letter which is circulated amongst the benevolent public on behalf of a Hospital for Diseases of the Heart. We give the circular in full, as part of the Medical history of the nineteenth century:—

> "Hospital for Diseases of the Heart,
> "67, Margaret-street, Cavendish-square,
> "June 5, 1866.
>
> "Dear Sir,—Permit me to recommend to your benevolent consideration the claims of the above Hospital for your sympathy and support. Enclosed you will find a synopsis of the report, and I feel assured, from the kind aid you have rendered to other institutions similar in their character, that this appeal will not be made to you in vain; but for the sake of the great Saviour of our race you will give that assistance it so greatly stands in need of at the present time.
>
> "With much respect,
> "I am, your obedient servant,
> "Eldridge Spratt."

Of course the usual threadbare arguments may be put before the ignorant on behalf of the new institution. It may be asserted that diseases of the heart are more prevalent than heretofore; big-looking figures may be quoted from the Registrar-General to show the gross numbers who die of such diseases; their sudden fatality may be hinted at; the sly assertion may be made that *ordinary* Practitioners may not be gifted with the skill and experience necessary for the detection and cure of heart disease; and we may be told that the old Hospitals are too full, and that the patients cannot receive sufficient attention, etc., etc. If things go on at the present rate, the Physician or Surgeon will run the risk of being starved in the midst of abundance, and of seeing every organ claimed by a specialist. The Nervous System is clearly going; Phthisis and Diseases of the Chest have long been made over; the Eye, and Ear, and the Teeth have each their special cultivators; the Throat cannot be swabbed nor the Skin anointed without a Laryngoscopist or a Dermatologist; Dyspepsia and Piles have devotees who "pay special attention," etc., etc.; and now the Heart is going. It will soon require at least half-a-dozen men to examine one patient.

On the sound principle that we cannot have too much of a good thing, we venture to prognosticate a great success to any two institutions, one of which shall take the right side of the heart, the other the left. The Bishops might be expected to interest themselves in the Mitral Valve, whilst the Tricuspid might be left to the Dissenters.

THE WEEK.

ROYAL COLLEGE OF SURGEONS.

The annual election of Fellows into the Council of the College took place on Thursday last, and though not of such an exciting character as last year, there was still sufficient interest evinced by the Fellows to show the importance they attached to the election. The hour for commencing the proceedings was 2 o'clock, but long before that time a great number attended to inspect the Museum and the large and highly interesting additions made to it since the last election, which were displayed in the theatre and adjoining committee-room, and of which we publish an account in another page. Punctual to the time appointed, Mr. Wormald, the President, accompanied by the Vice-Presidents, Messrs. Partridge and Hilton, entered the library, where the Fellows were assembled.

(a) Twentieth Report of the Lunacy Commissioners, p. 7.

The President at once explained the object of the meeting—viz., the election of two Fellows into the Council in the vacancies caused by the retirement in the prescribed order of Messrs. Luke and Hilton, who, however, offered themselves for re-election, together with Messrs. Erasmus Wilson and Charles Hawkins—and informed the Fellows that the other gentleman on the list sent to them—viz., Mr. Spencer Smith—had requested his name to be removed on the present occasion. He then called on the Secretary to read those portions of the by-laws relating to elections into the Council. This having been gone through, the President explained that the mode of conducting the voting was by each Fellow signing his name and address on the blank forms provided for that purpose; and on another form, containing the names of the candidates in chronological order, they were to draw their pens through those for whom they did not vote, taking care, however, not to leave more than two names in the list. These forms having been filled up, one was to be handed to himself and the other to the Secretary; he then invited the Fellows to proceed to their choice of the candidates. This having been gone through, and all present appearing to have voted, the President stated that, in pursuance of the provisions of the charter, he should keep the ballot open ten minutes. Other Fellows continued to arrive, and being desirous of voting, it was not until 4.15 p.m. that the poll was finally closed. The President then called on the Clerk to take down the result, and directed that duplicate copies of the forms should be given to any Fellow desirous of checking the return. The balloting-box was then opened, and the names called out and duly recorded. It at once became evident that Mr. Hilton would deservedly return to his vacant chair, as nearly every paper appeared to contain his name, so often was it called out by the Secretary, either alone or in connexion with one or other of the candidates. The President then having exhibited the empty box, and the result of the analysis having been communicated to him, he declared that the choice of the Fellows had fallen on Messrs. Hilton and Hawkins, who were consequently duly elected members of the Council. The numbers polled by the different candidates were as follows:—Hilton 162, Hawkins 113, Luke 86, Wilson 35. The numbers of plumpers being—for Hilton 17, Hawkins 30, Luke 6, and Wilson 8. It is deserving of mention that the only reason for rejecting Mr. Luke arose from the fact, as an Irish elector stated, of his long and honourable connexion with the College, of which he had been twice President, and where he will still remain a member of the Court of Examiners. In the evening the Fellows dined at the Albion Tavern, under the admirable chairmanship of Mr. Wormald, the President, who was surrounded by upwards of one hundred of the most distinguished metropolitan and provincial Surgeons, who attended from great distances—as Ceely, Aylesbury; Cardell, Salisbury; Cantrell, Wirksworth; Lund, Manchester; Paget, Leicester; Turner, Manchester; Wiblin, Southampton; Fox, Broughton.

THE CHOLERA.

This disease is prevalent at various points along the north of France, from Penmarch (Finistère), L'Orient (Morbihan), and Nantes in the extreme west, to Hesdin (Pas-de-Calais) and Courcelles-Chaussy (Moselle). It has also broken out at Lille. But Amiens is the place where it has been raging with the greatest intensity. Nearly fifty persons died there on Monday. The epidemic (says *L'Union Médicale*) appears to be confined to the centre of the old town, where the population is most densely packed; the more elevated parts and the suburbs remain yet untouched. We regret to find that two Physicians of the place, M. le Dr. Léger, and M. le Dr. Thuillier, *fils*, together with five sisters of charity and the venerable curé of one of the parishes of Amiens, have fallen victims. Yet there is no panic in the town, and the best feeling prevails, encouraged, no doubt, by the example of M. Béhic and of the Empress, who have paid visits to the patients in the public Hospitals. Cases of *foudroyant* cholera—that is, unattended with premonitory symptoms—are said to be far from uncommon. We should very much like to know what water do the people of Amiens drink? And how do they dispose of the excreta of the sick? Are Condy's liquid and Crace Calvert's carbolic acid known as disinfectants, and used? We are likely, however, to have an opportunity of testing the value of various disinfectants nearer home, if it be true that several fatal cases of diarrhœa and of Asiatic cholera have occurred at Batley and Dewsbury, in Yorkshire, in places infamous for dirty overcrowded hovels and collections of filth. It appears, however, that the case of the captain of the ship *Messenger*, who died at Brixham, was not true cholera, but debility from anxiety of mind. Moreover, one case of choleraic diarrhœa was reported as having occurred in South-street, Grosvenor-square, the week before last, but we believe that the investigation of the Medical Officer of Health shows it to have been a case of modified pyæmia after vaccination. The patient, a child of six months, was quite healthy until vaccinated, but never afterwards. It suffered from a succession of abscesses beginning in the axilla, and from diarrhœa; it was sent out of town, but returned worse, and died soon after from a sudden increase of the diarrhœa.

TESTIMONIAL TO MR. GRIFFIN.

A meeting of Poor-law Medical Officers was held on Thursday last at the Freemasons' Tavern, for the purpose of presenting a testimonial to Mr. Griffin, in recognition of his indefatigable exertions in the cause of Poor-law Medical Reform; but we are compelled to reserve further details until next week.

EPIDEMIOLOGICAL SOCIETY.

At the meeting of this Society held on Monday, an exceedingly interesting paper on "The Rinderpest and its Bearings on the Question of Epidemic Diseases in General," was read by Dr. Sanderson. The author began with some general remarks as to the influence of theory in therapeutics on the one hand, and in the prevention of disease on the other hand, and the necessity of understanding the nature of the agency against which we are called upon to operate in the attempt to prevent its action upon healthy bodies. He then commented upon the importance of observing phenomena amongst the lower animals—a branch of scientific inquiry much neglected in our own, but not a little cared for in foreign countries; the value of *experimental* evidence especially being insufficiently appreciated. The recent inquiry into cattle plague has opened out, or rather stimulated English pathologists to the employment of, a new method of inquiry. Diseases can be better studied in animals for many reasons; experiments can be easily conducted, and the most perfect control and regulation exercised, whilst the origin, early nature, and course of phenomena can be readily determined. Moreover, a very perfect comparison can be instituted between healthy and diseased conditions. In man the *obvious* interruption of natural processes is taken as the early state of disease. In animals we are enabled to ascertain at starting the exact conditions of health, and then the first deviations from them—by such experiments, for instance, as inoculation. In this way the stage of incubation is at once determined. It is also possible to study the subsequent *succession* of changes very accurately, the only limit to success being imposed by the time and patience of the observer. At first the rough outline can be obtained, then fuller details sought for, points of doubt investigated, and omissions filled in. In animals experiments can be controlled or remodelled to suit any special requirement. Every function can be estimated in a trustworthy manner, for there are no mental conditions, no nervous symptoms, no hysteria, or the like, to interfere. Dr. Sanderson then referred (1) to the relation of Rinderpest to human diseases, remarking that it has been supposed by many that every bestial disease must have its analogue in man, a doctrine that he did not countenance; (2) to the particular line of investigation which he had undertaken for the Commissioners, giving a digest of his conclusions and suggestions for further research, urging that further experiments ought to be made at once, now that the opportunity offers itself, for probably all morbid poisons belong to the same genus as that of Rinderpest, and certainly no great progress will be visible until facts be substituted for present speculations. Dr. Sanderson suggested that as the virus exists throughout all the blood, that diffusion experiments might determine with what component the poison is especially associated. Again, experiments might be instituted with each component of the blood or serum to ascertain the same fact. Then as to the nature of the poison, many speculations demand criticism. If, as Dr. Richardson believes, the poisons of zymoses be of an alkaloid nature, and that of Rinderpest would be ranked with them, then the *salts* of the poisons would necessarily be detected by the diffusion apparatus. It is desirable too to show the changes which the virus undergoes under the influence of physical and chemical conditions, how long it retains its activity after removal from the body. The experiments made with cholera poison by order of the Bavarian Government seem to show that no effect is produced by the exhibition of fresh intestinal evacuations, but that the worst results followed the action of the smallest quantity of dried cholera dejections—fluid kept a few days until it had dried. This seemed to show that cholera poison is not volatile, and that the *mature* poison is not held by the patient, but to produce this some "molecular" change must take place in it, and this requires time for its accomplishment. Further, there are some who believe that all that is necessary for the production of zymotic disease is the mutual action of poison and blood; others, that some special change must take place in the local inoculated part. This matter might be set at rest by experiment—inoculating the tail, and then removing it after sufficient time for mere absorption to occur had elapsed. Lastly, it has been shown that the whole mass of the blood fifty hours after inoculation holds the poison in each smallest quantity. May the blood become "virulent" before this time? Experiments are needed to determine this question. Dr. Sanderson then referred to Mr. Crookes's report, especially to that part of it relating to the fact of the existence of the poison in the air. Mr. Crookes passed the air of infected sheds through glass tubes containing wool, the inoculation with the fluid obtained from the wool producing Rinderpest. Dr. Sanderson's observations are calculated to excite additional attention to that doctrine to which all facts seem to converge and give support—the organic living nature of the poisons of zymotic diseases. Dr. Sanderson's researches in Rinderpest are unquestionably amongst the most exact and important made in any subject of late. We can only hope that he may be enabled to prosecute his inquiries farther, and especially into the nature of the poison.

REGISTRATION OF VACCINATION—CAN IT BE ENFORCED AT LAW?

We sent the following case to a barrister well-known to have given great attention to Medical matters, and received the opinion which we subjoin:—

"A private Practitioner is threatened with *mandamus* by the Board of Guardians, unless he send to the District Registrar his certificate of vaccination, successful or otherwise, in every case in which he performs the operation."

Opinion.—"The duty of sending a certificate of successful vaccination is equally imposed upon the Practitioner performing the operation, whether he be an appointed public vaccinator or not. By section IV. of the 16 and 17 Vict., cap. 100, every Practitioner who shall have performed successfully the operation of vaccination is to deliver a certificate thereof to those in custody of the child, and to forward a duplicate of such certificate to the Registrar of the sub-district in which the operation was performed. In the event of his refusing or neglecting to forward such duplicate certificate, I do not think that the Court of Queen's Bench would grant a *mandamus* to compel him to do so. In such a case, if the Guardians take any steps at all, it appears to me that their proper course would be to proceed by indictment against the recusant or negligent person for not complying with the Act. It would then rest with the tribunal before whom the indictment was heard to determine the penalty, as none is prescribed by the Act. In one or two cases this course has been adopted, and the defendant has got off only on payment of the costs in the case. Sections V. and VII., which require the Practitioner to whom a child is brought to give to its custodians a certificate of the ill-success of vaccination, or of his opinion that such child is insusceptible of the vaccine disease, as the case may be, contain no provision for the delivery to the Registrar of a duplicate of such certificate. It can, therefore, be in cases of *successful* vaccination only that an indictment could lie.

"July 4, 1866."

ANIMAL INGRAFTING.

The possibility of re-uniting parts of the body cut off has long since been completely admitted, and we have on record numerous cases of fingers, ears, chins, cheeks, completely separated from the body, and restored to it with perfect success. Besides, many a shaver accustomed to strop his razor on the palm of his hand is familiar with the fact that if he happen to lop off a slice of his integument, he has only to stick it on again and it will adhere.

Physiologists have tried to effect analogous restorations in the case of the lower animals. They have done more; they have transferred the tissues of one animal to another, often of a different species. Feathers have been planted in the backs of dogs, and have grown; human teeth have been fixed in the comb of a cock, and have taken root. It is well known that John Hunter made some striking and successful experiments in this line, as shown by his specimens in the Museum of the College of Surgeons; and many other scientific Surgeons, especially on the Continent, have followed the practice with similar results; but it has remained for Dr. Paul Bert, assistant to M. Claude Bernard, recently to throw the greatest light on this curious department of experimental physiology.

Dr. Bert terms this new phase of art animal ingrafting. His experiments open up an extensive field of scientific inquiry. Animal ingrafting enters, at certain points, the confines of reparatory Surgery, and includes within its domain every branch of autoplastics, or the art of repairing loss of substance. On the other hand, it extends to teratology, that branch of embryology concerned with the production of monstrosities which seem often formed of two individuals soldered together—in point of fact, ingrafted one upon the other by natural processes, which can be imitated by experiment.

Dr. Bert has shown that ingrafting re-establishes every anatomical connexion, and permits the transference of every organised substance from one animal to another. But, in point of fact, what is there in the well-known transfusion of blood from one animal to another but a veritable liquid ingrafting? The blood, with its globules, which are definite anatomical elements, after being separated from one body enters the living organism of another, ingrafting themselves on the mass in circulation.

In the present practice of animal ingrafting, it is not a piece of tissue or a part quite ready that is to be applied, but pieces or parts which can be fashioned in far better conditions, and which will almost for a certainty adhere and become organically united. In order to success, we must secure in the patch to be applied a point of attachment with the rest of the body. This pedicle in its normal condition contains vessels, so that the patch will share in the circulation sufficiently to prevent it from perishing whilst waiting for the formation of new vessels which will place it in communication with its neighbourhood. As soon as the new union is effected, this pedicle may be cut off without danger.

Not less curious are the phenomena presented by the transformations of the parts thus transplanted, and the facts have very great significance in a physiological and therapeutical point of view. If a piece of skin be used to restore absent lips, it will conform to its new requirement or destination, and change into mucous membrane at all points in direct relation with the cavity of the mouth; on the other hand, and reciprocally, if a mucous membrane be brought outwards and exposed, it becomes true skin. Muscular tissue, when transplanted, often disappears and is absorbed; on the contrary, the periosteum possesses the singular property of reproducing bone by its inner surface, so that, by adjusting patches of periosteum taken from the vicinity, Ollier and Nélaton were enabled to create a base of bone for repaired noses, whilst Langenbeck thus restored the osseous portion of the cavity of a palate, the perforation of which he had to fill up.

What are the new connexions established between the graft and the subject receiving it? Is ingrafting possible between animals of different species? Does the success of ingrafting materially depend upon the relation of the region from which we borrow the graft with that in which it is planted? What are the modifications of the graft after it has adhered? Finally, what are in general the favourable or unfavourable conditions of success in ingrafting? Obviously we might multiply *ad infinitum* the problems to be proposed in this curious inquiry, but we shall cite only a few of the most important—those, in fact, the solution of which may suggest new inductions to Surgery.

Dr. Bert has succeeded in soldering two animals together. He calls this species of ingrafting Siamese, after the celebrated twin-monsters publicly exhibited some thirty years ago under the name of the Siamese Twins. Two rats, fifteen days old, were ingrafted together by the lateral part of their bodies. For this purpose an incision was made in the skin; a common suture from one rat to the other joined the lips of these party-wounds, and a bandage kept the animals one against the other so effectually that in six days they were solidly soldered together by the cicatrix, and could be left to themselves in their twin condition. The positive union being effected, the next point to verify was whether there existed between the two animals an interchange of vessels to establish a functional solidarity between their bodies. In order to test this, Dr. Bert injected beneath the skin of one of the rats an alcoholic solution of three centigrammes of atropine. In half an hour, the rat which had not been injected presented a notable dilatation of its pupils. Great care had been taken to prevent all direct contact between the second rat and the substance injected into the first; consequently, it could only be through the communication of the two blood systems that the atropine could pass from one animal into the other.

This Siamese ingrafting was effected in other conditions, and still more hazardous; Dr. Bert laid open the abdomen of two rats, and brought the intestines of one in close contact with those of the other; the graft succeeded equally well.

Siamese ingrafting succeeded between neighbouring species; the white rat *(Mus rattus)* was soldered to the field rat *(Mus decumanus)*, a white rat to the Barbary rat *(Mus striatus)*; but the experiment failed betwixt a rat and a guinea-pig. Perhaps the failure must chiefly be ascribed to the indocile nature of the latter, which, in the experiment, lived on very bad terms with its companion, and finally stifled it on the third day. It appears that this Siamese ingrafting is by no means relished or approved of by the animals in question. Dr. Bert constantly found that the two rats thus united got more and more disgusted with each other the longer they were kept together; in fact, it was a case of mutual and uncompromising aversion; at the end of two months, at the most, it was absolutely necessary to separate them—they would have devoured each other. It is satisfactory to know, to the honour of human nature, that it was very different between the Siamese twins, who manifested the greatest affection for each other, and always lived in perfect harmony.

After these experiments with the rodents, Dr. Bert overleaped a huge interval in the zoological series, and tried to ingraft together two animals of a totally different species—a rodent to a flesh-devourer—positively a rat to a cat! After six failures, he at last succeeded; and at the end of six days after the operation, which was successful, the adherence was sufficiently complete to prevent the rat from separating from the cat. Now, the adherence did not exist between the skins of the two animals, but between the deep parts, and yielded elastically to the strongest pull without separation; it was a complete union. The injection of atropine was tried in this case also, and with the same effect as in the former instance. These results, although as yet incomplete, are sufficiently encouraging, and tend to show that ingrafting is possible between animals of very different species.

With the view of testing the function of the nerves of sensation, Dr. Bert ingrafted the tail of a rat on the back of the same animal; but he implanted the tip of it, allowing the base to stand out. After rooting, the tail was for a long time insensible; after the lapse of some months, however, the animal manifested pain when the tail was pinched, which proved that the nerves had got into communication. But how did the nerves act? Why, just in the contrary way to common experience—namely, from the base of the tail to the tip of the organ implanted in the back. When the tail was pinched the rat, in self-defence, tried to bite; but mark the result, its attempts to bite were not directed to the part pinched, but to the region of the skin of the back where the tail was ingrafted. By degrees, however, the rat got habituated to distinguish the true point of the pinch, and defended the extremity of its transplanted tail without making a mistake. It is obvious that here the transmission of sensation in the nerve was reversed in direction—from the base to the tip—and that "education" or habit was required, as it seems to be in all cases, to distinguish the point of reference.

The persistence of vitality in the parts after removal from the body is very surprising. Dr. Bert cut off the tail of a rat and dried it in the vacuum of an air-pump, and in the vicinity of concentrated sulphuric acid, in order to remove all its humidity. He then placed it in a glass tube, and there kept it enclosed for five days. Then he exposed it for several hours to the temperature of 176·4° F. in a dry stove, and then replaced it for four days in its tube. He then ingrafted this veritable animal mummy, and it took root. Three months afterwards the vessels, as demonstrated by injection, had formed in the ingrafted part precisely as though it had been transplanted quite fresh from one animal to the other. In short, it appears that the parts may be washed in almost any solution not acid, and exposed to very high temperature, without detriment to their vitality.

Lastly, Dr. Bert has shown that the organs ingrafted, when subjected to the influence of energetic modifications, are attacked by various diseases. Then, by killing the animal at various epochs, he has been able to trace the progress of these lesions, and he hopes to render in this line considerable service to Medicine, by being able to produce at will certain diseases whose phases of evolution he will be able easily to study, and so trace to definite causes their analogues in human nosology.(a)

(a) "Recherches Expérimentales pour servir à l'Histoire de la Vitalité des Tissus Animales," par Paul Bert, in the *Annales des Sciences Naturelles*. 1866.

PARLIAMENTARY.—NUISANCES AT LIVERPOOL—THE GAS WORKS AT VICTORIA PARK.

In the House of Commons on Thursday, June 28,

Mr. Samuelson asked the Vice-President of the Council whether his attention had been called to the fact that, notwithstanding the warning which the local authorities at Liverpool had received in the occurrence of recent cases of cholera, accumulations of night soil had been allowed near populous parts of the town from which typhus fever was never absent.

Mr. Bruce said he had received an unofficial intimation of this state of things, but the hon. member did not seem to be aware that, though the Privy Council had power to institute inquiries in cases where epidemics had broken out, they had no power to compel the local authorities to adopt precautionary measures beforehand with regard to any particular nuisance. There was a Bill now before a Select Committee of the House by which a power of this nature was proposed, but at present nothing could be done by the Privy Council.

On Friday, we are glad to say that the House of Lords, by a majority of 27 to 26, threw out the Bill of the Imperial Gas Company, which was to have permitted the erection of a gas manufactory in the immediate vicinity of Victoria Park.

FROM ABROAD.—THE SUBCUTANEOUS METHOD—POPULAR LECTURES IN FRANCE.

M. Guérin, in the memoir the propositions of which we presented last week, did not act very wisely to refer so directly to M. Velpeau, for he aroused the old lion, who quickly showed that his objections were not mere prejudices, but founded on reasoning of which he was well able to maintain the soundness. While cheerfully admitting M. Guérin's great merit in so perseveringly following out the practice of the subcutaneous method, he cannot, in face of the facts placed on record by Delpech, Stromeyer, and Bouvier, admit that he is really its originator, nor can he agree with him in the exclusiveness of its advantages, and in the interpretation of its phenomena. Indeed, he is in a position to deny one of the leading propositions—viz., that subcutaneous wounds never suppurate, unless through the unskilfulness of the Surgeon; for he has met with cases which have been under M. Guérin's own care and still have suppurated. And even without these cases, do we not often meet with suppuration after dislocations without breach of the skin, and in which the air has been much more carefully excluded than can be the case in any subcutaneous operation?

"In fine, subcutaneous incisions do in fact rarely give rise to suppuration; but this is a fact admitted by everybody, and which has been announced before M. Guérin, but in a far less absolute manner than that which he is seeking to establish. I cannot admit that he has resolved the question by the simple statement:—'With air suppuration; without air no suppuration—*i.e.*, immediate organisation.' M. Guérin is much attached to the mode of arguing based upon philosophic induction, and he employs it by appropriating to himself discoveries which he only shares with others. Let me be allowed a comparison. Suppose that in a field open to all and cultivated by all, each bringing his labour and his industry, and receiving his share of the product; some one raises a palisade, and declares 'No one shall enter here nor labour here without my permission.' This field represents the subcutaneous method, which M. Guérin has thus seized hold of. Now what I want is that every one who has worked at this method should have his share of the merit. That belonging to M. Guérin I do admit is a large one; for it is he who has generalised the method, and no one has been engaged with it and employed it more than he has; but he makes use of language which may impose on some Surgeons, and which I think I ought to correct. I have a great esteem for him; I pay homage to his talent, and I applaud his ardour in scientific research—an ardour which the progress of age has not diminished; but he is obstinate, as I have found out during this thirty years. On my side, too, there is no deficiency of perseverance, and whenever I find him reproducing what I have already combated, I cannot resist the impulse to ascend this tribune."

The rage which has prevailed lately in France for popular scientific lectures may be judged of by some figures recently published by the Minister of Public Instruction. Lectures of no sort whatever can be delivered without due authorisation in France, and between November, 1865, and April, 1866, there were 865 such authorisations granted, Paris having 235 of these to her share. Between 500 and 600 were given in Academies or under their auspices, and 152 under the auspices of the Municipal authorities. As a general rule the auditory has been very numerous, frequently amounting to 500 or 800, and even reaching 1200 or 1500, the places assigned for the lectures often proving far too small to admit all desirous of attending. The lectures were delivered by, amongst others, 2 Councillors of State, 9 Members of the Institute, 100 Professors in Faculties or superior schools, 143 Professors in Lyceums, 88 Professors in Colleges, 16 magistrates, 32 public functionaries, 22 free Professors, 29 advocates, 53 Physicians, 3 architects, 21 engineers, 7 priests, 3 pastors, and 3 military officers.

REVIEWS.

Die Grossen Volkskrankheiten des Mittelalters. Von J. F. C. Hecker; Gesammelt und Herausgegeben von Dr. August Hirsch, Professor der Medicin, Berlin. Berlin: Enslin. 1865.

The Epidemics of the Middle Ages. By Dr. J. F. C. Hecker. Collected and Edited by Dr. A. Hirsch, Professor of Medicine, Berlin. Pp. 432.

Although in England, owing to the exertions of the old Sydenham Society, we have long possessed a complete edition of Hecker's tracts on the epidemics of the middle ages, it is but recently that they have been collected into a single volume in Germany. This has been done by the well-known Dr. Hirsch, so distinguished in this line of research, who has also added considerably to the contents of the volume.

The first epidemic noticed is that which ravaged Europe in the time of Justinian during the sixth century of the Christian era. Its appearance was ushered in by many signs and wonders—comets, earthquakes (one of which laid Antioch in ruins and destroyed 250,000 people), rivers overflowing their banks and devastating the surrounding country, and extraordinary summer heats. In January, 531, the plague appeared at Constantinople, and on this occasion 10,000 people, chiefly strong and healthy young men, lost their lives. For eleven years after this it slumbered, occasional outbreaks showing that it had not entirely disappeared; but in 542 it broke out with renewed violence, spread rapidly over Egypt, Syria, and Asia Minor, and in the following year again made its appearance in Constantinople. The symptoms observed during the epidemic were the ordinary buboes in the groins, armpits, and even on the throat, with strong fever and delirium, black spots the size of a lentil over the whole body, and vomiting of blood—the two last symptoms only appeared as the immediate precursors of death. During this outbreak, which lasted four months, young women suffered more than young men, and the daily mortality sometimes exceeded 10,000. The deplorable condition of the Byzantine Empire at this period is very well described, but we can only allude to it here, and hasten on to mention that by the end of the century (for the plague lasted as long) several cities had been completely depopulated, and the Eastern Empire deprived of half of its inhabitants. From Syria the plague spread eastwards and westwards, ravaging Central Asia and leaving Western Europe without hands to collect the crops, or shepherds to protect the flocks, and its houses inhabited by wild beasts. Nor did this dreadful scourge cease from its devastations until the beginning of the seventh century.

Small-pox in the sixth century.—Simultaneous with the ravages of this plague, and in the year 582, a new epidemic arose in France, characterised by small white smarting pustules, which appeared on all parts of the body, ultimately breaking and discharging pus. Medicine was powerless, or powerful only for evil, for, thinking that the risk of the disease was lessened by the evolution of the eruption, the Physicians employed for their development cupping glasses, or, with still more disastrous effects, applications of cantharides. The Bishop of Nantes died from this last mode of treatment. Austrigildis, Duchess of Orleans and Burgundy, who was also attacked, rewarded her Physicians in a somewhat unusual fashion, for, finding that she got no better under their treatment, she besought the Duke, should the malady prove fatal to hold them responsible for her death, and on her decease they were executed as she had requested. The details of this epidemic are supplied by monkish chroniclers, so that there is a want of exact description in some points relating to the eruption, but the initiatory symptoms—the pains in the head, neck, and lumbar region, as well as the bilious vomiting—leave little doubt as to the nature of the disease. In 582 the true plague raged in Narbonne, which gives some ground for the hypothesis suggested by Hecker—viz., that the disease named tusula or corales, and which has just been described, was the true plague in a modified form, as it but rarely happens that two distinct epidemics prevail, even in neighbouring districts, at the same time. Our knowledge of the existence of small-pox in Arabia eight years previous to this date goes far, however, to contradict the notion. In a short appendix to this article the editor draws attention to the difference between the modes of action among the Greek Physicians even of this date, and those of Western Europe (subsequently) in the middle ages, the former following the Hippocratic method of investigation, the latter bound hand and foot by the Aristotelian philosophy, and directing their attention to names rather than things.

To the article on the "Black Death," being well known to English readers, through the medium of Dr. Babington's elegant and exact translation, we shall only allude. It is here preceded by a sort of introduction containing a list of additional authorities unknown to Hecker, and is followed by some account of the Indian or pale plague, also by Dr. Hirsch. On this subject, seeing that it is wholly derived from English sources, we shall not linger long; it will be enough to say that in 1815 an unknown disease made its appearance in the peninsula of Cutch, whence it spread into the neighbouring districts of India, which it ravaged till 1821, when it disappeared, but only to make its appearance anew at Pali, the commercial emporium of Gujerat, and the North-West provinces. After some time it was discovered that the disease was endemic at Kumaon, among the southern outliers of the Himalayas. As to the symptoms of the disease, we cannot here speak, but must refer the reader either to the work under notice or to Webb's "Pathologia Indica;" it will be enough to remark that vomiting of blood and buboes were always observed. Altogether, Dr. Hirsch thinks himself entitled to draw the conclusion that in "the North-West provinces of India, and particularly among the Southern spurs of the Himalayas in the provinces of Garwall and Kumaon, a form of disease prevails endemically which, peculiarly modified by an inflammatory disease of the lungs (hæmorrhagic pneumonia), exhibits the characters of the Oriental bubo plague, and accordingly, from these characteristics, exactly corresponds with the epidemic known as the black death.

Abandoning the subject of bodily disease, Hecker next directs attention to some of the more extraordinary forms of delusion prevalent during the middle ages. Two of these are described—"the Children's Pilgrimages" (Kinderfahrten) and the "Dancing Mania," the former having previously been never laid before the public at large. We shall confine our attention to it, as the other is readily accessible to the English reader through Dr. Babington's translation. In 1212 a shepherd lad, named Stephen, who lived at Cloves, near Vendôme, in France, affirming that God had appeared to him and entrusted him with miraculous powers, began to draw the attention of those of his own age, who flocked to him in crowds, no efforts of their parents being sufficient to restrain them. Through France the assembly marched towards the Mediterranean, and at Marseilles embarked in seven ships provided by two merchants, as they said, for the sake of religion; in reality, for their own vile ends, as all that survived the voyage (two ships with all on board were lost) were sold as slaves to the Saracens. In Germany a similar excitement raged, and crowds of children of both sexes set out on their journey to the Holy Land; 7000 crossed the Alps to Genoa, whence, failing to procure a passage and disappointed in their expectation that the sea would dry up before them, the survivors returned one by one to their homes. Another, but less important, period of excitement occurred in 1237, but the results in this instance were not nearly so disastrous as in the former case, and the symptoms are more closely allied to those of the dancing mania, which broke out a century later.

The sweating, or English sickness as it is also called, is next noticed. This essay is translated in the Sydenham Society's work, so that we shall not further refer to it than by saying that it is here preceded by a short introduction from the pen of the editor. In this edition, also, the article on the morbus cardiacus is omitted, and the Rottingen sweating sickness, as well as the sweating sickness of Picardy, discussed at greater length than in ours. A comparison is also instituted between these diseases and one which raged in France during the cholera years of 1854—55, termed by the French Physicians "Cholera Sudoral." Finally, the list of authorities appended by Hecker has been considerably enlarged by Hirsch.

The work itself needs no commendation from us, and we can say no more than that the editorial additions are worthy of the distinguished author of the "Historico-Geographical Pathology." Although we have long possessed the work almost in its entirety, we think that Hecker might well be congratulated on having obtained such an editor as Hirsch, and the Germans on possessing the joint labours of the two in the shape of a work that will stand as a monument of learning and industry to all future generations.

CHOLERA LITERATURE.

Dr. Russell Reynolds's System of Medicine. Vol. I. Article Cholera. By Dr. Goodeve.

Dr. Goodeve, while admitting the possible adequacy of the cholera poison to produce the algide stage by its action on the vessels of the lungs or by a sedative influence upon the centres of circulation and respiration, although the proof is not yet complete, nevertheless considers that, taking a review of all the facts in our possession, there is a great probability that the collapse has a relation to the transudation, if not to the purging. "Whether the exudations in cholera be eliminative or not, there can be little doubt," he says, "that they are very destructive methods of cure. . . . . Most men who have had much experience in cholera will say that when they succeed in checking the discharge before collapse comes on their patients are saved. They justly fear the result of active purgative medicines given in seasons of cholera. It is hardly possible that experience can have gone quite wrong in these matters." In accordance with these views, Dr. Goodeve recommends the checking, if possible, of the exudations from the blood into the intestine in the *evacuation stage* of the disease. The first medicine given, he says, should be a full dose (2 grs.) of opium. In half an hour's time he gives an astringent, generally the following mixture:—℞ Plumbi acet., gr. xxx.; acid. acet., ♏x.; aquæ destillatæ, ℥vj.; 1 oz. or ½ oz. every half hour or hour. If at the end of an hour from the administration of the first dose of opium the purging persists, he gives another grain of opium, and continues the astringent. "As a general rule, we should limit the quantity of opium to three grains, and the acetate of lead to ten or fifteen grains in the first three hours. . . When the collapse is progressive, no opium should be given after the third grain, and, indeed, if it seems to be approaching fast, even the third grain should be withheld." In the stage of *collapse* the opium and astringent are not needed. The best thing in the stage of full collapse is to gratify pretty freely the instinctive desire for cold water, or ice may be used. "There need be no restriction placed upon the quantity of water given, beyond that it is advisable not to provoke too much vomiting by it." Dr. Goodeve thinks that the cases where stimulants in moderation, such as ether or ammonia, or weak brandy-and-water, are useful, are those in which the collapse is not perfect; and that then they maintain the strength, as in other diseases with exhaustion. He prefers the volatile stimulants to the alcoholic, but in any case their operation must be carefully watched. If the pulse revives under their use they may be cautiously continued. Hence the writer does not regard stimulants as inadmissible in the collapse of cholera; he advocates, in fact, their discreet use. Extreme cases will come round by themselves as well, or better, without stimulants as with them. Dr. Goodeve dwells upon the importance of treating cases of cholera in well-ventilated wards. He has no preference for tents, and considers their inconveniences to counterbalance all their supposed advantages. He considers the stage of reaction best left to nature, a little liquid food, and cold water, and that the officious use of purgatives and mercurials too soon often brings on a relapse. Vomiting, if continued into this stage, will often yield to a single dose of opium or morphia; but an important element in its treatment is the limitation of the diet to small quantities of milk and lime-water, or barley-water, etc., at intervals of half an hour or an hour; a blister or leeches to the epigastrium may be employed. He treats the suppression in the uræmic stage by encouraging the patient to drink as much water as he can, and by cupping and sinapisms to the loins;

and when coma comes on, if the pulse be firm and good, he is in favour of the moderate venesection. Bloodletting in the collapsed stage, in Dr. Goodeve's opinion, if any blood flows, does more harm than good.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, June 12, 1866.

Dr. P. Black, Vice-President, in the chair.

A paper, by Dr. T. C. Allbutt, was read on

A CASE OF PREMATURE MENSTRUATION.

The patient, M. A. W., was seen in the summer of 1865, and was reported to have menstruated within the last few days. Her age was one year and six months. The child was then suffering from emaciation, weakness, quick pulse, and other symptoms of hectic fever. These symptoms passed off in a few days, and the child partially recovered her health. On examination, the anal and genital regions were found free from discharge, and quite healthy in appearance. On the following month the discharge again appeared, and after it had passed away the author found the child, as before, in a state of hectic, and still presenting a perfectly healthy appearance about the anus and pudenda. He was unfortunately unable, being absent from home for a while, to see the child during the continuance of the flow. In about a fortnight the child had again recovered some degree of health. On many occasions the author carefully examined the child for disease in other organs, and did not find anything of importance. At the third monthly period he actually saw the child in a menstruating state. The discharge appeared with curious accuracy at the month, and lasted about two days and a half. The discharge was sanguineous, and in every way resembled that of a girl at puberty, but was more scanty in quantity. A return of the hectic fever followed, and the child's life was endangered. She recovered, but only to be again prostrated by a fourth appearance; and after a fifth she died, wasted and exhausted, without any effort to rally. There were no other signs of premature puberty. A post-mortem examination could not be obtained. Among many cases of premature menstruation on record, there are two in which the menses appeared at the age of nine months, and one in which the discharge appeared at the age of two years. The first two cases are reported in the *Transactions* of the Royal Medico-Chirurgical Society, vol. ii., p. 116, and in the *Lancet* for November, 1828, from Michel's Archives. The former cases were seen by Dr. Martin Wall. The third case is reported by Mr. Embling in the *Lancet*, 1848, p. 137. In these three cases obvious signs of puberty were seen in the genital organs, mammæ, and elsewhere, and these signs form a great part of the interest of the cases. In other cases of premature menstruation, exhaustion and death have occurred as in this.

Another paper, by Dr. T. C. Allbutt, was read on a

CASE OF MYELOID TRANSFORMATION OF THE LUNG.

The present perhaps unique case of complete myeloid transformation of the lung occurred under the author's care in the Leeds Infirmary. During life there were found complete dulness and stillness all over the left chest, and absence of vocal sounds and fremitus—or at least these, from the feebleness of the subject and the distance of the voice, were indefinable. The heart was seen to beat under the right nipple. Cough was almost absent, and there was no great dyspnœa. The intercostal spaces were not bulged, and the circumference of the left chest only exceeded that of the right by three-quarters of an inch. There was some degree of emaciation and of hectic fever present. The duration of the disease was uncertain, but certainly of eighteen months' standing. There was no marked cancerous cachexia of appearance, and the progress seemed to have been slow. The boy was fourteen years of age. He remained in the house about eight weeks in the autumn of 1865, and, becoming more and more exhausted and short of breath, he left the hospital for home, where he died in a few weeks. Mr. Jessop performed the post-mortem examination for the author. The whole of the left chest was found filled with solid substance, thrusting the heart out of sight on the right side, and pushing down the diaphragm to the left kidney. The solid contents were of two kinds. The upper portion which appeared on opening the chest was of a dense fibrous character, of a greenish-white colour, and presented the form of an enlarged lung. Below this, occupying the whole back of the chest, and in contact with the costal pleura, was a considerable quantity of true myeloid matter, soft and sanguineous. Both substances contained myriads of little bones, varying from the size of a pea to that of the thumb. These being densely packed in the upper and firmer mass made it almost impenetrable. The origin of the disease was probably in the chest-walls, and had thence impregnated the lung. No attachment could be found, however, nor disease of the ribs or spine. The friends of the lad stated that he had been short-winded since his earliest age, and had presented some prominence of the chest for many years.

A paper, by Mr. Balmanno Squire, was read, entitled

AN INQUIRY INTO THE INFLUENCE OF PREGNANCY, THE PUERPERAL STATE, AND LACTATION ON THE DEVELOPMENT AND PROGRESS OF CHRONIC DISEASE OF THE SKIN.

Mr. Squire related several cases of psoriasis (lately under his notice) in which the development and progress of the disease appeared to be influenced in a remarkable manner by pregnancy, the puerperal state, and lactation. From the data afforded by these cases he drew the following conclusions:—1. That lactation is an exciting and sustaining cause of psoriasis. 2. That the period occupied by pregnancy and its sequel, the puerperal state, is unfavourable to the manifestation of the disease. Why the puerperal state should exert the same influence as pregnancy on the eruption, and why the effect of lactation should be of the opposite kind, might not at first appear. The explanation, Mr. Squire thought, was to be found in the fact that the uterus, either when gravid or when undergoing the process of involution, was at its maximum of functional activity. Whereas during lactation its functions were more in a state of abeyance than at any other period of its functional life—more so than when menstruation was regularly taking place, and more so certainly than when the organ was either gravid or undergoing involution. He arrived, therefore, at the following proposition:—That when a woman has exhibited a predisposition to psoriasis, her liability to an eruption of the disease at any time during the catamenial era will be inversely as the functional activity of the uterus at that time. In further support of this view he adduced the details of two more cases of psoriasis, which showed that the development of the disease may be connected with amenorrhœa. Of these examples, the one occurred at the commencement and the other at the close of the catamenial era. In the former, the first appearance of the disease coincided with the first molimen menstruationis. In the latter, the sudden and apparently premature arrest of the catamenia was promptly followed by the appearance, for the first time in the patient's life, of an eruption of psoriasis. The cases he had brought forward, it would be observed, were all of them cases of psoriasis. This was owing to his having preferred, in the first instance, following out his inquiry in one channel. He was, however, by no means prepared to say that psoriasis was the only chronic disease of the skin that exhibited the peculiarities he had described, but thought it extremely probable that further inquiry would show that other chronic diseases of the skin besides were similarly influenced by the state of the uterine functions. That pulmonary consumption might be arrested by pregnancy was well known, as well as that its course became unusually rapid shortly after delivery. But similar observations, so far as he knew, had never as yet been made on psoriasis; and it might be that there were many other instances of chronic disease, whether of the skin or of other organs, in which the control exercised by uterine influence in determining their commencement and in modifying their progress has in like manner escaped observation.

Dr. Hillier said he could not corroborate the author's experience in reference to psoriasis. He had seen one case only of that disease in which the eruption was worse during lactation. In his experience it was subject to relapse under very varying conditions. It very often became worse in the spring and when the patient appeared in robust health. Eczema, on the contrary, he had found to be often aggravated or induced by lactation, and at the climacteric period in women. Psoriasis very commonly began before puberty, and not at all frequently at the period when the catamenia ceased.

Dr. Greenhow said that the author appeared to have overlooked the relation existing betwixt psoriasis and the gouty constitution, and the fact that gouty ailments were liable to appear during lactation, and would disappear when lactation was over. Thus, in the cases related the connexion might be betwixt gout and psoriasis, although the appearance of the psoriasis might be directly due to the debility induced by suckling.

Dr. A. P. Stewart said that for fifteen years he had noted the frequent coincidence of psoriasis with lactation, and also of many cases with rheumatism or gout. He agreed with Dr. Greenhow that the connexion of psoriasis with gout was very strong.

Mr. Balmanno Squire was glad to find his researches supported at least in some degree by the observations of so careful and experienced an observer as Dr. Hillier. Yet he still continued to think it not unlikely that the examples he had adduced were mere coincidences. He did not bring them forward as picked cases to exemplify a fact of which he (Mr. Squire) had become previously persuaded. On the contrary, his attention had first been attracted to the subject by the history of the first of the cases he had narrated, and the remainder were given in his paper without any kind of elimination. They were simply the history, and the whole history of the subject, as it had come before him clinically during a certain period, the only qualification for the admission of a case into the series having been psoriasis plus either exaltation or suspension of the uterine functions. Mr. Squire then recalled attention to the case of the woman who, having suffered from psoriasis before her marriage and having been subject to it since, had during her married life been five times pregnant, and on each of the five occasions had been temporarily free from psoriasis, but on those occasions only. From that case he thought the conclusion was fair that pregnancy was at all events sometimes antagonistic to psoriasis. Dr. Hillier had misapprehended him in supposing him to advance lactation as *the* cause of psoriasis. The tenour of his paper had, he thought, clearly indicated a presumption on his part of a predisposition to the disease in the examples he had brought forward. The object of the paper was not to show that lactation was the cause of psoriasis, but that it was an agency favourable to its development in persons in whom a predisposition to the disease existed; and that pregnancy, on the contrary, was a condition which was, so long as it lasted, unfavourable to the manifestation of the disease. In reference to Dr. Greenhow's and Dr. Stewart's remarks, Mr. Squire said that the development of psoriasis, as was well known, was usually associated with a vigorous state of the general health, and often with a state of plethora. Gout, he believed, was allowed to be often associated with the same general condition. He saw no reason, after having made inquiries specially directed to that subject, to suppose that there was any intimate connexion betwixt psoriasis and gout, and he was inclined to think that in the instances observed by Dr. Greenhow and Dr. Stewart the association of gout and psoriasis was to be considered as dependent rather upon a common predisposing cause—viz., an exalted state of the functions of assimilation—than as due to a dependence on part of psoriasis on a gouty condition of the system.

THE PATHOLOGICAL SOCIETY.

Tuesday, April 17.

Dr. Peacock, President.

Dr. Greenhow exhibited

THE SUPRA-RENAL CAPSULES,

a nipple and specimen of skin from the body of a man, aged 32, who had died in the Middlesex Hospital, March 28. Addison's disease, together with disease of the spine, had been diagnosed during life from the history and symptoms of the case, and from the discolouration of skin. There had been an injury to the back three years before, and during the illness, which lasted four months, there were all the usual symptoms of Addison's disease, and latterly vertigo, deafness, and dimness of sight, with some want of power over the lower limbs. The general surface was dusky; there were some almost black freckles on the face, and the nipples and areolæ, penis and scrotum were very dark, as were also the cicatrices of blisters which had been applied for the relief of pain from the spinal injury. The patient died, as usual, from exhaustion, and at the post-mortem examination the supra-renal capsules were found to have undergone the morbid change characteristic of Addison's disease, which, however, was furthest advanced in the left capsule. On the left side of the spine the intervertebral substance had been torn from the upper surface of the first lumbar vertebra for two-thirds of its depth, and in front of the spine was an abscess extending over several vertebræ. In the apices of both lungs there were remains of old tubercular disease.

Dr. Greenhow said that this was one of the three cases of Addison's disease to which he had referred when he exhibited two other cases to the Society a month ago as being then under his observation, and the post-mortem examination had exactly verified his anticipations.

Dr. Dickinson referred to a case of discolouration of the hair, similar to the one related by Dr. Greenhow.

Dr. Hermann Weber exhibited a specimen of

ANEURISM OF THE SINUSES OF VALSALVA WITH PERFORATION OF ONE OF THE SEMILUNAR VALVES.

The patient, a sugar-baker, aged 47, had been admitted into the German Hospital under Dr. Sutro's care, on March 1, with anasarca, albuminuria, and bronchitis. He never had, according to Dr. Bacumber's report, rheumatism, but exhibited increased precordial dulness, with a loud systolic bruit, which was most intense near the apex; there was also distinct pulsation of the jugular veins, two pulsations of the latter corresponding to one of the radial pulse. On March 7 he was suddenly seized with giddiness, vomiting, and transitory loss of consciousness; the dyspnœa increased, the expectoration became bloody, the pulse remaining steady and rather slow (usually under 80). Died on March 12. *Post-mortem Examination.*—Extensive hypertrophy of both ventricles and auricles (weight about seventeen ounces); advanced fatty degeneration of ventricular walls and septum; thickening of endocardium; considerable aneurismal dilatation of the three sinuses of Valsalva and the aortic semilunar valves, with recent rupture in the centre of one of the valves, permitting the passage of a crow's quill from the enlarged sinus into the cavity of the left ventricle; this rupture being probably caused by the ulceration of an atheromatous patch, the rest of the ascending aorta and valves being likewise highly atheromatous; extensive right-sided pneumonia; cortical substance of the kidneys atrophied, with dilatation of the pelvis and calices; nutmeg liver. Dr. Weber thought the aneurismal condition of the sinuses of Valsalva caused obstruction, and therefore a species of stenosis of the aortic opening, scarcely allowing a certain diagnosis. He was inclined to interpret the sudden attack of giddiness and loss of consciousness, five days before death, as caused by the shock, and the mechanical disturbances effected by the rupture of the aortic valve.

Dr. Beigel showed a specimen from a case of

PLICA POLONICA.

This disease had, Dr. Beigel remarked, been known in England, and was described in the *Phil. Soc. Trans*, 1747. It was alluded to by Shakespeare in "Romeo and Juliet." It had been ascribed to dirt by some, and by others was considered to be constitutional. Dr. Beigel gave an interesting account of the affection.

After a discussion, in which Mr. Gaskoin, Mr. Hutchinson, Dr. Schulhof, Dr. Weber, and Dr. Cobbold took part, it was agreed that Dr. Cobbold and Mr. Hutchinson should examine the specimens and report on them.

The President exhibited a specimen of

STRICTURE OF THE SIGMOID FLEXURE OF THE COLON.

It was removed from the body of a female 46 years of age, who was under his care at St. Thomas's Hospital. When first admitted she had been suffering from small-pox for five days. Calomel and opium were given, with castor oil and injections with O'Biern's tube, but without effect. Nine days after admission stercoraceous vomiting came on, and she rapidly sank two days after. The obstruction was found to be situated lower down than had been expected, or the lower end of the sigmoid flexure. The stricture was so tight as only to admit of the passage of the tip of the little finger, and the opening was entirely closed by a dried raisin, which was impacted in it. The intestine above was greatly distended and the mucous membrane in places inflamed and gangrenous and the serous covering of the bowel intensely congested. There was no appearance of cancer in the seat of stricture.

With reference to the performance of Amussat's operation, the patient was seen by one of the Surgeons to the Hospital, but she died more rapidly than was anticipated, and the opportunity for operating was not afforded.

INTESTINE FROM A CASE OF ENTERIC FEVER FATAL AT A VERY LATE PERIOD.

The President also exhibited a specimen of intestine from a patient who died at a very advanced period of uncomplicated typhoid fever. It was removed from a female 21 years of age, who was admitted on the fifth day of illness. She then had threatenings of perforation; these symptoms subsided under the use of opium; but the active febrile stage was of very long duration, the temperature continuing steadily above the healthy standard till the fiftieth day. At the latter part of her illness she had constant sickness and vomiting of everything which she took, and she was only supported by nutritive and stimulating injections. She died on the eighty-first day. The case was very remarkable from its long duration, from never having presented any decided signs of convalescence, and from having been throughout uncomplicated. After death the lower portion of the ileum and the cæcum and ascending colon displayed evidence of being the seat of very extensive disease; but the ulcers were almost entirely healed, there being merely in their seats some superficial abrasion and thinning of the mucous membrane.

At the time this case was in progress, there was another very similar in the Hospital, under the care of Dr. Bennett. In that case, however, some food could always be retained by the stomach, and the patient ultimately recovered.

Dr. Murchison (hon. sec.) exhibited for Mr. Bickersteth, of Liverpool, a specimen of

EXTREME DISEASE OF THE BONES OF THE CRANIUM.

The whole surface of the cranium was covered with a nodular bony growth. The lower jaw was also affected, and was enormously enlarged. The only other bones affected were the hyoid and one fibula. The disease began at the age of 14 in the bones of the skull, which became gradually larger and larger. The patient did not suffer much until two years before his death, which took place at the age of 35. The pain was in the fibula, and was so exceedingly severe that it was believed to have been the cause of death. There was no history of syphilis in himself nor in his parents, and after death all the internal organs were found to be healthy.

Dr. Andrew exhibited a

TUMOUR FROM THE ABDOMEN

of a man, aged 27, who had died in St. Bartholomew's Hospital. It sprang from a mass of enlarged glands in the hilum of the left kidney, and filled the lower three-fourths of the abdomen. It consisted partly of solid material, partly of cysts containing limpid fluid. The cysts in its anterior aspect were very thin, delicate, not tense, and pedunculated. The solid portions presented the usual microscopical characters of malignant disease. The patient had first noticed an increase in the size of the abdomen about twelve months before his death.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, May 2, 1866.

Dr. Barnes, President.

The following gentlemen were elected Fellows: — Dr. Andrews; Dr. Rugg; Mr. Sequire and Mr. Bassett, of Birmingham; Mr. Blease, of Altringham; Mr. Brown, of Ealing; and Mr. Cornwall, of Fairford. Professor Lazaréwitch, of Charkoff, was elected an honorary Fellow of the Society.

Dr. Wiltshire showed a new form of Uterine Tent, composed of sponge and laminaria, the sponge forming an outer casing to the laminaria.

Dr. Barnes exhibited a Uterus with its Appendages which were affected with colloid disease. He also showed a specimen, which he had received from Dr. Brunton, of Abscess in the Placenta. The abscess contained about an ounce of pus. There had been no symptoms of pain during gestation; but there had evidently been inflammation of the decidua. Dr. Barnes considered these cases very rare, and exceedingly interesting. He knew of but two or three on record, and they were described by French authors.

A paper by Dr. Thomas Radford was read, relating some

CASES OF LACERATION OF THE UTERUS, WITH REMARKS.

The author, after briefly alluding to the views of Hunter, Denman, and Douglas on this most dangerous complication to labour, related minutely the histories of nineteen cases which had fallen under his notice. Of this number, in eleven the ages registered were from 21 to 40 years, and it was found that the accident occurred more frequently between the ages of 39 and 40. The number of labours which each woman had undergone varied from the first to the eleventh; and it was shown that laceration of the uterus happened most frequently in women pregnant for the eighth time, and that in those *enceinte* for the first time the accident took place quite as often as it did in any of the other cases which were registered. The duration of the labour from its commencement to the occurrence of laceration (though in some cases not exceeding three or four hours) was generally from ten to thirty hours. Of the various causes or conditions mentioned as producing laceration, slight contraction at the brim of the pelvis appeared to have been the most frequent. The author considered that when the form of the pelvis was only slightly contracted, the os and cervix uteri partially descended during labour into or a little through the aperture of the pelvis, so that, as the head of the infant was forced down, the uterine tissues became fixed between this body and the pelvic bones. The fixity of this structure actually formed a *point d'appui* from which the uterine fibres during contraction forcibly pulled; and the great probability was that sooner or later the tissue either directly tore, or, being first contused and softened, yielded. As regarded the situation of the laceration, the cervix uteri was the part most frequently affected, and sometimes with it the body of the organ was also implicated. In eleven cases the laceration was longitudinal, in three transverse, in three oblique, and in one circular. Of the nineteen cases, three recoveries took place, or nearly sixteen or seventeen per cent. Dr. Radford, in his concluding remarks, observed that when we contemplated the frequent fatality of laceration of the womb, we were led to inquire whether there were no symptoms which showed themselves as universal precursors of this dreadful catastrophe; and if there were, were we possessed of the means of prevention? In all the cases he now brought before the Society, there could not be found any with premonitory symptoms which of themselves would warrant any operative measures being taken in order to avert the impending danger. Nevertheless, he thought we should carefully consider all the contingent circumstances of protracted labours, and especially of those which were prolonged by mechanical impediments; and whether they were produced by relative disproportion of the capacity of the pelvis to the size of the fœtal head; if so, we should adopt measures of timely delivery.

Dr. Graily Hewitt acknowledged the great value of Dr. Radford's paper, but could not agree in the antiphlogistic treatment mentioned by the author. He (Dr. Hewitt) concurred in the opinion that there was an absence of uniformity of symptoms in these cases, and strongly urged the necessity for early artificial aid in some cases of protracted labour. He related a case of concealed hæmorrhage, in which the symptoms were closely allied to those observed in ruptured uterus.

Dr. Playfair could not approve of the treatment which had been adopted in those cases where the fœtus had escaped into the peritoneal cavity. He thought a much better line of treatment would be to perform gastrotomy. He knew of twelve cases in which this operation had been performed, and in some with satisfactory results.

Dr. Braxton Hicks said that, with respect to the symptoms of rupture, it was generally asserted that recession of the head was a constant symptom, but that he had never seen a case where this had taken place. He believed there were many more cases of ruptured uteri than we were cognisant of. Dr. Hicks believed that one of the greatest safeguards against rupture was the use of chloroform.

Dr. Eastlake observed that in the diagnosis of rupture of the uterus some data were furnished by auscultation, the fœtal heart sounds becoming inaudible after the rupture. This point Dr. McClintock strongly insists upon, as also that in these cases there is very little hæmorrhage.

The President regretted that through indisposition Dr. Radford was unable to be present. He considered the first great cause of rupture was protracted labour, and the object to be had in view was to remove the obstruction as speedily as possible. A second cause was rigidity of the os uteri, and he agreed with the author as to the necessity of incising the os. A third and fourth cause existed in the obliquity of the uterus, which caused it to become jammed in the pelvis; also, when there is a dead fœtus in utero there is a want of the resiliency which a live child possesses, and the action of the uterus rather tends to squash than to expel it. He also mentioned disease of the uterine tissue as another cause leading to rupture. He thought softening of the tissue might depend upon degeneration, either before labour or during labour, by the pressure of the fœtal head against the pelvis. With respect to gastrotomy, he would say that Dr. Radford had urged the operation, but that it had been overruled by others. The late President of the Society objected to any operative measures whatever when the fœtus had escaped into the abdominal cavity; and he (Dr. Barnes) had seen a case where it was left, and the woman recovered.

Dr. Brunton observed that the cases which Dr. Radford had collected were attended by midwives, and he knew that midwives were in the habit of giving very large doses of ergot. He believed that this was one of the great causes of rupture of the uterus; and when it did not cause rupture the placenta was often retained, owing to the irregular contractions of the uterus produced by that drug.

The meeting then adjourned.

OBITUARY.

CHARLES JOHNSON, Esq., F.R.C.S.I.,

Honorary Fellow of the King and Queen's College of Physicians in Ireland.

Dr. Charles Johnson, whose death we have now to record, was for many years in most extensive practice as an obstetrician in Dublin, and enjoyed to as great an extent as perhaps any other Practitioner in the same branch ever did the confidence of the Profession and of the public. He was a worthy contemporary of the many eminent Medical men who, entering upon practice much about the same period, flourished in that city within the last fifty years, and whose names remain enrolled as those of the most illustrious ornaments of the Irish Medical School. Nearly all of these distinguished men have now passed away, but their memories will long be fresh amongst us.

Dr. Johnson obtained the license of the Royal College of Surgeons in Ireland in the memorable year 1815. In the following year he was elected an Assistant at the Lying-in Hospital, Dr. Labatt being then the Master of the Institution. Here he spent the usual period of three years. In 1822 Dr. Johnson, in conjunction with the late Sir Henry Marsh, founded an institution (in Pitt-street) for the diseases of children, which continues up to the present day, but on a somewhat wider basis, and with a more extended sphere of usefulness. This was, we believe, the first successful attempt in Dublin to establish an institution for the special treatment of infantile complaints and accidents. Dr. Johnson early acquired a reputation for skill in the diseases of children and of women, and a large part of his consultation practice was made up of such cases. At the same time he was held in very high and deserved estimation for his abilities and success as an Accoucheur; indeed, but that his delicacy of health put a restraint upon him, he might have had unlimited practice in this capacity.

The publication (in the *Dublin Hospital Reports*, vol. iii., 1822, p. 479) of his cases of successful extirpation of the inverted uterus, materially helped to make a name for him as an authority on the diseases of women; and justly so, as these were the first, or among the first cases, in which this bold operation was performed with complete success. The paper just alluded to, and one on whooping cough, in the "Cyclopœdia of Practical Medicine," were the only articles he ever published. Both of them closely resemble his lectures and everything he wrote, in being remarkable for the perspicuity and elegance of their composition.

He was a Fellow of the Royal College of Surgeons, and for several years was Professor of Midwifery, etc., in the Medical School of that College. He was also a Licentiate and an Honorary Fellow of the King and Queen's College of Physicians. In 1840 he was elected Master of the Lying-in Hospital.

Dr. Johnson died of an apoplectic attack, June 19, in his 73rd year, having given up practice about two years previously, in consequence of failing health. All through life he had to contend with a delicate constitution; and he was frequently obliged, from illness, to suspend practice for a time and go away in search of health; yet such was the amount of confidence placed in him by the public, that these interruptions to the pursuit of his Profession never seemed to entail any permanent loss in his practice; for no sooner did he return home than his patients all came back to him again. Such constancy as this few Medical Practitioners can boast of! At the time of his death he was Consulting-Physician to Pitt-street Institution for Diseases of Children, a Member of the Board of Superintendence of Dublin Hospitals, and an Honorary President of the Dublin Obstetrical Society.

DEATH OF HENRY JACKSON, ESQ., F.R.C.S.

(From the *Sheffield and Rotherham Independent.*)

We deeply regret to state that death has deprived the Medical Profession in Sheffield of one of its most estimable members and its chief ornaments. Mr. Henry Jackson, of St. James'-row, has been suffering for some time from aneurism in the right knee. Till within a very short time, he has not confessed it even to his Medical friends, though he has suffered intense pain, and when he was obliged to consult them, they were shocked at the aggravated state of the case. In spite of the tortures he endured, the sufferer had persisted in attending to his duties, and on Friday week he was in his place at the Infirmary to receive applications and admit patients. He returned home much exhausted. Mr. Jackson had so much confidence in the local members of the Profession that he refused to consult any of the great Surgeons of the metropolis, and all he could be induced to do was to receive a visit from his old friend Mr. Hey, of Leeds, who entirely concurred in the opinion which had been formed here, that amputation was indispensable as the last, though by no means hopeful, chance of prolonging an invaluable life. The operation was very skilfully performed on Friday, by Mr. W. F. Favell, in the presence of Dr. Bartolome, Mr. Jonathan Barber, and Mr. Brown, House-Surgeon of the Infirmary. Unhappily the worst fears have been realised. On Saturday morning, the report was that the sufferer was as well as could be expected, but a very bad night succeeded, and in the course of yesterday it was obvious that Mr. Jackson was sinking fast, and at a late hour last evening Mr. Jackson expired. Throughout these painful scenees he has received from his attached Medical brethren unremitting attention, Dr. Branson, Mr. Barber, Mr. W. F. Favell, and others, being constantly with him.

Mr. Henry Jackson was the only son of an eminent Surgeon of the same name, who lived in the same house, in St. James's-row, where the lamented subject of our notice has lived and died. He was most carefully educated for his Profession, and though his retiring disposition has withheld him from notoriety, Professional or otherwise, he has had a deservedly high reputation. To his Medical brethren the death of Mr. Jackson is a most severe loss. He was acknowledged to be at the head of his Profession here. In reading and in experience he was pre-eminent. He kept himself well up in the progress of science generally, but especially in his own department, and having been one of the Surgeons of the Infirmary for nearly thirty-four years, his practice was most varied and extensive. To every one who ever had occasion to see Mr. Jackson, the benevolence of his disposition was known. He was most sympathetic and kind to his patients, and the stores of his learning and his skill were most readily and constantly at the disposal of the Profession, and especially of its younger members. Mr. Jackson was a great collector of rare and curious books, and possessed a knowledge of antiquities, especially local, such as scarcely any one equalled. He leaves a widow and four sons to mourn his loss. Mr. Jackson was about 60 years of age.

Académie des Sciences.—For the vacant place among the corresponding members of the Academy in the Section of Anatomy and Physiology, the following list of candidates was presented on the part of the committee by M. Milne-Edwards. In the first line, Van-Beneden, of Louvain; and in the second, arranged alphabetically, Filippi, Turin; Huxley, London; Leuckart, Giessen; Pictet, Geneva; Sass, Christiania; Siebold, Munich; and Vogt, Zurich. Professor Van-Beneden was elected into the vacant post.

MEDICAL NEWS.

University of Dublin.—At the summer Commencement, held in Trinity College on Wednesday, June 27, 1866, the following Licences and Degrees in Medicine and Surgery were conferred:—

Licentiati in Medicina.—Gulielmus Johannes Slade Boake; Robertus Edvardus Bredon. *Licentiatus in Chirurgia*—Robertus Edvardus Bredon. *Baccalaurei in Medicina*—Gulielmus Carolus Gasteen; Benjamin Hinde; Ricardus Beamish; Thomas M. Clarke; Matthias Ev. Hare; Selim Myer Salaman; Gulielmus H. N. Stanford; Edvardus B. Shuldham; Archibaldus N. Kidd; Gulielmus Henricus Steele; Sandford Moore; Johannes R. C. Lowry; Ricardus S. Smallman; Gulielmus Fetherston H; Jacobus O'Reilly. *Magistri in Chirurgia*—Matthias Ev Hare; Carolus F. Richards; Ricardus Beamish; Montgomery Albertus Ward; Henricus Davy; Selim Myer Salaman; Sandford Moore; Johannes R. C. Lowry; Jacobus O'Reilly. *Doctores in Medicina*—Benjamin Hinde; Thomas Armetriding Compton; Georgius F. Elliott; Archibaldus N. Kidd; Edvardus Barton Shuldham.

Previous Medical and Scholarship Examination, Trinity Term, 1866.—The following are the names, arranged in the order of merit, of the candidates who passed, out of twenty-three who presented themselves, the above examination held on four several days in Trinity College, Dublin. The Pass Examination, which was conducted *vivâ voce* and practically, embracing demonstrations on the dead subject, etc., occupied thirteen hours, and was held on June 25, 26, and 27. Those candidates who were recommended from the Pass Examination were subjected on a fourth day to a searching paper examination.

Joshua Parker, First Scholarship: John Burton, Second Scholarship; Edmond Frost; Richard Bookey; John Walker; Francis J. McNalty; Samuel M. K. Cotter; Alexander Stokes; John J. Lough; Henry L. Langstaff; George B. Edge; Charles Fitzgerald.

Royal College of Physicians of London.—At a general meeting of the Fellows, held on Monday, June 25, the following gentlemen, having undergone the necessary Examination, were duly admitted Members of the College:—

Richard Congreve, 37, Southampton-row; Lawrence Trent Cumberbatch, M.D. St. Andrew's, 12, Cadogan-place; Thomas Edmondston Charles, M.D. Edin., 12, Elizabeth-street, Eaton-square.

At the same meeting the following College Officers were elected for the ensuing year:—

Censors—William Augustus Guy, M.B.; Herbert Davies, M.D.; George Johnson, M.D.; Thomas Bevill Peacock, M.D. *Treasurer*—James Alderson, M.D. *Registrar*—Henry Alfred Pitman, M.D. *Librarian*—William Munk, M.D. *Examiners*—Anatomy and Physiology: Charles Handfield Jones, M.B.; William Brinton, M.D. Materia Medica, Chemistry, etc.: Andrew Whyte Barclay, M.D.; Alfred Swaine Taylor, M.D. Principles and Practice of Medicine: Frederic John Farre, M.D.; Edward Henry Sieveking, M.D. Midwifery and the Diseases peculiar to Women: Charles West, M.D.; Henry Oldham, M.D. Principles and Practice of Surgery: Holmes Coote, Esq., F.R.C.S.; George David Pollock, Esq., F.R.C.S. *Curators of the Museum*—James Alderson, M.D.; George Hamilton Roe, M.D.; William Wegg, M.D.; Francis Sibson, M.D.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, June 28, 1866:—

Edward Alfred Trinnell, Lewisham road; Alfred Courtnay Bailie Melhado, Princes-square, Bayswater; Percy Chatterton, Edgware-road, W., Paddington; James Couch, Swansea.

The following gentlemen also on the same day passed their First Examination:—

Henry Clifford Gill, University College; Tempest Anderson, University College; William Powell, Charing Cross Hospital.

APPOINTMENTS.

⁎ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Lawrence, H. C., L.R.C.P.Lond., M.R.C.S.Eng., and L.M., has been appointed House-Surgeon at the Bath United Hospital.

BIRTHS.

Bradley.—On June 29, at Spa, Belgium, the wife of W. H. Bradley, Deputy-Inspector-General of Hospitals, of a son.

Heward.—On June 29, at Stamford, the wife of J. M. Heward, M.R.C.S., of a son.

Hughes.—On June 17, at 64, Kirkdale-road, Liverpool, the wife of E. Hughes, M.D., of a son.

Lewis.—On June 27, at Henfield, Sussex, the wife of C. F. Lewis, M.D., of a son.

Mitchinson.—On June 25, at Lincoln, the wife of G. Mitchinson, M.D., of a daughter.

Pattisson.—On July 2, at Kingsland-road, the wife of J. S. Pattisson, L.R.C.P.L., prematurely of a son.

Wrench.—On June 28, at Park Lodge, Baslow, near Chatsworth, the wife of E. M. Wrench (late 12th Royal Lancers), Surgeon to the Duke of Devonshire at Chatsworth, of a son.

MARRIAGES.

Blake—Hanson.—On June 27, at Newport, Salop, Edward T. Blake, M.R.C.S., of Wolverhampton, to Annie Madeline, eldest daughter of the late Sidney Hanson, M.D. No cards.

Coupar—Ritchie.—On June 19, at Leuchars, J. L. Coupar, M.D., of Dundee, to Maggie, eldest daughter of the late James Ritchie, Esq., of Westfield, Fife.

Jones—Foster.—On June 29, at All Saints', Hertford, John H. Jones, M.D., H.M. Indian Army, Cawnpore, to Alice Mariana, eldest daughter of John Lyon Foster, Esq., of Hertford.

Jones—Morse.—On June 28, at St. John the Evangelist, Burgess Hill, Sussex, E. Jones, M.D., of Sydenham, to Caroline Jane, widow of the late W. A. Morse, Esq.

Swan—Goddard.—On June 26, at St. Maurice Church, Winchester, W. Swan, M.D., Ballyragget, to Henrietta Lucy, second daughter of the late Lieut. W. H. Goddard, R.N. No cards.

DEATHS.

Agnis, John Crown, Assistant-Surgeon Royal Horse Guards, at 25, Harewood-square, Regent's-park, on June 28, aged 37.

Goyrand, M., Senior Surgeon of Aix and Corresponding Member of the Academy of Medicine, well known for his writings on Interarticular Bodies of the Knee-Joint, and other subjects, died last week, aged 63.

Ingram, W., M.R.C.S., at Midhurst, Sussex, on June 29, aged 67.

Sutheria, H., M.R.C.S.E. (many years Medical Officer of Health, St Pancras), on June 27.

POOR-LAW MEDICAL SERVICE.

⁎ The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Cheltenham Union.—Mr. Henry Bird has resigned the Workhouse; salary £45 per annum.

Chorley Union.—Dr. Hilton has resigned the Croston District: area 10,125; population 5369; salary £20 per annum.

St. Thomas Union.—Mr. J. A. Edwards has resigned the Tedburn St. Mary District; area 4433; population 768; salary £9 12s. per annum.

APPOINTMENTS.

East London Union.—Charles Hogg, L.R.C.P.Edin., M.R.C.S.E., L.S.A. to the Aldersgate District.

Hackney Union.—George C. Millar, M.D., M.R.C.S.E., L.S.A., to the Workhouse.

Hendon Union.—George B. Irving, M.R.C.S.E., L.S.A., to the Great Stanmere District.

Tisbury Union.—William B. Thompson, L.R.C.P.Edin., M.R.C.S.Edin., L.M., to the Donhead District.

The Health of her Majesty the Queen.—We are able to confirm the correctness of a statement that lately appeared in the *Pall-mall Gazette* to the effect that the immediate reason which induced her Majesty to undertake her recent journey into Scotland was the hope of shaking off a troublesome spasmodic cough, from which her Majesty has lately suffered, and which it was feared might prove to be whooping-cough, that disease having made its appearance in the royal nursery.

The Secretary of State for the Home Department has appointed Dr. Burrows a member of the Senate of the University of London.

The Ophthalmological Congress.—In consequence of the events now passing in Germany, the Congress, which was to have been held this year at Vienna, is postponed to (at least) next year. There will, however, be an ophthalmological section at the Medical Congress to be held at Strasburg from the 27th August to the 2nd of September. MM. Stoeber and Monoyer, of that city, will facilitate all arrangements.

Royal Institution of Great Britian.—At the General Monthly Meeting held on Monday, July 2, 1866, Sir Henry Holland, Bart., M.D., D.C.L., F.R.S., President, in the chair, His Royal Highness the Duke of Edinburgh, K.G., was elected an Honorary Member of the Royal Institution. Richard Cockerton, Esq., was elected a Member of the Royal Institution.

M. Husson, Director-General of the Hospitals of Paris, is at present on an official visit to London. He is employed in studying, as on the occasion of former visits, the Medical Institutions of the metropolis. He presented himself yesterday at the Whitechapel Union. M. Hussen was provided with an official letter of introduction from the Poor-law Board—and was refused admission.—*Times.*

Medical Charities.—The funds of the Aylesbury General Infirmary have just been increased by the munificent donation of £500 by Mrs. Raper, in memory of her lamented husband. The Royal Infirmary, Glasgow, will benefit to the extent of £200 under the will of the late Mr. Richard St. George Kilbee, of St. Paul's School, London, who has bequeathed large sums to other institutions not strictly Medical.

St. Mary's Hospital.—At a special meeting of the Board of Governors of this institution on the 3rd inst., Earl Manvers in the chair, Mr. H. Haynes Walton, F.R.C.S. Eng., of Brook-street, Hanover-square, was unanimously elected one of the senior Surgeons of the Hospital in the vacancy occasioned by the decease of Mr. Alexander Ure. The new wing of the Hospital, the foundation-stone of which was laid by H.R.H. the Prince of Wales in the spring of last year, is rapidly progressing, and will be opened in October next.

Cholera in France.—The cholera, after lingering for a long time in Nantes, Nancy, and other places, has latterly shown itself with considerable violence at Amiens. The last bulletins, however, reduce the number of cases to about twenty a day.

The Recent Hot Weather.—On Wednesday, while a mason was working at Ford, Northumberland, he suddenly fell down and expired, excessive heat causing his death. A private of the 13th Foot has died of sunstroke at Devonport, and a similar case is reported from Hackney Wick.—*Guardian.*

Glanders.—A man named Evans has died in Guy's Hospital of glanders. Deceased was a horse-slaughterer, and attributed his death to having rubbed a cut on his chin while handling the carcase of a glandered horse.

Le Marchant *v.* the South-Eastern Railway Company. — This was one of the cases arising from the accident at Staplehurst. The plaintiff, a Frenchman, had sustained fracture of the pelvis. The question in dispute was that of ultimate recovery. The *Times* significantly says:—"There was the usual discrepancy in the evidence of the Surgeons as to possibilities and probabilities." Verdict for the plaintiff, damages £3250.

What constitutes Madness.—The Scottish Commissioners in Lunacy state in their report for 1865 that in the course of that year a patient was brought to a lunatic asylum with the certificate of a Medical Practitioner, giving (by way of compliance with the statute) as the fact observed by himself in proof of insanity, that the patient "has a great desire to appear conspicuous as a musician."

Hippophagy.—The Prefect of Paris published a decree last week legalising the use and sale of horseflesh, and allowing the keepers of restaurants and eating-houses to place it before their customers, on condition of declaring its nature. A market for the sale of the same article is now being organised on the Boulevard d'Italie, and will be opened in a few days. The price is expected to be about two-thirds lower than that of beef.—*Guardian.*

Medical Members of Parliament. — Mr. Baxter Langley has just issued an address to the members of the Medical Profession in the borough of Greenwich, of which the following is a copy:—

"Gentlemen,—You will probably have seen by the public announcements that I am again a candidate for the representation of Greenwich, and I take the liberty of submitting a few of the reasons upon which, I think, I may have a claim to your support:—

"1. That I am member of the Royal College of Surgeons, and of some of the learned societies; and that I have devoted my attention for many years to the question of Medical Reform, having written upon it in the public journals so far back as 1842.

"2. That the Medical Profession is not sufficiently represented in the House, Dr. Brady and Mr. Clement being the only members of our body in Parliament.

"3. That Medical representatives are more than ever necessary at a time when sanitary reforms of the most important character are under consideration; when the Poor-law Guardians are proved to be generally neglectful of the Medical requirements of the poor, and are almost uniformly regardless of the respect due to the 'Parish Doctor;' when great works for the utilisation of sewage are being carried out; when, in a word, educated scientific opinion is wanted in Parliament.

"4. That the claims of the Medical Profession are not sufficiently regarded in the public services.

"5. That the laws for the protection of authorised Medical Practitioners are crude and ineffective.

"6. That, though a member of your Profession, I have nevertheless made politics a study, and that as a writer and speaker upon public matters I am not unknown; whilst, as a 'man of business,' I believe that I am favourably known to most of you.

"Under these circumstances, I take the liberty of asking your support to my candidature, assuring you that the welfare of my Professional brethren will always be a matter of the warmest and deepest interest to me.

"I am, Gentlemen, yours faithfully,
"J. Baxter Langley, M.R.C.S., F.L.S., &c."

Typhoid or Shock?—Judd *v.* the Manchester, Sheffield, and Lincolnshire Railway Company.—(Sittings at Guildhall, before Mr. Justice Mellor and a special jury.) The Solicitor-General, Mr. Day, and Mr. M'Leod were for the plaintiff; Mr. Bovill, Q.C., Mr. J. A. Russell, and Mr. W. H. Mellor, for the defendants. This was an action by the plaintiff, who was chemist to the Cyclops Steel Works at Sheffield, for damages for injuries alleged to have been sustained in consequence of a collision on the defendants' railway. The collision was a slight one, and the defendants admitted the negligence, but the defence was that the plaintiff's illness (which was undoubtedly severe) was attributable to typhoid fever, and not the result of the accident at all. It appeared that the plaintiff was sitting in a second-class carriage of a train which left Sheffield for London on the 23rd of December, 1864. The train run into some trucks, and the plaintiff was thrown forward, and then fell back on his seat. He did not consider that he was seriously injured, and continued his journey to town. He was decidedly ill on the next day, and in a few days called in Mr. Cooke, the family doctor, and soon after became seriously ill. On the part of the plaintiff, Dr. Barlow, the Senior Physician of St. George's Hospital, and Dr. Barnett, one of the Physicians of St. Thomas's Hospital, as well as Mr. Cooke and Dr. Elam, of Sheffield, were called, and agreed that the plaintiff's symptoms were inconsistent with fever, and tended to show that it was the result of the accident. They also stated that the treatment to which they subjected the plaintiff would have been most dangerous had he been suffering from fever. The plaintiff appeared to be greatly recovered, but the Medical men stated that he ought to have a longer rest. On behalf of the defendants, Dr. Fletcher, Dr. Edward Smith, and Dr. Tweedie were called, and also agreed as positively that the symptoms as described pointed clearly to typhoid fever. The case occupied the whole day, and the jury, after hearing the summing up of the learned judge, returned a verdict for the plaintiff—damages, 500*l*.

Gallant Rescue from Drowning by a Medical Man.—The *Leicester Chronicle and Mercury* of June 30 reports that "Dr. Charles Crane, son of Dr. J. W. Crane, of this town, while walking down the banks of the canal on the afternoon of the 28th inst., saw a man rising and sinking perpendicularly in the middle of the stream, and another man nearer the edge attempting to catch him as he came up. Thinking that they were swimmers amusing themselves, he stood looking on until the man sank again, and finding that he did not come up, and hearing a remark from one of the bystanders, 'Poor fellow, he is gone!' he became at once aware of the true state of the case, and as none of the bystanders, of whom there were about twenty, made any effort to save the man, Dr. Crane dashed his coat, waistcoat, and watch on the ground, and immediately dived down, head foremost, where the man had disappeared. On reaching the bottom, he himself became entangled in the weeds, which were very thick, and he could with difficulty move his arms; and after many efforts found it impossible to disentangle and raise the man from among them. He then rose to the surface, when some one threw him a wooden rake, with which, while treading water, he attempted to separate and remove the weeds, but in vain. He then resolved on coming to shore, as he was impeded by his shirt, and, throwing that off, he went down the river until he found a place free from weeds, and diving in there, he advanced under water, separating the weeds as he went, until he got to the man, and was enabled to get him in his arms, and bring him to the surface of the water and swim with him to the shore. Being a very big man, Dr. Crane had some difficulty in getting him out of the water. On examining him, he found no sign whatever of life; he, however, proceeded at once to try to resuscitate him, using a combination of Marshall Hall's and Sylvester's plans, and after about a quarter of an hour or twenty minutes' perseverance (as far as he could judge of the time), some signs of returning animation became perceptible, and he was enabled to dress himself, and when the man was sufficiently recovered he sent for a cab and had him conveyed home."

URTICARIA IN THE HORSE.—At the Albert Veterinary College, Bayswater, at the moment we write, is to be seen a very interesting case of urticaria in the horse. The animal appears in very good health, the temperature is about normal; the pulse, however, is quicker than in health, and the visible mucous membranes somewhat reddened, especially that of the nose. There is some slight puffiness about the face under the eyes, about the nostrils, and also about the legs. The urticated patches are chiefly scattered about the shoulders; there is a large one about the size of the palm of the hand on the right flank; it is well defined, feels somewhat elastic but firm, and stands out in relief. Some of the spots are not larger than hazel nuts: the majority, however, are much larger. These "wheals" are evanescent in character, rising up to their full development and disappearing again in the space of a few hours.

LOW FORMS OF LIFE: VIBRIONES, BACTERIUM, AND LEPTOTHRIX.—In the *Archiv für Mikroskopische Anatomie*, April, 1866, is a valuable essay on Leptothrix-swarms and their relation to Vibriones, by Ernest Hallier. The author traces the relation of some of the vibrio-forms to Leptothrix and the more developed forms of mould, and he arranges them under the following heads:—1. Mould series, including *Penicillium*, or brush mould; *Mucor*, or head mould; and *Oidium*, or jointed-plants. The first occurs on the surface of liquids, the second on substances which are pretty dry, and the third on substances which are putrescent and pap-like in consistence. 2. Achorion series, which arises from the germination of the spores of brush mould, *Penicillium*, and gives rise to *Oidium*. 3. Leptothrix series, producing the *Leptothrix buccalis*. 4. Leptothrix-yeast, made up of the broken fragments of mycelium that have fallen into the fluid from the surface and from swarms, giving rise to (*a*) Penicillium-yeast, which is roundish, refracts slightly, and has a large nucleus; (*b*) Mucor-yeast, which is globular, highly refracting, and finely grained. 5. Torula-yeast, which is produced from the germination of Penicillium spores in alcoholic fermentation. 6. Jointed-yeasts, which take origin in acid and ammoniacal fermentations from the conidia of Penicillium or Mucor. 7. Aerospore-yeasts, or *Trichophyton tonsurans*, developing itself from Penicillium spores in connexion with the development of oily matter (oil fermentation). Hallier thus confirms the opinion of some writers that the fungi found upon and in the human system belong to one genus. Many of the so-called vibrios and bacteridia are consequently the early stages of ordinary moulds developing out different mature forms, according to the soil which they fall upon.

SO-CALLED PACCHIONIAN BODIES.—The current number of the *Microscopical Journal* contains an elaborate paper on the "Pacchionian Bodies" by Dr. Bastian, who agrees with Rokitansky and Luschka as to these bodies being invariably growths from the arachnoid, though he differs from the latter observer as to the fact of their ever springing from its parietal layer. They are in all cases not only continuous, but histologically identical, with the arachnoid membrane, without vessels or nerves, and covered over, in the earliest stages especially, by delicate tesselated epithelium. Microscopically they are seen to be made up of fibrous tissue in different stages of development, intermixed with elastic fibres here and there. In old people these bodies contain deposits of "brain sand." They must be distinguished from other formations arising as the result of calcifications, of embolisms and the like. Dr. Bastian discusses their nature; Luschka believes them to be normal structures, the rudiments of which can be detected at the earliest periods of life. It is, however, certain that at about twenty years of age they become common, and increase in frequency subsequently. It would seem, nevertheless, most probable that they are simple hypertrophic vegetations. "Two causes seem influential in bringing about a fibroid thickening and opacity of serous membranes—undue amount of friction on the one hand, which, as Dr. Jenner and other pathologists maintain, seems to be by far the most frequent cause of 'white patches' of the pericardium; and hyperæmia on the other, whether from chronic inflammation or oft-repeated congestions, to which this condition of arachnoid and synovial membranes seems most attributable." Repeated congestion is common after the middle periods of life, and the number of Pacchionian bodies seems to be in direct proportion to the frequency with which such congestions arise. Dr. Bastian does not think these bodies of much pathological import. "Still their growth is slow, and the pressure exerted upon the cerebrum can only be insignificant, seeing also that the direction is *outwards* towards more vascular parts, causing them to press upon the inner table of the skull, and finally produce more or less deep erosions in the vault of the cranium." They may also impede the current of blood through the veins, blocking up the sinuses, and increase more rapidly in consequence of the produced congestion. But no case of this kind has as yet been made out. The effects of their growth are so gradually produced that the local circulation has plenty of time to accommodate itself to any change.

THE following are the last week's Cattle Plague Returns.

Census Divisions.	1. Attacked.			Back cases reported in the week ending June 23, 1866.	2. Result of reported Cases from the Commencement of the disease.				
	Week ending June 9.	Week ending June 16.	Week ending June 23.		Attacked.	Killed.	Died.	Recovered.	Unaccounted for.
Metropolitan Dist.	10	3	5	..	7901	3420	3713	318	450
South Eastern Co.	5	10	4	..	4877	1703	2538	465	171
South Midland Co.	99	50	60	5	20610	8616	10068	1540	386
Eastern Counties	21	9	10	..	11405	5378	4842	789	396
South Western Co.	..	..	..	2	1758	658	822	207	71
West Midland Co.	96	117	43	..	14669	6155	6092	1516	906
North Midland Co.	111	67	39	9	18848	10820	6265	1218	545
North Western Co.	536	190	205	45	71065	24092	35016	8312	3645
Yorkshire	40	33	15	1	34526	7878	18350	5936	2362
Northern Counties.	21	9	2	..	8633	4928	2613	974	118
Monmouthshire & Wales	36	27	7	..	8286	1141	5791	1057	297
Scotland	12	18	15	..	46854	6257	28087	10706	1804
Totals	987	533	405	62	249432	81046	124197	33038	11151

The Return shows that 405 attacks were reported to have occurred during the week ended June 23, being a decrease of 128 on the previous week.

Correcting the total by adding an estimated average of attacks commencing during the week, but which may be subsequently included under the heading "Back Cases," the number for the week will be 506.

Note.—7 Inspectors who reported cases last week have not reported in time for this return—viz., for the county of Oxford, 1; Lincoln, 4; Chester, 1; and Salop, 1. These inspectors reported 22 cases last week.

THE HUNTERIAN MUSEUM.—If the Council of the Royal College of Surgeons are remiss in the promised publication of their *Proceedings*, they certainly are not in those relating to the Museum, as the members can judge by paying a visit to the lecture-room of that Institution, where are displayed and catalogued all the portable additions which have been made to the collection since the last annual meeting of the Fellows—we say portable additions, as it would be very inconvenient to remove the large whale to the theatre, even if the room was large enough for the leviathan of the deep, which is now on stilts in the Museum. The preparations in the theatre and adjoining committee-room, which are about to be added to the Museum, comprise some valuable specimens in natural history, physiology, and pathology, obtained principally as contributions from Sir Wm. Fergusson, Bart., Messrs. Hilton, Busk, Curling, Henry Smith, Carr Jackson, Wormald, Spencer Wells, etc. Amongst the purchases is a magnificent skull with the horns of the African white rhinoceros (*Rhinoceros simus*), one of the trophies collected by and purchased of the celebrated traveller, Gordon Cumming. The physiological and pathological preparations, so interesting to the Professional man, were fine examples of minute structure in man and in the lower animals, and of morbid changes in various parts of the human animal economy. Dr. Bell Pettigrew, the assistant, appears to have been exceedingly active, and has produced a most laborious series of dissections illustrating the arrangement of the muscular fibres of the human bladder. This anatomist has described them in a paper read before the June meeting of the Royal Society, which will prove particularly interesting to physiologists. Their arrangement is, curiously enough, almost identical with that of the heart previously described in a paper published in the *Philosophical Transactions* for 1864. Next in importance to the bladder is a series of preparations intended to show the arrangement of the voluntary muscles in man. These preparations are very carefully dissected, and when completed will form a standard with which to compare the muscular systems of the lower animals. They are in many respects unique, and will no doubt be used to test the knowledge of anatomy of the candidates for the diploma of the College. Particular attention should be paid by the naturalist to a specimen of young whalebone, to the heart of a dugong with its deeply cleft apex, and to the rete mirabile of the sloth and spider monkey; also to the lungs of a manatee (the mermaid of our sailors), which is beautifully injected. Amongst the pathological specimens we observed typical examples of fatty, fibrous, cartilaginous, and bony tumours; of epithelial, medullary, colloid, and other cancers; of necrosis of the foot, of diseased and stiff knee-joints, of old-standing dislocations, angular curvature and disease of the spine, club-foot, stricture of the œsophagus. Many of the pathological specimens are successfully injected; two of them are deserving of special mention—viz., an osteo-sarcoma of the lower end of the femur, and a hypertrophied mamma, both removed by Sir William Fergusson; the former is remarkable from the rapidity of its growth, and the latter for its size; the specimen, before mounting, weighed no less than thirteen and a half pounds. An early visit of inspection should be made, as the series will only remain on view until the 12th inst., when they will be dispersed through the large collection. We have no doubt the visitors will come away with the conviction that in Mr. W. H. Flower, F.R.S., the Council have found an admirable Conservator; we may add that from long and repeated visits to the Museum we have never seen the collection to so much advantage as at the present time, showing the great labour bestowed on it by this gentleman and his indefatigable assistants.

If weakly children are tided over infancy, the result, it may be said, will be an increase of sickly adults and degeneration of race. All breeders of animals throw aside bad specimens. The Spartans did not allow the father to dispose of his child as he thought fit, for he was obliged to take it to the tryers, who, if they found it puny and ill-shaped, ordered it to be carried to a sort of chasm under Taygetus; of this course Socrates in Plato approves. At Athens and Rome the infant at birth was laid upon the ground, and was abandoned to its fate if the father did not lift his child from mother earth, who was assumed to have claims upon its fragile body. The Romans were reproached by the Christian fathers for their inhumanity. "Which of you," says Tertullian, upbraiding the Gentiles in rude eloquence, "has not slain a child at birth?" Thus the right of a child to life was questioned at its very threshold, and he only won it after examination. Children were dipped, like Achilles, in cold water to harden, or to kill them, as the case may be. Through Christianity, through one of the leading races of mankind the Jews—and through the manly sense of the Anglo-Saxons, we have been led to look upon children in another light, and be they weak or strong their lives are sacred in the eyes of English law. Experience has justified this policy. Great qualities of soul are often hidden in the frailest child. One Christmas-day a premature posthumous son was born in England of such an extremely diminutive size, and apparently of so perishable a frame, that two women who were sent to Lady Pakenham, at North Witham, to bring some medicine to strengthen him, did not expect to find him alive on their return. He would inevitably have been consigned to the caverns of Taygetus if the two women had carried him to Spartan tryers. As it was, the frail boy grew up into Newton, lived more than four-score years, and revealed to mankind the laws of the universe. If he had perished, England would not have been what it is in the world. In Paris one evening a puny child in a neat little basket was picked up: he had been left at the church door; the commissary of police was about to carry him to the foundling Hospital, when a glazier's wife exclaimed: "You will kill the child in your Hospital, give him to me; I have no children, I will take care of him." She cherished her boy, poor as she was, until some one, perhaps his father, settled a small annuity on his life, with which he was educated at the Mazarin College, where he displayed the early genius of a Pascal; it was D'Alembert, to whom we are indebted for a new calculus, for the grand introduction to the Cyclopædia, and for innumerable physical discoveries. He was offered 100,000 frs. a-year by Catherine of Russia, but refused to leave his mother by adoption—the glazier's wife—and his country. It would be easy to multiply instances, to prove how impolitic it is to take away life on the verdict of the most clear-sighted tryers. How false, then, is the policy of exposing children to those blind tryers, the pestilences which infest infant life in Europe? Let the little strangers have a fair chance; in their respect, "Be given to hospitality, and you may entertain angels unawares."—*Dr. William Farr, on the Mortality of Children.*

NOTES, QUERIES, AND REPLIES.

◆

He that questioneth much shall learn much.—*Bacon.*

St. Mary's Dispensary.—We are authorised to say that Miss Elizabeth Garrett, L.S.A., has nothing whatever to do with the Female Medical Society. Miss Garrett is an accomplished scholar, and thoroughly educated and qualified Medical Practitioner. As a matter of taste, and as a matter of practice, we regret that a lady should have devoted herself to Medicine; but there the fact stands, and we believe that not many women can have the time, the money, the ability and energy requisite for such a career. The Dispensary lately opened is under Miss Garrett's charge as Medical attendant. On the other hand, the *Female Medical Society* has a far lower aim; it is to educate women as midwives merely. This is quite a retrograde step. Every case of labour should, we think, be watched by a well-educated Medical man ready on the spot to correct whatever may go amiss. Educated men are far less meddlesome and fussy than women as midwives. As for the charge that they carry infection, that was disposed of in the *Medical Times and Gazette* a year ago.

The Right Hon. William Windham.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Can any of your readers inform me what was the cause of death in the case of this celebrated statesman? His memoirs, recently published, were edited by a lady, and perhaps this will account for the scanty and mysterious hints that occur towards the close of the volume as to "an *operation*" he underwent. What was this operation? who performed it? and what connexion had it with his death?

I am, &c. D.

June 28.

, If D. will turn to Paget's "Lectures on Surgical Pathology," vol. ii., p. 144, he will see that Mr Paget mentions a tumour (Mus. Coll. Surg., 218) "which," he says, "has some historic interest, for it was removed from the Hon Wm. Wyndham, the associate and friend of Pitt and Fox and Burke, the model of the true English gentleman. When he was 60 years old, and an invalid, he exerted himself very actively one night in saving from fire the library of a friend. During his exertions he fell and struck his hip, and from that injury the tumour appeared to derive its origin. It grew quickly, and in ten months it seemed necessary to remove it. Mr. Wyndham submitted to the operation, says his biographer, 'with neither hope nor fear,' and it would be difficult to describe more briefly a more unfavourable state of mind. The operation was performed by Mr Lynn. The tumour was attached to the capsule of the hip, and was with difficulty removed. At first all went well, but then, it is said, symptomatic fever came on, and death occurred on the sixteenth day. The tumour was, at Mr. Wyndham's request, placed in the museum of this College, and I have had it sketched because it might be signalised as one of the most characteristic examples of its kind."

Is Chloroform Accumulative in the System when taken into the Stomach?

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE

Sir,—Perhaps some of your readers may be able to answer the above question, as I am not aware that chloroform is known to possess two opposite properties—viz., the power of accumulating, as well as the property of eliminating itself from the system when administered internally.

About twelve years ago I first observed that whenever I gave spirit of chloroform in the form of mixture, in cases of jaundice, it acted with great energy in the removal of bile from the blood. The action of the remedy in such cases was readily accounted for by the affinity which exists between chloroform and bile on the one hand, and its diuretic property on the other, thus causing the elimination of bile through the kidneys with the urine.

It was interesting to see with what rapidity the skin and conjunctiva were cleared of the deep yellow colour caused by the bile in the blood. Moreover, I observed that symptoms of coma gave way (in a case of jaundice from disease of the liver) by the removal of the bile by chloroform. I have had no opportunity of proving whether chloroform undergoes decomposition in passing through the system, but it would appear that no decomposition takes place, as is shown by the affinity which exists between bile and chloroform.

After making the above observations, I was led to conclude that chloroform, when taken into the stomach, would at all times pass out of the body by the kidneys, unless those organs were diseased, and then, if not decomposed, it would be eliminated through the skin or lungs. I was surprised, however, to find that chloroform was capable of accumulating in the system of some of my patients when the kidneys were not affected. Cases in which this phenomenon occurred were those of phthisis, choleraic diarrhœa, and anasarca arising from obstruction to venous circulation, without any indication of disease of the kidneys. The quantity of spirit of chloroform taken by each patient was comparatively small, being from 10 to 20 minims for a dose, or amounting to two or three drachms in the space of a few days. The most remarkable fact was that the mixture containing the chloroform was suspended for several days, and on visiting the patients daily, I found no odour of chloroform, but on the third, fourth, or fifth day (I write from memory), on entering the bed-room, I found a strong odour of chloroform. On making the strictest inquiry, and even on searching the room, I could not prove that chloroform had been either taken or used. In one or two cases, chlorodyne, which contains chloroform, had been taken and discontinued, but the exhalations from the patients took place, or at least the room was impregnated with the odour, as before mentioned. The patients in whom the suspected exhalations occurred were chiefly Dispensary patients, and not disposed to adopt any treatment without my knowledge; I therefore arrived at the conclusion that chloroform in certain diseases and constitutions was capable of accumulating in the system of certain individuals. I am not aware that the observations which I have made have been recorded; and as the retention of any remedial agent is of so much importance in a therapeutical point of view, I trust that by giving the subject publicity further observations and investigations will be made, especially by those who have opportunities of making post-mortem examinations and analyses, whereby the pathological and chemical cause may be more correctly determined. I am, &c.,

June 28, 1866. HENRY OSBORN, M.R.C.P. Lond.

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TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

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I am, &c.,

ROBERT FOWLER, M.D., Treasurer and Hon. Sec.

145, Bishopsgate Without, July 4, 1866.

THE ARMY MEDICAL DEPARTMENT.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—His Royal Highness the Duke of Cambridge, with the silent consent of the Director-General of the Army Medical Department, has finally decided that the present condition of the Army Medical officers must remain unaltered, and has completely ignored the just recommendations of a mixed and unprejudiced committee detailed by Government to inquire into our many grievances. This denial of equity is entirely owing to the fact that at the last half-yearly Army Board examination there were a sufficient number of candidates (chiefly Irish) to fill the vacant appointments, and who, by so acting, have effectually crushed for the present all the hopes and efforts of the many who have laboured for years to advance the unenviable *status* of the army and naval branch of our Profession.

Should a similar influx of candidates take place at the next examination, appointed to be held at Whitehall-yard on August 8, 1866, there is no manner of doubt—and it is a solemn and serious reality—that all our prospects of genuine relative rank, social position, promotion, pay, and retirement, are for ever doomed.

This appeal is therefore forwarded to every Medical school in the United Kingdom, calling upon the professors as well as students, for the sake of justice and the honour of our Profession, to cease the supply of Medical candidates for the vacancies of the army at the next and future examinations, until the rights accorded us by the late Commission are duly approved of by the Horse Guards and the Admiralty and are ensured to us by Government.

"Amongst the Parliamentary documents issued during the last Session is a return to the House of Commons of the number of Assistant-Surgeons at present in her Majesty's service, exclusive of the Indian army, and of the number of Assistant-Surgeons promoted to the rank of Surgeon during the last three years, specifying the number in each year. The return is very brief, but highly instructive. I quote it in its very words :—'Return showing number of Assistant-Surgeons at present in her Majesty's service, exclusive of the Indian army, 738. Return showing number of Assistant-Surgeons promoted to the rank of Surgeon during the last three years: Year ending March 31, 1863, 16 ; year ending March 31, 1864, 19 ; year ending March 31, 1865, 20.' The average annual rate of promotion, therefore, for these three years is simply 18, which goes into 738 just 41 times, so that the last appointed Assistant-Surgeon in her Majesty's service has the just expectation of being promoted at the end of forty-one years."

This is the present prospect there is of promotion to Army Assistant-Surgeons ; the rank of all in both services, army and navy, is "nominal," not "relative." We can retire after a full service of twenty-five years, and during that period self-respect too frequently dwindles away, and gradually succumbs to a process of almost perpetual "snubbing ;" and for the sake of peace and years hard spent in every climate we have almost to barter all the feelings of gentlemen, and often endeavour to forget the dignity due to ourselves and our Profession. I am, &c.,

June, 1866. ONE OF THE ABOVE.

HEAT FEVER.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Will you kindly publish the enclosed case if you think it of sufficient interest?

John Mould, aged 24, single, worked in a brass-foundry, had delirium tremens three months ago, but is said not to have drunk hard lately. Is said to have suffered from the heat of his work. Was out of sorts June 25 and 26. On the morning of June 27, went to his work, and worked till shortly before noon, when he left owing to headache. A quarter of an hour afterwards he was found by the police violently delirious. While he was being led to the office he fell, vomited, is said to have been slightly convulsed, and lapsed into coma.

I saw him at 12.30. He was then profoundly comatose ; his eyes open ; pupils contracted ; conjunctiva injected. The heart was beating violently, and communicated an impulse of remarkable sharpness to the larger arteries ; but the radial pulse was almost imperceptible. Breathing was laboured, the skin felt exceedingly hot, and the thermometer, placed in the axilla between the skin and clothes, registered 109·6° F. He lay in this state half an hour, when the pupils dilated, and in a few minutes the heart ceased to beat.

Fifteen minutes after death, the thermometer had fallen one-tenth of a degree. On post-mortem examination twenty-two hours after death, all the organs were found to be perfectly healthy. The heart was empty and contracted ; the lungs were congested, the brain not so ; the blood everywhere was black and fluid.

The foregoing was evidently a case—almost typical in its symptoms—of heat fever. It occurred, as it is said most often to do, in a man previously out of sorts, probably suffering from suppressed cutaneous secretion. Its onset took place in a room of great heat ; not, however, as is almost always the case in England, while the patient was exposed to the direct rays of the sun. Lastly, the old observation of the heat of skin in such cases has been here strikingly confirmed, and the temperature proved to be so high that the thermometer might be called in to aid us in diagnosis. It may not be unnecessary to remark that the instrument used was one of Cassella's, and of proved accuracy. I am, &c.,

EDW. CASEY, M B.,

House-Physician to the General Hospital, Birmingham.

Birmingham, July 3.

WILLIAM HENRY HARVEY.

Dr. Harvey was born, near Limerick, on the 5th of February, 1814. His parents belonged to the Society of Friends, though in after life he joined the communion of the Established Church. At a very early period he exhibited a great fondness for collecting objects of natural history. His father was in the habit of going for a portion of each summer to the seaside at Kilkee ; and in making a collection of the sea-weeds cast up on this productive coast the first taste for this speciality in botany was indulged in. In the course of 1824 Harvey was sent to Ballitore School, Kildare, where he received a most liberal and excellent education. After continuing here for some years he went home to Limerick, and settled down for a time in his father's office. The accurate business habits here acquired remained with Harvey to the last, and were found to be of the most essential value to him throughout his life. About this time he made several excursions into the neighbouring counties of Cork and Kerry, and commenced a herbarium of native plants, which still exists. During one of these journeys in April, 1832, he discovered a new species of Limnæus (L. involutus, Harv.) in a small alpine lake in Killarney. His elder brother was appointed, in 1835, Treasurer and Registrar-General to the Cape of Good Hope colony ; and Harvey, thinking it would be a grand opportunity for seeing a new country and collecting unknown plants, obtained leave to accompany his brother. On his arrival at the Cape he commenced to examine and describe the plants: and many papers descriptive of new genera and species are to be met with in the "London Journal of Botany" for 1837-8. In this latter year he published, in one small 8vo. volume, "Contributions towards a Flora Capensis." In 1839 he returned to Europe with his brother, who was at this time in delicate health, and who died before the vessel reached England. The Government offered Harvey his brother's place, which was, after some deliberation, accepted, and in 1840 he once again returned to Cape Town. His reputation as a botanist was at this time well established, and his desire to devote himself altogether to his favourite pursuit was perhaps never more fervent than when he thus found himself in the enjoyment of a fair competency and of a pleasant position ; so that when, in the course of 1843 he heard of the death of Dr. Coulter, Keeper of the Herbarium of the University of Dublin, he made up his mind to apply for the vacant post. At this time Dr. Allman was Professor of Botany, and Whitley Stokes was Lecturer on Natural History in Dublin : so that when, in the course of 1843 the Professor of Botany died, and for a time it was thought probable that the Keepership of the Herbarium would be united to the Professorship. Dr. Allman, the present Professor of Natural History in Edinburgh, was, however, elected as professor instead of Dr. Harvey : but the Keepership of the Herbarium was given to him. Small though the salary was—not so much as Harvey was in the habit of giving to his servants at the Cape—the place was one that he had often wished for, and he lost no time in putting Coulter's American collection and his own Cape specimens into order ; and in consideration of his presenting his own herbarium to the College he was allowed a yearly sum of £50 for life. His election to the Keepership was in 1844, and in February of that year the Dublin University conferred on him the honorary degree of M.D. From this time Harvey's life was one of constant, unceasing work. In 1845 he projected the first of his great works, the "Phycologia Britanica," the first part of which was published in January, 1846. The whole of the plates in this work, 360 in number, were drawn on stone by Dr. Harvey himself. In every respect, pecuniarily and otherwise, the publication of the "British Seaweeds" was a great success, and established its author as one of the first living authorities on this subject. In 1849 he published, at the instance of Mr. Van Voorst, "The Seaside Book," dedicated to his nephew, and one of the pleaantest of a now very numerous class of books. It has already reached a third edition. In January, 1848, Dr. Harvey was elected Professor of Botany to the Royal Dublin Society. The following year Dr. Harvey received an invitation to deliver a course of lectures on Algæ before the Lowell Institute of Boston, U.S., and he left Dublin for America in July, 1849, returning early in May, 1850. In the meanwhile he had not been idle; but visiting many places on the coast of North America, he made large collections of algæ. He also at this time made a tour around the shores of the Pacific, visiting Oregon and California. The result of these labours was published by the Smithsonian Institution, in a large 4to. volume of 550 pages and fifty plates, during the years 1852-57. The preparation of this work and the publication of a "Nereis Australis" engaged Dr. Harvey for another year or two; but again the great desire to be away in other parts of the world came over him, and this time he made arrangements for a long and, as it proved, a last journey. In August, 1853, he left for Ceylon, stopping at Aden to collect on the way. From Ceylon he proceeded to Australia, visiting Sydney, Melbourne, Adelaide and several parts of Tasmania and New Zealand. Taking advantage of the visit of a missionary ship, he went to the Fiji and Friendly group of Islands. Returning to Sydney, he went to Valparaiso, and came home in October, 1856. This extended tour cost Dr. Harvey more than £1,200. The University and the Royal Dublin Society allowed him his full salary during his absence, and his friend Professor Allman delivered the necessary course of lectures for him. The algæ collected on the Australian coast amounted to more than 20,000 specimens and 600 species; and in 1857 the "Phycologia Australica" was projected. This was published in five volumes, each volume containing sixty plates, of which the first 200 were drawn on stone by the author. The work was completed in 1863. The "Flora Capensis" was next commenced. In this Dr. Harvey was joined by Dr. Sonder, of Hamburg; and the Cape Government, at the solicitation of the late Sir W. Hooker, gave a grant in aid of the publication of each volume. This great work, of which three large 8vo. volumes are already published, unfortunately is still incomplete. Dr. Harvey commenced at the same time a series of illustrations to this Flora under the title of "Thesaurus Capensis;" two volumes of this work, containing 200 plates, are already published. In 1856 Professor Allman was appointed to the Chair of Natural History in Edinburgh; and at the subsequent election Dr. Harvey was chosen as his successor in the University of Dublin. About the same time the professorial staff was transferred from the Royal Dublin Society to the Museum of Irish Industry, and Professor Harvey was retained as one of the Government lecturers. Such constant work, and so very much of it desk-work, was ill-suited to Professor Harvey's constitution; and in the course of 1861 he was so ill that at one time his life was considered in danger. From this attack he almost completely recovered; but from this time he did not work so hard as before. His last course of lectures was delivered in the spring of 1864, and by the advice of his Physicians Professor Harvey spent the winter and spring of 1864-5 in the South of France. Pleasant letters from Arcachon told that a more genial climate had revived the invalid, and the returning strength brought on a wish to be back once again in the Herbarium. Home they brought him, and to see the still zealous worker drooping amid accumulated collections of African plants, eager to describe them, still too feeble to hold them, was a sight to see and grieve at. Working away, the autumn and the winter months passed, and the spring days were looked forward to with hope. As the days got longer a change of air and scene was recommended, and Torquay was chosen. Thither, about last Easter, guided by gentle and loving hands, Dr. Harvey went; and there breathed his last.—*Athenæum.*

COMMUNICATIONS have been received from—

C. H. WARD, Esq.; D.; Dr. T. SARVIS; C. H. JOHNSON, Esq.; J. WORDSWORTH POOLE, Esq., M D.; APOTHECARIES' HALL; Dr. R. FOWLER; Dr. MACCORMAC; ONE OF THE ABOVE; Dr. SAMUELSON; Mr. C. C. BLAKE; Mr. E. BELLAMY; Mr. J. CHATTO; Dr. GEORGE WILLIS; Mr. F. C. SKEY; Dr. BALLARD; Mr. F. H. MARSH; Dr. MOXON.

BOOKS RECEIVED—

Goldsmith, On Bromide in Hospital Gangrene—Erichsen, On Railway Injuries—Goupil and Bernutz, On Diseases of Women—Cobbold, On Tapeworms—Braithwaite's Retrospect (Vol. LIII.)—The Pharmaceutical Journal (July)—Turner, On the Convolutions of the Human Cerebrum—Hussey, On Accidents to Volunteers—The Medical Reporter (St. Louis) (June)—The Annual Report of the Dorset County Asylum—Pim, On the Negro and Jamaica—The Dental Journal (June)—Foster's Use of the Sphygmograph—Grimshaw, On Atmospheric Conditions influencing the Prevalence of Typhus Fever—The Australian Medical Journal (April)—Johnson, On the Anatriptic Art—The Glasgow Medical Journal (No. 2)—Gairdner, On the Function of Articulate Speech—Rosebургh, On Optical Defects of the Eye—Twentieth Report of the Commissioners in Lunacy—Symons' Monthly Meteorological Magazine—Todd and Bowman's Physiological Anatomy—The New York Medical Journal—Fayrer's Clinical Surgery—Canniff's Principles of Surgery.

VITAL STATISTICS OF LONDON.

Week ending Saturday, June 30, 1866.

BIRTHS.

Births of Boys, 982; Girls, 937; Total, 1919.
Average of 10 corresponding weeks, 1856-65, 1810 3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	694	706	1400
Average of the ten years 1856-65	602·9	545·2	1148·1
Average corrected to increased population ..	..	..	1263
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West ..	463,388	4	6	2	2	12	2	11
North ..	618,210	5	10	10	—	15	15	20
Central ..	378,058	8	5	6	—	7	5	5
East ..	571,158	13	20	11	2	12	8	14
South ..	773,175	11	18	5	3	11	8	17
Total ..	2,803,989	41	59	34	7	57	38	67

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·814 in.
Mean temperature	66·3
Highest point of thermometer	86·5
Lowest point of thermometer	48·6
Mean dew-point temperature	58·1
General direction of wind	N.E. & N.N.E.
Whole amount of rain in the week	0·21

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, June 30, 1866, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending June 30.	Deaths.		Temperature of Air (Fahr.)			Rain Fall.	
				Corrected Average Weekly Number.*	Registered during the week ending June 30.	Highest during the Week.	Lowest during the Week.	Weekly Mean of the Mean Daily Values.	In Inches.	In Tons per Acre.
London (Metropolis)	3067536	39·3	1919	1400	1400	86·5	48·6	66·3	0·21	21
Bristol (City) . .	163680	34·9	119	73	‡88	84·0	53·0	66·7	1·90	192
Birmingham (Boro')	335798	42·9	306	163	113	..	..	..	..	..
Liverpool (Borough)	484337	94·8	411	281	329	..	..	..	..	..
Manchester (City) .	358855	80·0	307	203	‡201	91·3	47·8	67·7	0·07	7
Salford (Borough) .	112904	21·8	9[illegible]	57	47	87·9	50·6	67·4	0·00	0
Sheffield (Borough) .	218257	9·6	138	115	101	81·4	52·0	64·0	0·12	12
Leeds (Borough) .	228187	10·6	331	116	124	87·0	51·0	66·8	0·03	3
Hull (Borough) .	105233	29·5	80	49	54	..	..	..	..	..
Nwcastl-on-Tyne, do.	122277	22·9	149	65	62	75·0	54·0	64·7	0·00	0
Edinburgh (City) .	175128	39·6	125	84	67	79·7	53·0	64·4	0·10	10
Glasgow (City) . .	432265	85·4	385	252	234	77·9	47·8	62·9	0·25	25
Dublin (City and some suburbs) .	318437	32·7	189	†156	121	79·8	41·5	63·4	0·11	11
Total of 13 large Towns . . .	6122894	34·4	4554	3014	2941	91·3	41·5	65·4	0·28	28
					Week ending June 16.	Week ending June 16.				
Vienna (City) . .	(1863) 560000	..	..	..	360	..	..	§ 70·7	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·844 in. The pressure of the atmosphere was 30·05 in. at the beginning of the week, and 29·53 in. at the end of it.

The general direction of the wind was N.E. & N.N.E.

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* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 65·4°.

APPOINTMENTS FOR THE WEEK.

July 7. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p m.

9. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

10. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p m.; St. Peter's Hospital for Stone, 3 p.m.

ETHNOLOGICAL SOCIETY OF LONDON, 8 p.m. S. White Baker, Esq., "On the Tribes of the Nile Basin." Gilbert Malcolm Sproat, Esq, "On the West Coast Indians in Vancouver Island." Lieut. Col. A. Fytche, "On the Aborigines of the Andaman Islands."

11. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

12. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

13. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

THE PANCREATIC EMULSION,

A NEW REMEDIAL AGENT.

Originated by **Dr. DOBELL**, Physician to the Royal Infirmary for Diseases of the Chest.

Vide THE LANCET, *Nov. 11th* and *18th*.—"A third report of cases of consumption treated with Pancreatic Emulsion at the Royal Infirmary for Diseases of the Chest."

This Preparation is now made on an extensive scale, and the Price is therefore considerably Reduced.

N.B.—The TRUE PANCREATIC EMULSION has an acid reaction, and is readily miscible with water or milk. Preparations in IMITATION of it have an alkaline reaction, and are not miscible with water or milk.

PREPARED ONLY BY

SAVORY & MOORE, New Bond-street,

CHEMISTS TO HER MAJESTY THE QUEEN, HIS ROYAL HIGHNESS THE PRINCE OF WALES, HIS IMPERIAL MAJESTY NAPOLEON THE THIRD, AND HIS MAJESTY THE KING OF THE BELGIANS.

INVALID TURTLE.

As the best restorative for strength, used and recommended by all Physicians in cases of WEAKNESS and PROSTRATION. Kept ready for use in Half-pints, Pints, and Quarts, by Mr. DONALD, St. James's Hall, Regent-street, W.

Natural Mineral Waters of Vichy, Carlsbad, Seltzer, Kissengen, Homburg, PULLNA, FRIEDRICHSHALL, &c., direct from the Springs; also the Artificial Mineral Waters prepared by Dr. Struve and Co. at the Royal German Spa, Brighton.—Agents, W. BEST and SONS, 22, Henrietta-street, Cavendish-square, London, W.

NATURAL MINERAL WATERS OF VICHY,

Efficacious in Stomach, Liver, and Renal Diseases; Gout, Rheumatism, Diabetes, &c.

Also, the celebrated OREZZA MINERAL WATER, containing Iron, and which is extensively prescribed as an invaluable Tonic.

VICHY PASTILLES, the best Digestive Lozenges; and VICHY SALTS for Baths. Also, other French and German Natural Mineral Waters.

VICHY WATERS COMPANY (only Depôt in Great Britain), 27, MARGARET-STREET, REGENT-STREET, LONDON, W.

The Mineral Water of Geilnau (Nassau), an Acidulous and slightly Alkaline and Chalybeate Water, of very agreeable and refreshing taste, owing to its large proportion of carbonic acid; a valuable Dietetic Beverage in many morbid tendencies through its antacid, diuretic, and tonic qualities.

Specimen and analysis of the Water may be obtained from Messrs. BECKER and JUNG (Ems), the appointed Agents, 9, Rood-lane, Fenchurch-street, E.C., London, who supply also the other German Mineral Waters.

MINERAL WATERS OF VALS.

ACIDULOUS, GASEOUS, BICARBONATED, SODAIC, &c.

Analysed by O. HENRI, Member of the French Imperial Academy of Medicine.

Ferro-Arsenical Spring of Dominique.	
Free sulphuric acid	1·33
Silicate acid, sesqui-oxide of iron. Arseniate ,, sesqui-oxide of iron. Phosphate ,, sesqui-oxide of iron. Sulphate ,, sesqui-oxide of iron. Sulphate of lime Chloride of soda Organic matter	0·44

Thermalité 13°.	*Saint-Jean.*	*Rigolette.*	*Précieuse.*	*Désirée.*	*Magdeleine.*
Free carbonic acid	1·425	2·095	2·218	2·145	2·050
Bicarbonate of soda	1·480	5·800	5·940	6·040	7·280
,, of potash	0·040	0·263	0·230	0·263	2·255
,, of lime	0·310	0·259	0·630	0·571	0·520
,, of magnesia	0·120		0·750	0·900	0·672
,, of iron and manganese	0·006	0·024	0·010	0·010	0·029
Chloride of soda	0·060	1·200	1·080	1·100	0·160
Sulphate of soda and of lime	0·054	0·220	1·185	0·200	0·235
Silicate of silica, alumina	0·080	0·060	0·060	0·058	0·097
Iodure alcalin, arsenic of lithia	traces	traces	traces	traces	traces
	2·151	7·826	8·885	9·142	9·218

Quantity Analysed, One Litre of Water from each Spring.

These Waters are extremely gaseous, and very agreeable to drink at table, pure or mixed with wine. An excess of Carbonic Acid, and the happy proportion of Bicarbonate or Calciques Magnesia, make these the richest Mineralised of all known Waters, and of a light, soft, and essentially digestive character. They are very valuable for preventing the formation of the alkaline diathesis. The ordinary dose is one bottle per day.

SPECIAL USES.—*Saint-Jean:* Maladies of the Digestive Organs. *Précieuse:* Affections of the Biliary System. *Désirée:* Disarrangement of the Sexual System. *Rigolette:* Chloro-Anæmia. *Magdeleine:* Maladies of the Urinary Organs. *Dominique* (this Water is Arsenical, and has no analogy with the preceding): Intermittent Fevers, Cachexies, Dyspepsia, Skin Complaints, Scrofula, Organic Maladies, &c.

The Waters of these six Springs are exported, and keep well for years, without undergoing any alteration. They are to be obtained at the price of 36s. per case of 50 bottles, of

E. GALLAIS & CO., 27, Margaret-street, Regent-street, W.; W. BEST & SONS, 22, Henrietta-street, Cavendish-square, W. COVERDALE & CO., 11, London-street, City, E.C.; and of all the principal Chemists in the Kingdom.

ORIGINAL LECTURES.

NOTES OF LECTURES ON INSANITY.

DELIVERED AT

St. George's Hospital,

By GEORGE FIELDING BLANDFORD, M.B. Oxon.

Introductory.

Gentlemen,—Gladly would I avoid, if I could, all reference to the study of healthy mind, and would plunge at once into the art of curing the disorder we call insanity; but insanity will come before you, not only Medically, but Medico-legally, and you will be examined in courts of law, and your opinion will be asked upon "intellectual insanity," "emotional insanity," "moral insanity," "insane *ideas*," "perverted feelings," and the like. Therefore, you must have some notions as to the physiology of the mind, as to the meaning of *ideas*, *feelings, emotions*, or your answers will be confused and vague. In this first lecture I shall briefly speak of the physiology of that nerve-life and brain-life which constitute the mind of man.

Method.—Writers and thinkers wage a continual warfare as to the method of studying the human mind. Which philosophy is really the true and the divine they can by no means decide: and this fierce and ancient strife arises chiefly out of the fact that there are two methods, distinct and different, each with its champions. Each has its charms, its advantages, and disadvantages. I shall just glance at these, and show that one—and one alone—is of use to us in our present inquiry.

One of these we may call the philosophical analysis of our own consciousness, further than which it does not pretend to go. The thing we are certain of is our consciousness; we only *know* things in general as we are conscious of them, as we *feel* them to exist. Whether they really exist or not we do not go on to inquire. The nature of our subjective feeling and knowledge is the concern of this philosophy. By means of this we rightly consider such questions as the freedom of our will, ethics, what it is that we know, what we want to do, what we ought to do, and what we can do. Now, as we can analyse no one's consciousness save our own, it is plain that when we apply the truths we have elicited from our self-examination to others, we do it on the supposition that their nature is identical with ours. Clearly, then, this philosophy cannot be applied to inferior or unsound minds. It can take no account of the mind of the child, the idiot, or the lunatic—of none, in fact, but that of the highly-trained thinker. Legislators who enforce ethics, and by law enact what we shall do, are obliged to proceed according to this philosophy, and to assume that all people know the law, any exceptions being proved as they arise. Hence it comes to pass that lawyers so puzzle themselves and witnesses about a lunatic's "knowledge of right and wrong," which, as Lord Brougham said, means nothing but "knowledge that an act is contrary to law." A lunatic, arguing from his subjective consciousness, tries to persuade us that his fancies are facts, because he himself is firmly convinced of their reality; but so soon as we commence to argue with him, we find ourselves on a totally different tack. We disregard his feelings and convictions, and we test his ideas as we do any other phenomena. No one ever stands up in a witness-box and says that a patient's delusions, being firmly believed in, are therefore true. We adopt the other method of inquiry—we inquire into his mental phenomena as we look at phenomena of any other kind—*inductively*. This, and this alone, is true inductive philosophy—the true method of studying mind, called by some "positivism," by others "phenomenalism," by others "empiricism." By this we investigate the facts and faculties of the brain function as we find them in animals, children, men (sane or insane); we consider them as phenomena which exist, whether we know it or not—whether the beings in which they exist are conscious of it or not. We compare these phenomena, classify them, predict them, as we do the functions of the body. We lay down a certain series of them and call it normal and healthy, while those that differ we call abnormal and unhealthy. We look at the relation which one brain function bears to others in an individual, and in as many other individuals as we can observe, and we judge of their consciousness also as a phenomenon, much as we judge of the subjective feeling of pain as a phenomenon in disease. Though pain often constitutes the disease, as in hysteria, yet we test it in a variety of ways, and often take it little into account in our estimation of the gravity of the disorder.

Let me call your attention to this diagram. It is to show that the same thing happens in the lowest manifestation of nerve function as in the highest intellectual act of man: that each act is made up of a stimulus, a stimulated centre, and a resulting movement—no nerve action has less than this, or more. Adopting a common division, I have divided the whole cranio-spinal system into *cerebral centres, sensory centres*, and *spinal centres*, each having corresponding movements and activities, and being aroused and stimulated by appropriate stimuli. I will speak of these in order, beginning with the lowest, reflex action.

I.

Stimuli { External events stimulate *Cerebral Centres.* / Internal { Mental / Organic
1. With consciousness = FEELING /IDEAS\ —— WILL .. Voluntary Acts { Mental. / Bodily.
2. Without consciousness ...... Involuntary Acts { Mental (unconscious mental action). / Bodily.

II.

Stimuli { External / Internal stimulate *Sensory Centres* ...... Instinctive movements of man and higher animals.
All acts of invertebrata and lower fishes.

III.

Stimuli { External / Internal stimulate *Spinal Centres* ...... Reflex action.

Reflex Action.—This, as it has come before you in other lectures, in experiment, and disease, means muscular contraction following the application of a stimulus to some part of the spinal centres or their encephalic prolongation. But some authors have extended the term to other actions, and have spoken of sensori-reflex acts, done under the stimulation and guidance of the sensory ganglia—nay, have extended it even to cerebral acts, and described as "reflex action of the cerebrum" all that which has been known for ages as "unconscious mental action." In short, every operation which is unconscious and involuntary has been denominated "reflex." As my object, however, is not to establish identity of nerve function in all animals and in all parts of animals, but rather to point out a parallelism in the different orders and degrees of this function, I wish to limit the term "reflex action" to the common meaning, viz., spinal action; for, in truth, there is a certain antagonism between this and cerebral action in man and in animals, so that spinal reflex action in a frog is best demonstrated after removal of the head. I am not going to describe reflex action. I mention it merely to point out its place in the scale of nerve life. It is to be studied, not that we may see consciousness and volition in the spine of a headless frog, but that we may recognise in this, the simplest type of nerve action, all the elements of the highest brain action; that we may understand how largely this lowest nerve life enters into the organic life of man; and chiefly that we may learn from its action, inaction, disorders, and disturbances, what must be the analogous pathology of the higher life of the brain.

To study spinal action we must examine it in vertebrate animals. There are some of the lowest animals, the jelly fishes and others, whose actions may be said to be almost entirely reflex, so little are they endowed with organs of sense; but these are too low in the scale to teach us much, and they are but few. We soon come to families possessing sensory ganglia. The higher animals can live, though but for a short time, by reflex action only—nay, frogs can live even after the medulla oblongata is removed, the respiration being performed by the skin. There are no animals which live in a state of nature by means of a spinal system only.

Sensori-motor Actions.—Many classes of animals possess, as their highest nerve centres, the sensory ganglia, chiefly the invertebrata, the mollusca and articulata, and a few of the lower fishes among the vertebrata. The automatic and instinctive acts performed by many of these animals, such as the bees and ants, are truly wonderful; and these are performed by creatures devoid of everything like a cerebrum, possessed only of a nervous chain, like that of others, as flies, whose acts are not wonderful at all. By experiment, by vivisection, we may study sensori-motor action in higher animals whose cerebral hemispheres have been removed, as did Flourens in his well-known experiments. Sometimes disease of the hemispheres may afford us the opportunity of doing this in the case of man, but such observations are rare and uncertain. In the undeveloped and developing mind of the child, however, instinctive action may be seen and studied; and what conclusion shall we come to upon it? That it is the response to a stimulus communicated from within or without to the sensory centres, not a single muscular contraction, as is reflex action, but a number of compound and consentaneous actions. And although the acts of the ant and the bee evince apparently so much purpose and forethought, yet they are to be considered only as the instinctive processes necessary for self-preservation and reproduction, done by each animal alike without individuality or differentiation, done at once without teaching or experience, and not to be confounded with the acts of animals possessed of a cerebrum, such as the dog, the elephant, or the monkey. And they are to be studied, not that we may see reason and will in the bee or the ant, but that we may understand how much of this automatic and instinctive life is included in the volitional life of man and the higher animals, overshadowed and forgotten by many, but silently at work during our every-day existence.

Mind Proper.—So soon as we leave these lower animals and study the mental phenomena of those possessed of a cerebrum, we begin to discover, gradually and elementarily, the rudiments of the highest brain functions which we call mind, and when we reach the dog, horse, or elephant, we find *emotion* of no mean kind, *reason* not a little, and corresponding *volitional* acts. Instinctive life we see manifested, too, but it is not mere blind instinct. The instinctive habits may be overcome. The animal is docile, individually capable of being specially educated. Far below man, he is yet far above the ant, or the bee, or the lower fishes. That which seems to cut off the highest animals from man is the lack of language; emotion, reason, and will they possess, as does man's mind. Let us see what is meant by mind. Probably most men now-a-days will agree as to the division of the human mind into three groups of properties or phenomena. The first, those of the feelings; the second, those of intellect or ideas; the third, those of the will. They differ, however, in their views of the relation which each of these bears to the others, the difference depending on the method, metaphysical or physiological, according to which they approach the subject.

Feelings.—Keeping to our physiology and our diagram, we see that the highest centre, as the lowest, is stimulated by some stimulus, external or internal. But this stimulation of the highest cerebral centre calls up, for the most part, not unconscious, but conscious, sensation or feeling. Feeling, whatever its character, whether high ethical or æsthetic emotions, or terror, or horror, or passion, or bodily pleasure, or pain, is the state or condition of the centre called up by the excitation. It *must* be a feeling of pleasure or pain. It is, be it observed, not an *act* of the mind, but a *condition*. And this feeling prompts to action the active parts of mind or body. If the act is voluntary, the will must interpose between the feeling and the act, and this volition is based upon reason and experience; therefore reason, or in other words intellect, must also come in between the feeling and the act, and guide and control the act.

Will and Intellect.—The feeling, then, is the first mental state, the act is the final result. The relation of the intellect and the will is the remaining problem to be solved. The will determines to act or not to act, according to the dictates of reason, according to past experiences or knowledge. In other words, will refers the feeling of pleasure or pain to the region of *ideas*, and this brings us to the question, what are *ideas?* Now every feeling, caused, as I have said, by some stimulus, external or internal, is an affair of the moment only. It is the state of mind at any moment of consciousness. The next moment something alters it; another feeling succeeds, and the first is gone, never to exist again save in memory. We cannot twice feel the same thing in exactly the same way. The feeling, however, is embalmed in memory as an idea, and may so continue for a long or a short time according to its intensity. In memory ideas are stored away, and not only so, but they are also sorted and arranged. And this storing and sorting is mainly an unconscious and involuntary physiological process, just as is the assimilation of our daily food. These ideas are of the things we have seen, and felt, and done, and they are arranged by the ideational faculty into "groups," "trains," "associations," "currents of ideas," which are being perpetually shifted and shunted, dissevered from one string and joined to another, we know not when or how.

Now it is to this storehouse of ideas that our active powers of remembering, reasoning, judging, imagining, etc., are sent by the will, and according to the ideas laid up, so will be the result of these processes. The man of vast memory and well-sorted ideas will, out of the abundance of his treasures, reason, judge, and argue well. The man whose experiences and ideas are half gone and forgotten, will, from ignorance, argue and decide imperfectly. The man whose ideas are so wrongly joined that they are altogether delusions, not representing any true sensations or experiences, will argue, like the insane, upon false premises. And this is all, I think, we can say of the will—that it relegates the feeling of the centre to the region of ideas which we call intellect, and according to the decision arrived at there, it proceeds to set in motion some further bodily or mental action.

Once more let us look at the diagram. Besides the stimulation of the cerebral centres which calls up consciousness or feeling, there may be a stimulation without consciousness, yet resulting nevertheless in action of mind or body. If we well consider and examine the daily life of ourselves and others, we shall notice a vast amount of unconscious, habitual, and automatic action, cropping out here and there into consciousness. The stimuli, too, are hidden and mysterious, often internal, from visceral sympathies, sexual desires, or the like. How much is done by this unconscious action is not always easy to define; but how much it hinders and hampers us in what we are consciously trying to do many know full well. Space forbids my enlarging on the subject, but all must be aware that much goes on within their heads, and much is done externally by their bodies, which, in every sense of the word, is involuntary.

The foregoing remarks will enable us, I think, to comprehend the seats and sources of mental disorder—to place our finger on the sore place, even if we cannot wholly explain the pathology. The stimulation of any centre may be excessive, disproportionate, exhausting. The centre itself may be disordered or disorganised by the stimulation, or through defect or disease it may be too much or too little stimulated. The conscious feeling aroused in the highest cerebral centres may be converted into an idea in no way adequate, which does not correspond to the feeling; or the idea, when stored up, may be wrongly joined to other ideas, making the whole train erroneous, a delusion; and so the will, basing its judgment on these false ideas, may carry out acts accordingly, acts which are denominated those of a madman. Disorder may occur in any of these physiological processes. Sometimes we may be able clearly to point out the spot. Frequently it will elude us, but it is physiology, and physiology alone, that can help us to find it, not the examination of our own self-consciousness. I shall endeavour in my next lecture to apply these brief remarks to the elucidation of the pathology of insanity, and to show how far such an investigation may be successfully carried out, and for what reasons it must of necessity be limited.

Dr. C. O. Baylis has been appointed by the Birkenhead Commissioners Medical Officer of Health for that township, at a salary of £350 per annum, in the place of Dr. Robinson, resigned. Dr. Baylis, who at present resides in the Isle of Man, was formerly a member of the board and chairman of the Health Committee.

Surgeons wanted by the Prussians.—A telegram from Berlin dated July 6 states that an appeal has been published by the War Minister to Surgeons, even if not Prussians, to report themselves for voluntary service upon the Medical Staff, in order that provision may be made for the care of the enemy's wounded. The Queen has had the Surgeons leaving for the army presented to her at the railway station. The correspondent of the *Times* writes that the Austrian Medical men and Hospital attendants who were captured at Gitschin work hard, and are aided powerfully by the Prussian officers, but they have few materials with which to supply the wants of the wounded.

ORIGINAL COMMUNICATIONS.

ON THE NATURE OF VITAL FORCE.

By W. MOXON, M.D.

The reply which Dr. Beale made to my paper on this subject does not, I think, touch the question there considered. That question is this—Is there ground for believing that vital force is a correlative of the physical forces? In opposition to Dr. Odling's affirmative, all that Dr. Beale urges is a total difference between its operations and the operations of chemical force; in particular, he contends that no mechanical arrangements are present in the site of the former, whilst elaborate mechanisms are needed to bring into play the latter. He says —"An absolute, not a relative difference. I maintain that chemical and vital changes differ from one another in their essential nature;" and "of course, if chemists could discover any compound capable of increase by making a compound like itself out of matter of a different composition, he would have some reason for comparing living things with lifeless matter."

Now, if what Dr. Beale here demands were accomplished, and the chemist should make such a substance, then the chemist would not have shown vital force to be correlative with chemical force; but he would have made it for ever impossible to hold that view by having proved vital force to be identical with chemical force.

It does not seem to receive Dr. Beale's full consideration that forces are not accounted correlatives unless there is an absolute and entire difference between them in their modes of manifestation. In what is chemical attraction like light? Is the manifestation of chemical attraction more like the manifestation of light than the manifestation of vital force is like the manifestation of chemical attraction? Who can say? The difference between the members in each of these pairs is absolute, and there is no mode of comparing these differences. Yet, although this absolute difference exists between chemical attraction and light, all agree to admit their correlation; and this being so, it can be no argument against the correlation of vital force and chemical attraction that they differ never so absolutely in their manifestations.

The proofs on which the belief in the correlation of forces is based are not in any way connected with a likeness between these forces. These proofs consist in experimental demonstrations, showing that when one force disappears in acting, the other correlative appears, and that the amount of the one disappearing has a constant proportion to the amount of the one appearing. But we do not follow the process by which they are converted, nor apprehend how the conversion occurs. When we are assured of the fact that light has changed into chemical attraction, we do not see any further similitude between their manifestations such as to explain the transformation of the one into the other. In short, every force has its own specific and inexplicable mode of manifestation. That of vital force is this—that the material which shows it forms the like material from other indifferent material.

This is a wonderful property, and is enough to give the vital force a complete distinctness from chemical force. But if it is shown that the amount of its operation is proportioned to the amount of light, heat, etc., which acts in its seat, there is the same evidence of the correlation of vital force with those forces as is admitted to prove the correlation of those forces with each other, and any indications of phenomenal difference are utterly wide of the question.

Whilst thus urging that Dr. Beale's argument does not reach the grounds on which is based the view of the correlation of vital and physical forces, I am far from concurring in that view, and believe that it is possible to show that the mode of proof which is acceptable in the case of simple sequences is not acceptable in the case of sequences combined with arbitrary co-existences; that is, that the law of universal causation of all simply successional phenomena is not necessarily applicable to phenomena wherein successions may be combined with collocations due to attractions, elections, or preferences, which are rather voluntary than chemical, although remote in their nature from human conscious volition. The consideration of this position I will postpone to a future opportunity.

MANAGEMENT OF "RETAINED PLACENTÆ" IN ABORTIONS.

By C. B. SUCKLING, M.D.,
Senior Surgeon-Accoucheur Queen's Hospital, Birmingham.

M. J., aged 29, married; fifth child; six months advanced in pregnancy; has hitherto carried her fœtus to the full time of utero-gestation. She was taken with uterine pains early on Saturday morning, February 3, 1866, which continued on and off until I was summoned to see her on the following Monday at 10 a.m. I saw the patient at 10.30, and found she had had pain more or less intense during the previous three days. She had lost but very little blood. A vaginal examination, which is the only one to guide us to an accurate diagnosis in these cases, was at once made. It revealed the presence of the fœtus in the vagina, and a patent state of the external opening of the os uteri. On removing the fœtus, the umbilical cord became detached from the placenta, three-fourths of it being left adherent to the fœtus, and the remaining fourth to the after-birth. This severance was afterwards found to be owing to a state of decomposition which had set in apparently at the time when the pains had been first felt by the patient. As the after-birth could not be felt, and as there was no flooding, after waiting a little time, I adopted my usual course—plugged, and left the patient, promising to return in the course of seven or eight hours; but I requested the attendant to send for me immediately, should anything occur of an alarming nature during my absence. When I visited the patient again at the expiration of eight hours, I found she had been pretty comfortable, free from pain, and had been soothed by sleep. She told me she had suffered occasionally from pains, but they were of short duration, and had given her but slight uneasiness. On removing the plug, the placenta came away with it, accompanied by a few coagula of blood. There was very little flooding. It may be as well here to remark that the plug I used consisted of shreds of linen—the only available substance at hand.

This case I record as one of very many to illustrate a practice I am in the habit of pursuing in the treatment of cases of abortion in which the retention of the placenta is a source of trouble and anxiety to the accoucheur. Young Practitioners especially have the notion that, at all risks, the placenta should be removed before they leave the patient, and that she is in imminent jeopardy if it be permitted to remain longer than half-an-hour, or at the most three hours, and they are apt—too apt when nature does not assist them in this much-to-be-desired end—to summon to their assistance the ready resources of art so abundantly supplied them by those skilful and ingenious Obstetricians whose mechanical inventions for this purpose are most beautifully and cunningly contrived, and who quite ignore the maxim that "meddlesome midwifery is bad." There are many such instruments described in the various works on midwifery. The best of the kind, I think, is the "wire crochet" of Dr. Dewees. With this we could not do any harm if we used the commonest precaution. But I maintain that, in the majority of cases, the finger of an expert Practitioner and the *vis medicatrix naturæ* are more to be depended upon than any artificial appliance.

When the placenta can be felt over the os uteri the finger may be passed around it, and by a little skilful manœuvring it may readily be detached and extracted; but I would not advise any prolonged attempts to dislodge it, as by so doing the material parts may be much irritated and the patient's suffering greatly enhanced.

Plug and leave the case in the hands of nature. The kind of plug you should use is a matter of no very great moment so long as it is of a soft and yielding material, adapted to accommodate itself to the parts. In cases of emergency, where no time can with safety be wasted, you will be glad to avail yourselves of a good silk handkerchief, and this I have found to make an excellent tampon, answering every needful purpose. Cotton wool is, perhaps, preferable. Small pieces of sponge, about the size of a walnut, to which are attached pieces of string, are those more generally recommended. One great objection to them is, that when they become saturated with the fœtid discharge they become obnoxious to the patient, and are liable to promote the accession of febrile symptoms. To prevent this, they must not be kept too long in the vagina. Whatever plug we may employ, we should take care that the whole of the vagina be well filled, but not to such an extent as to cause by distension pain—(I may remark here that in midwifery operations we should always endeavour to avoid causing pain to the mother)—but so as to prevent the discharge of blood from the uterus externally. Some may be haunted by the idea that although the plug is *in situ* that internal hæmorrhage may take place to an alarming extent, but I do not see how this can occur to any great degree when we bear in mind that there is a small uterus, not large enough to admit the hand, partly occupied by the placental mass, and the os uteri blocked up by the artificial plug. In my own practice, when I adopted the treatment I am describing, I have seldom met with hæmorrhage that either caused me any anxiety or created much depression of the system of the mother. To recapitulate, I would recommend, in the treatment of cases of retained placenta in abortion, the following points to be observed:—1. If it be possible, remove the placenta by the finger; the sooner this is effected the better, but do not rashly act, and do not let the attempt last too long, as you have nothing to fear by its retention. 2. Plug, and use that which you have readiest at hand, but the sponge plug, in my opinion, is the best. 3. Wait eight, ten, or twelve hours before you remove the plug, and you will generally find, on removing it, that the after-birth either comes away with it, or it is found lying in the vagina, from whence it may be easily withdrawn.

A NEW METHOD OF INDUCING PREMATURE LABOUR.

By LUMLEY EARLE, M.D.,
Obstetric Surgeon to the Queen's Hospital, Birmingham, etc.

The plan which I am going to submit to the notice of the Profession is not intended to supersede all the well-known modes of inducing labour, and probably a method never will be devised which will be equally suitable, although it may be applicable, in all cases.

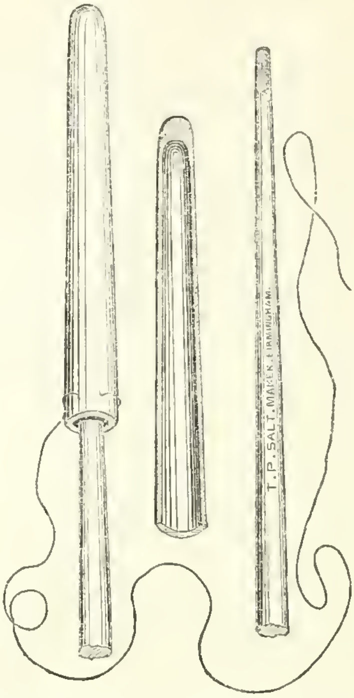
Medical men often have what they call "a favourite" method of performing the operation, and adopt it in all instances; this I believe to be a mistake. The plan selected should depend upon the nature of the case—*e.g.* rupture of the membranes is preferable in severe cases of general anasarca, which disease is generally associated with dropsy of the amnion, and in accidental hæmorrhage. Ergot is most suitable in nervous women who obstinately refuse the use of "instruments," or any local means. Kiwisch's method of injecting water forcibly against the os uteri ought to be exclusively used in those rare cases in which such extensive deformity exists, or so large a tumour fills up the cavity of the pelvis, that the os uteri cannot be reached by the finger; and in retroversion of the uterus, if a catheter or other instrument cannot be insinuated within that organ. Dr. Barnes' india-rubber bags are most useful in all instances where it is necessary to commence and terminate the labour in a few hours, as in placenta prævia, puerperal convulsions, etc. Separation of the membranes from the wall of the uterus by passing an elastic catheter between the uterus and the membranes, and either leaving it there, or removing it after having slightly moved it from side to side, is best adapted to cases in which there is only a moderate contraction of the brim of the pelvis.

The new plan is intended to remove certain objections attached to the two modes of inducing labour with an elastic catheter. The objections are these:—If the catheter is simply passed between the membranes and uterine wall, and moved from side to side, then removed, it does not always induce uterine action, and it requires more manipulative skill and experience than most Practitioners possess. In the hands of Dr. Arthur Farre, it has proved most successful; but in the hands of others, it has often failed. If the catheter is passed in a similar manner, and left in the uterus, and tied to the patient, although it is much more certain in its action, the patient has to stay in bed until labour comes on, as it would not be altogether safe for her to walk about with the instrument retained. It is very advisable that the patient should be able to go about her ordinary duties until uterine action sets in, because her thoughts then are not so liable to be fixed exclusively upon the recent operation or the forthcoming delivery.

The principle upon which the new method acts is exactly the same as that of the catheter—viz. by separation of the membranes, and irritation. The instruments consist of—

1. One or more pieces of native india-rubber tubing of the length and size depicted in the engravings. One end is closed and the other open. To the open extremity is attached a piece of strong thread to enable the tube to be removed when necessary. Fig. 2 shows a longitudinal section of the tube.

FIG. 1. FIG. 2. FIG. 3.



2. A whalebone sound or guide fourteen inches long. Fig. 3 represents the tapering extremity of the guide, which must be made to fit the tube so loosely, that if the two were inverted the tube would fall off immediately. At the same time, the point of the guide must not be made so fine as to endanger the structure of the india-rubber.(a)

Labour should be induced as follows:—Place one of the tubes on the tapering end of the whalebone guide (Fig. 1), which must be held lightly by the right hand. Then, guided by one or two fingers of the left hand, pass the tube into the os, and gently push it on between the membranes and uterine wall for several inches, as far as it will go readily. No more force should be used than is required in passing a catheter into the female bladder. If any resistance be met with, it should be overcome by passing the tube in another direction. Lastly, slowly remove the whalebone guide, leaving the tube in the uterus. One or more tubes may be passed in the same way, but in a different track. The patient need not be undressed, and, after remaining quiet for about an hour, may get up. The hydrostatic pressure of the liquor amnii below the india-rubber tube or tubes will prevent them from readily falling out of the uterus. If in twelve hours the tubes are still in the uterus, and labour pains have been felt, they may be removed by pulling the string. The string should be just long enough to hang about three inches out of the vulva, and the patient should be warned not to let it get entangled in her clothes—in fact, it would be better to pass it into the vagina.

The advantages of this method are:—

1. Its safety both to mother and child. The india-rubber tubing is soft and compressible, and during its passage into the uterus is much less likely than the catheter to rupture the membranes on the one hand, or to injure the uterus on the other.

2. The patient can walk about, retaining this small foreign body in the uterus, without any risk.

3. The operation is very easy to perform, and does not require more than ordinary skill.

4. It is not only safer than the catheter left in the uterus, but probably more efficient than the catheter when it is merely passed into the uterus, and withdrawn after having been slightly

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(a) The whalebone guide, with six india-rubber tubes in a neat paper box, can be obtained from Mr. T. P. Salt, Bull-street, Birmingham, price 5s.

moved from side to side, as it acts both by separating the membranes and also by irritation, not set up through any offensive emanation due to decomposing fluids, but by the mere presence of a foreign body.

5. More than one tube can be passed into the uterus with safety, thereby separating the membranes more extensively, and setting up irritation in more than one place.

6. The whalebone guide is preferable to a metallic sound, because, on account of its flexibility, it facilitates the introduction of the india-rubber tube into the uterus. If any obstruction is met with, the whalebone immediately bends, and the smooth and yielding nature of the india-rubber causes it to take a more favourable direction.

I can only bring forward at present one case in proof of its efficiency; and although it is unadvisable in most instances to urge the value of a new method of treatment from its success in one case, I consider this new plan to be an exception to the rule, as it is founded upon an old principle which has been well tried and approved of. From what I knew of the action of the catheter in the uterus, I felt as certain as I could be without trying it that it would succeed, and I should have been surprised if it had not.

Mrs. L., aged 37, a married woman, residing in Newhall-street. The following is her obstetric history:—The first two deliveries were good. The third, fourth, and fifth were very bad, each increasing in difficulty, but not instrumental. The sixth and seventh labours had to be terminated by craniotomy, extraction with the forceps first having been attempted. In the eighth pregnancy premature labour was induced by Mr. Clay, of this town, and delivery effected by turning. In the ninth and tenth pregnancies I brought on labour both times by passing an elastic catheter between the membranes and the uterus.

The present was her eleventh pregnancy. According to her calculations she had gone just seven months. I first intended to have waited at least a fortnight before performing the operation, as her children at the seventh month were unusually puny and weak, and either were stillborn or died within twenty-four hours. On examination, however, I found her to be very large, as if she had very nearly gone her full time. Only one fœtal heart could be heard beating, but there appeared to be two placental bruits, one at each side of the fundus. The condition of the os was such as to confirm the patient's opinion that she was in the commencement of the seventh month of gestation. My idea was that she was either carrying twins, or that there was dropsy of the amnion. Not feeling certain, and fearing lest she should have miscalculated, I thought it would be better to induce labour in a few days. Accordingly, on Saturday, June 9, at 9.30 a.m., in the presence of Mr. George Jones, who kindly gave me the benefit of his advice, I passed up two india-rubber tubes between the membranes and the uterus. This was very easily done, and the patient did not complain of pain. At 12 a.m., while walking about, one of the tubes came away. In passing the second tube I did not take particular care to pass it in a different direction from that of the first, and it probably passed along the same track, and, not being far from the os uteri, more readily came away. At 7 p.m. the pains commenced, and were repeated at intervals of about half an hour. At 10½ p.m. I removed the remaining tube. Like the first, it was full of blood mixed with a sero-gelatinous material, and there was also a slight discharge of the same fluid. No particular change was noticeable in the condition of the os. On visiting her next morning at 11.45, I was informed that the pains now came on every quarter of an hour, were strong, and lasted for some considerable time. The os was somewhat dilated, but not sufficiently to enable the presentation to be made out. There was a slight brownish discharge, which appeared like blood which had undergone a certain amount of extravasal change, mixed up with a gelatinous secretion. It was not offensive in the least. At 6 p.m. I was called to see her. The pains were recurring every five minutes, and the os was dilated to the size of a florin. The finger could not reach the presentation in the ordinary way, and therefore I did what I always do when uncertain as to the position of the child—I passed up the hand into the vagina and felt the head presenting. At 9 p.m. the os was fully dilated. The membranes were very tough, and I was obliged to rupture them with Lee's trocar. The child was born naturally at 9.40; it was alive, but very small and feeble. On examination I felt the head of a second child presenting. The pains soon recommenced, and each was attended with severe hæmorrhage. I then ruptured the membranes, which were also so tough as to require the use of Lee's trocar. As the hæmorrhage continued notwithstanding, and the head was still high up, not apparently making any progress, I thought it advisable to deliver by turning. The second was stillborn, and the first died two hours after; both were males. It was unfortunate that the case turned out to be one of twins, as of course the children were smaller and more feeble than if it had been a single birth. The mother made an uninterrupted recovery.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

MEDICAL COLLEGE HOSPITAL, CALCUTTA.

AMPUTATION OF THE FOREARM—ACUTE OSTEO-MYELITIS — SECONDARY AMPUTATION OF HUMERUS — FRESH OSTEO-MYELITIS — THIRD AMPUTATION AT THE SHOULDER-JOINT—RECOVERY—CLINICAL REMARKS.

(Under the care of J. FAYRER, M.D., F.R.S.E., Professor of Surgery and First Surgeon to the Hospital.)

Osteo-myelitis is a somewhat formidable term, and it might perhaps have been better if the condition it is intended to express—an inflammation of the medullary membrane of bone—could have had some more simple name given to it. The affection is much more common in military than in civil practice, and is seen with the greatest frequency, and in its most severe forms, in cases of gunshot injuries for which amputation has been performed. According to Dr. Valette (whose experience of the disease was gained chiefly in the large Hospitals of Constantinople during the Crimean war), in the first stage the medullary membrane is found to be extremely vascular and of increased density, in many instances projecting from the cut end of the medullary canal in the form of a greyish-coloured button-shaped protuberance. In the second stage there is purulent infiltration of the open tissue of the interior of the bone, with deposit of pus in the medullary canal. All authorities agree that this local affection is rendered in the highest degree dangerous by the liability which it produces to general blood-poisoning through the absorption of decomposing products of suppuration into the circulation. Much discussion, however, has arisen as to what is the treatment proper to be adopted when it is ascertained that a bone which has been cut through has become the seat of osteo-myelitis. Dr. Valette found that, in the acute form of the disease, it was useless to perform a second amputation through the bone higher up, since the affection always attacked the whole length of the bone, and pursued its course uninterruptedly in the part that was left after the operation; and he therefore held that disarticulation at the joint above ought to be resorted to. M. Jules Roux was led by a large experience among the soldiers wounded in the Italian campaign of 1859 to the belief that disarticulation was for the same reason necessary in the chronic form of the disease. On the other hand, Baron Larrey and Professor Longmore assert that osteo-myelitis does not by any means always affect the whole bone, but that, on the contrary, it is often limited in its extent and curative in its tendency; and hence they deny that disarticulation ought in the generality of cases to be performed. Indeed, Professor Longmore, on the occasion of reading a paper before the Medico-Chirurgical Society in 1865, exhibited several specimens and drawings of bones which showed conclusively that osteo-myelitis is often limited in its amount, and that its continuance is frequently due directly to the irritation produced by the presence of portions of bone whose vitality was destroyed by the primary injury; and he related several cases in which an operation for the removal of such dead portions of bone had been followed by complete recovery. The opinion of Dr. Fayrer on this important question may be gathered from the remarks which he has appended to the interesting case which he has favoured us with; but for a more complete exposition of his views we may refer our readers to an excellent article which he has published in the *Indian Annals* of October, 1865.

F. S., aged 31 years, German; residence, Mutlah; occupation, contractor. Admitted into the Medical College Hospital, with gunshot wound of both hands, at half-past four a.m. of February 25, 1866. He states that, as he was drawing the ramrod out of a gun loaded with two bullets in each barrel, it exploded, and the four bullets went through his right hand and injured also the left. The right hand is completely shattered, and the fingers of the left hand also injured. He says there was a great deal of hæmorrhage, from want of Medical aid at Mutlah.

February 25.—Amputation of the right forearm was performed by Dr. Fayrer, at 7 a.m., at its lower third by antero-posterior flaps; and two phalanges of the ring and little fingers, and the last phalanges of the middle and index fingers of the left hand, were removed. He was ordered tinct. opii ♏xl. In the evening he did not complain of much pain; his tongue was moist; was thirsty; had slept a little during the day; passed urine; pulse 84; temperature in axilla 100°. Morphia gr. ½ h. s. During the night he became delirious; his body was warm; he was very restless and thirsty; vomited occasionally.

The next morning his pulse was 116; his body was warm, head hot; tongue moist; very restless; answered rationally when questioned; no stool. Liq. ammon. acet. ʒij., with effervescing draught every two hours; castor oil ʒvj. stat. In the evening his pulse was 104; temperature 103°; no stool; tongue moist; not delirious; slept a little; vomits occasionally. Seidlitz powder ʒij. stat.; cont. effervescing draught without liq. ammon. acet.

27th.—Pulse 112; tongue moist; slept well; no stool since admission; not so thirsty as before; forearm slightly swollen. Cathartic enema stat. 6 p.m.: Pulse 108; temperature 101°; no stool after the enema; was very thirsty during the day; took a little food; swelling of the forearm extending. Calomel. gr. v.; ext. colocynth. gr. vij.; m. ft. pil. h. s. Castor oil ℥j. after four hours, if bowels are not moved.

28th.—Pulse 106; three stools after the castor oil; did not sleep well; says he felt hot; no shivering; tongue moist. Quinine mixt. gr. v. to ℥j. t. d. Arm to be painted with a strong solution of nitrate of silver. 6 p.m.: Pulse 104; temperature 104°; tongue moist; no rigors; some suppuration in the right arm, which is somewhat puffy and painful. Morphia gr. ½ h. s.

March 1.—Fainted twice during the day on account of the great heat (thermometer 90° to 100° in shade); pulse 100; tongue moist; no stool; skin cool; swelling of the forearm not gone down; very little pain; discharge from the stump free; appetite good; slept well during the night.

2nd.—Pulse 100; tongue moist; no stool; appetite fair; slept well in the night; stump looking much the same. Pulv. rhei co. ʒjss.; sp. ammon. aromat. ♏xv.; aq. menthæ ℥j., stat.; quinine mixt. gr. v. ad ℥j.; tinct. ferri muriat. ♏v., t. d. after stool. 6 p.m.: Pulse 104; temperature 103°; no stool; tongue moist; feels thirsty; no shivering; cathartic enema stat.

3rd.—Pulse 104; no stool after the injection; the swelling on the elbow fluctuating; a large incision made and some pus let out; another incision made on the lower part to relieve tension. Castor oil ʒvj.; tinct. rhei co. ʒij.; aq. menthæ ℥j., stat. 6 p.m.: Pulse 100; temperature 102°; four stools; tongue moist; not much pain in the stump; morphia gr. ½ h. s.

4th.—Pulse 96; tongue moist; not much discharge from the stump; three ligatures came away; appetite fair; no shivering. Cont. quinine and tinct. ferri muriat. mixt., t. d.

5th.—Pulse 96; discharge from the upper opening free; none from the lower; swelling of the forearm less.

6th.—Pulse 96; temperature 103°; all the ligatures have come away; a slough of cellular tissue taken out of the opening in the forearm; stump looking healthy; discharge diminishing; flaps have united.

7th.—Pulse 96; temperature 101°; tongue moist; says he had a slight shivering in the night.

8th.—Pulse 96; very little discharge from the stump; appetite good; no shivering.

9th.—Pulse 100; temperature 102°; still some discharge from the stump; bowels regular.

10th.—Pulse 96; temperature 103°; no shivering; complains of shooting pains in the arm. Morphia gr. ½ h. s.; cont. quinine and tinct. ferri muriat.

11th.—Did not sleep well last night; the arm was very painful. The forearm at the lower part looked puffy; a little deep-seated pus let out by an incision. The bone beneath was felt somewhat denuded. 6 p.m.: Pulse 104; temperature 104°; tongue moist; had one stool; had a slight rigor during the day, followed by heat of skin; does not complain of much pain in the arm; feels weak; is somewhat delirious; head hot. Cold lotion to the head; fever mixt. ℥j. q. 3tiâ h.; Seidlitz powder ʒij. stat.

12th.—Pulse 104; temp. 103°; no more rigors; no stool; is quite sensible; good deal of discharge from the wound; not much pain in the arm. 5 p.m.: Pulse 128; temperature 108°; tongue moist; had two rigors, one at 11 a.m., the other at 4 p.m. They lasted for half an hour, and were followed by profuse perspiration. Feels a tightness about the chest on breathing; no cough; not delirious. Fever mixt. ℥j. q. 3tiâ h.

13th.—Pulse 112; no more rigors; sweated a good deal in the night; tongue clean and moist. 2 p.m.: Amputation of the arm performed by antero-posterior flaps; lost about five or six ounces of blood; fifteen ligatures applied. The bones were examined by Dr. Ewart; both much diseased; medullary canal in radius and ulna had lost all appearance of medulla; replaced by carious and purulent debris; surface of bone carious; cancellated structure of heads of bones infiltrated throughout with pus; end of humerus healthy; soft parts of stump healthy. 7 p.m.: Pulse 96; skin cool; no bleeding; no more rigors.

14th.—Pulse 96; slept pretty well; no more rigors; tongue moist; no bleeding. 5 p.m.: Pulse 102; temperature 104°; tongue moist; no more rigors; feels hot since 2 p.m.; somewhat thirsty; not much pain in the stump; not much swelling; slight brownish discharge; wounds of fingers granulating; no discharge from them. Fever mixt. and acet. of potash, q. 3tiâ h.

15th.—Pulse 104; not much discharge from the stump; not much pain; discharge slightly fœtid. 4 p.m.: Had three stools since morning, rather loose, passed with griping and straining; did not feel hot during the day; pulse 100; temperature 102°; no rigors; appetite fair. Acid. muriat. dil. ♏v.; quiniæ mist. ♏ij.; tinct. ferri muriat. ♏v.; tinct. opii ♏x., t. d. Pulv. cretæ co. c. opio ℈j., three powders during the night.

16th.—Pulse 104; one stool in the night; slept pretty well; eight ligatures came away; one suture cut out to relieve tension of the flaps, which seemed somewhat swollen; very little discharge. 4 p.m.: Pulse 104; temperature 102°; one stool; no rigors; tongue clean and moist; took his food well.

17th.—Pulse 100; stump looking healthy; four ligatures came away; discharge healthy. 4 p.m.: Pulse 100; temperature 101°; no more rigors.

18th.—Doing well; pulse 90; not much discharge from the stump; fingers almost healed.

19th.—Pulse 100; temperature 101°; complains of occasional pain in the stump; no rigors.

20th.—Pulse 104; temperature 101°; still complains of occasional pain in the stump; it looks healthy; very little discharge from it.

21st.—Pulse 84; felt much pain in the stump last night; no discharge; stump looks healthy. 5 p.m.: Pulse 112; temperature 102°; tongue moist and clean; no pain in the stump; no shivering.

22nd.—Pulse 100; temperature 99°; stump looks healthy; all the sutures taken off; no suppuration above.

23rd.—Pulse 92; slept pretty well; feels better.

24th.—Pulse 92; doing well.

25th.—Pulse 116; no heat of skin; bowels regular.

26th.—Pulse 100; skin moist and cool; stump healing.

27th.—Pulse 100; doing well.

28th.—Doing well.

30th.—Pulse 108; temperature 102°; stump healing.

31st.—Pulse 108; doing well.

April 1.—Pulse 84; temperature 100°; complains of pain in the stump, which is œdematous; the absorbents a little red and inflamed; very little discharge. 6 p.m.: Pulse 102; temperature 103°; complains of much pain in the stump; no rigors.

2nd.—Pulse 100; temperature 102°; pain in the arm a little easier; slept well at night; no rigors.

3rd.—Pulse 120; temperature 103°; had a slight rigor during the night, followed by heat of skin; skin still hot; no sweating in the night. An incision was made on the anterior aspect of the stump, and a few small bits of bone removed. 7 p.m.: Had a distinct rigor at 11 a.m., which lasted for about a quarter of an hour; had another slight one at 1 p.m., which lasted only for a few minutes; does not complain of much pain; was delirious throughout the day; pulse 120; temperature 104°; perspiring now.

4th.—7 a.m.: Pulse 114; temperature 104°; no more rigors; sweating now; was very thirsty at night. 11 a.m.: Amputation at the shoulder joint performed; thirty-two ligatures applied; not much blood lost; flaps very vascular. There was some suppuration along the side of the humerus.

The lower end was denuded of periosteum for about half an inch; the medulla protruding. The bone, when sawn across lengthwise, showed diffuse suppuration in the cancelli, with three or four foci of pus within the medullary canal. 3 p.m.: Pulse 100; temperature 102°; no more rigors; thirst less; some pain in the stump; no bleeding.

5th.—Pulse 128; temperature 105°; no more rigors; tongue moist; is very thirsty; some pain in the head; no bleeding 5 p.m.: Pulse 128; temperature 105°; thirst less; still complains of pain in the head; feels occasional pain in the chest; no cough.

6th.—Pulse 124; temperature 103°. 6 p.m.: Pulse 124; temperature 102°; no rigors; no pain in the head; tongue clean and moist; no thirst; good deal of sanious discharge from the stump, very fœtid; one suture cut off to allow a free drain to the discharge.

7th.—Pulse 120; temperature 103°; no shivering; feels easier; slept well; tongue clean and moist. 6 p.m.: Pulse 112; temperature 103°; discharge from the stump free; no rigors; four ligatures came away.

8th.—Pulse 112; temperature 102°; slept badly; was very restless, and occasionally delirious. 6 p.m.: Pulse 112; temperature 104°; felt hot during the day; no rigor; was delirious during the day; discharge thicker and less fœtid; seven ligatures came away.

9th.—Temperature 102°; slept pretty well during the night; seventeen ligatures came away. 6 p.m.: Pulse 124; temperature 104°; no shivering; has not been delirious again; two ligatures came away.

10th.—Pulse 120; temperature 102°; not much pain in the stump; free discharge from it. 6 p.m.: Pulse 116; temperature 102°; discharge from the stump healthy, less in quantity, and drains freely; stump looks very healthy.

11th.—Pulse 104; temperature 102°; two ligatures came away; stump united in some parts, in others granulating; no shivering.

12th.—Pulse 106; temperature 100°; very little discharge from the stump; all the ligatures have come away; soft parts united.

Continued to do well, and left the Hospital on the 15th. He has now recovered, and is rapidly gaining strength.

25th.—He has recovered.

Remarks.—This is a case of great interest in a pathological, as well as Surgical, point of view. It illustrates what I have so frequently pointed out as the great tendency here, on the part of bones, when divided, to take on an unhealthy action, to pass rapidly into a state of suppuration, involving the whole of the cancellated structure, and rapidly inducing constitutional mischief, which, if not checked by the removal of the affected bones, is likely to terminate fatally by toxæmic changes. This form of diffused osteo-myelitis may occur, as the case proves, whilst all around it is doing well. In each of the instances in which it occurred in this case, the soft parts of the stump were doing so well as to have almost healed. It will be observed that the symptoms indicating the disease in the bone were not the immediate or direct sequel of the operation, but supervened at a period of several days later, when the general condition of the patient was favourable. They were ushered in by violent rigors and consecutive sweats, with rapid pulse and hurried respiration. Amputation on each occasion was performed as soon as the symptoms had fully declared themselves, and fortunately in time to anticipate any of those structural changes in the lungs which experience has taught us are but too certain to follow when the source of the mischief cannot be removed. It is very satisfactory to see how perfectly successful the last operation proved, notwithstanding its magnitude, the weak condition of the patient from incipient blood-poisoning, loss of blood, and the shock of former operations; and it seems to me to prove that disarticulation is often safer than amputation through the bones, where it can be practised. For here, after two amputations in the same limb, performed through the continuity of the bones, osteo-myelitis followed each. The third operation, disarticulation at the shoulder-joint, proved successful. It is probable that had I amputated at the elbow-joint, instead of just above it, on the first occasion, when osteo-myelitis appeared, the patient might have been spared the necessity of an operation subsequently at the shoulder-joint; but I thought that cutting through a part altogether sound and above the next joint would probably result more favourably, and hoped that osteo-myelitis would not attack the sound bone, and accordingly I amputated above the joint. I now feel so satisfied of the advantages, in a pathological point of view, of amputation at the joint over that through the shaft of the bone, that I shall hesitate on any future occasion to cut through a bone when there is a joint near the injury at which the limb may be divided. Such a rule cannot, of course, be made absolute, but I suspect if it were of more general application the mortality after amputation would diminish. There can be no doubt that the tendency to suppuration in bone is more marked in some localities than others, and it certainly is so here in Calcutta. Imperfect hospital construction and local hygienic defects have no doubt much to say to it, but cannot be the sole causes. The question still requires further investigation, and I am convinced that if a section were made of the bone of every amputated limb, and the lungs and other viscera examined in fatal cases, it would be found to be a more frequent cause of mortality than is perhaps supposed. I now feel better able to account for the loss of many amputations in field service, where death was attributed, sometimes perhaps rather vaguely, to other and uncertain causes. Were all such to be carefully examined, and the same minute inspection made as that practised more than twenty years ago by the pathologist who threw the first real ray of light on the cause of death after Surgical operations (I need hardly say I refer to Dr. N. Chevers), I feel certain that suppuration in the bone would be found to take a higher place as a cause of the blood-poisoning, surgical fever, or pyæmia—call it which you will—which raises the death figure of Surgical operation statistics so high. No one can read the report of M. Roux's experience and practice in the St. Maundrier at Toulon without feeling that this may be the case; and I am sure that no one can witness what occurs there without feeling that his experience must lead him to opinions similar to those of the eminent French Surgeon, and suggest similar practice. I can most conscientiously say that I had arrived at and recorded similar views before I had either heard of or seen his report. My experience of seven years in this great Surgical Hospital has not only led me to, but has confirmed me in them. The case I have related is not less interesting in a Surgical point of view, and it shows how much not only nature can sustain, but how far the Surgeon's aid may be instrumental in saving life. This man (not in a very high state of health—for he was residing in a most unhealthy part of Bengal, the Mutlah station, where he had had more than one attack of fever, and occasional attacks of malarious enlargement of the liver and spleen) sustained the shock of a very severe gunshot wound, by which one hand was shattered to pieces, and the other much mutilated. He lost much blood from want of assistance at the time, and travelled fifteen miles in a railway engine, in a state of exhaustion from hæmorrhage, before he reached the Hospital, where, ten hours after the injury, he underwent amputation of the right forearm and all the fingers of the left hand. He was subsequently attacked by osteo-myelitis in the ulna and radius, which rendered a second amputation of the arm imperative at a time when he was much prostrated. Recovering from this, he was again attacked by the same disease in the humerus, which, as the only hope of saving life, necessitated amputation at the shoulder-joint. From this he recovered, and is now in rapidly improving health, notwithstanding all he has undergone from shock, loss of blood, suppuration, surgical fever, and the effects of living and enduring all this in a hot and malarious climate.

For the above report of the case I am indebted to my House-Surgeon, Baboo Gopal Chunder Roy, and to Mr. Gratian, one of my dressers.

CHOLERA.—The following deaths from cholera were registered in the past week:—On June 29, at 3, George-street, Hammersmith, a labourer, aged 50 years, "cholera;" on June 30, at 58, Myddelton-square, Clerkenwell, a boy, aged 7 years, "English cholera (twenty-four hours);" on July 5, at 96, Borough-road, a boy, aged 6 weeks, "cholera (thirty-eight hours)." Besides these eleven deaths of children, chiefly infants, are returned as caused by "choleraic diarrhœa." —*Registrar-General's Report.*

SURGERY IN THE ITALIAN ARMY.—The *Times* correspondent, writing from Naples July 3, says that among those who left last week for the scene of action is to be honourably mentioned Signor Testa, a man of European reputation, and enjoying perhaps the largest practice as Surgeon of any in Naples. He has left all to join the camp in order to superintend and direct the host of young Practitioners who have already joined.

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Medical Times and Gazette.

SATURDAY, JULY 14.

THE FELLOWSHIP OF THE COLLEGE OF PHYSICIANS.

The Royal College of Physicians of London has from its very birth enjoyed a proud pre-eminence among the Medical Corporations of the Empire; in dignity and honour it has indeed ever occupied the first and foremost position, and no real lover of the Profession would willingly see it decline from its first estate. We all earnestly desire that it should ever worthily retain its eminence in the front, and that it should keep that position not by sufferance merely, not by resting on tradition and on the history of past glories, like an effete nobility which is illustrious only by its ancestors and shines only by a phosphorescent light from the great dead; we would see it illustrated by living worth, by great actions in the present, by attracting to and absorbing in itself all that is eminent of the living and working talent, dignity, and worth in the Medical world of the day. While, on the contrary, any sign of its sinking into a second-rate place, of its becoming a sleepy, stagnant, though not wholly undignified, Corporation could not fail to excite deep regret. The Profession was much grieved, therefore, when, years ago, he College of Physicians allowed the Apothecaries' Society to take the lead in the improvement of Medical education; when it suffered a civic Guild to acquire that honour and glory which might and ought to have been its own—the glory and honour, namely, of fostering and furthering the education of the general Practitioner; and great satisfaction was felt when the College, awaking from its slumbers, determined, though late, to take an active and honourable part in the work. We will not now stop to discuss the question whether or not it did this in the best way possible—whether its new creation of Licentiates was a happy one or not. The problem to be solved was undoubtedly a difficult one. But no one will deny, we imagine, that, in giving to the general Practitioners whom it admitted to corporate alliance with it the very title so long borne by Physicians—viz. the style and title of Licentiate—the College did inflict a serious injury on the latter gentlemen. It created the possibility, at least, of a hopeless confusion in the public mind between the Physicians and the general Practitioners—between the new "Members," who had up to that time been the "Licentiates" of the College, and the new "Licentiates." And having widened its basis and enlarged its borders, and so created this difficulty and danger, it was expected and hoped that the College would take a step further in the remodelling of its constitution, and would honour itself and the Profession by admitting its Members more freely and generously to the dignity of its Fellowship.

The annual selection by the Council of the College of the gentlemen to be admitted to the Fellowship had for years been a grievance, and fertile source of discontent. But the day of more enlarged and liberal views in the government of the College having apparently dawned, every one looked for improvement on this point also, and believed that either a new system of election to the Fellowship would be adopted, or that, at any rate, the old system would be carried out in a more liberal spirit. These hopes and expectations have, however, been disappointed, and, though a comparatively large number of Members were created Fellows in the first year of change, since then things have reverted to much their former state, and the Fellowship elections have been as incomprehensible and have excited as much discontent as formerly. And this discontent and dissatisfaction are excited not so much by what is done as by what is left undone—not nearly so much on account of the names that are so fortunate as to appear in the Fellows' list as on account of names that are "conspicuous by their absence" therefrom. According to the by-laws of the College, all "Members of at least four years' standing, who have distinguished themselves in the practice of Medicine, or in the pursuit of Medical or general science, or literature," are eligible for the Fellowship. It is obvious that a very wide and free interpretation may be given to this law, or a narrow and rigid one ruled according to a very high standard, and that the task of interpretation, which is entrusted to the Council, is by no means an easy or enviable one. With such grace and light as may be given them, the Council nominate annually the Members whom they think most worthy of the Fellowship, and their list is submitted to the Fellows at the June *Comitia majora* for election. It may be affirmed that the list invariably causes much disappointment and discontent among the Fellows and Members, and not a little surprise and murmuring in the Profession at large, and this, as we have already said, not because unworthy Members are nominated, but because many at least equally worthy are passed over. Because the Members nominated are worthy, or, at any rate, not unworthy, of the proposed dignity, the Council list is almost invariably passed, though, it may be, with more or less free expressions of dissatisfaction; and it will be remembered that two years ago that dissatisfaction was shown in a very painful, and happily unique, way —by the black-balling, namely, of half of the Council's list, the unfortunate Members being thus punished for the sins of the Council. This was felt to be so unjust that the process has not been repeated, but the dissatisfaction at the Council's selection remains, and threatens to be seriously injurious to the welfare and prosperity of the College. We have acknowledged that the task of the Council is anything but easy; and no one suspects them of being influenced by any improper or unworthy motives. But the principles which guide them in their selection are wholly incomprehensible by the outside world, and when it is seen that year after year well-known and distinguished Physicians are passed over, while much younger men, and men only distinguished, at present, by the possession of a degree from a University of high standing, and by having been fortunate enough to get an Hospital appointment, are nominated, one cannot easily resist the idea that it is not because the Council professionally know and love A less, but that they personally know and love B more.

All the gentlemen who were elected to the Fellowship the other day are no doubt worthy of that honour, though the fame of one is, we suspect, almost confined to a foreign health resort, and it might not be very easy to point out how some of the younger ones have as yet "distinguished themselves in the Practice of Medicine, or in the pursuit of Medical or general science or literature;" but some are undoubtedly distinguished, and all hold a position that fits them for the Fellowship. The murmurs against the list within the walls of the College and without are excited as usual by the fact that older and at least equally worthy Members have been again passed over, and Physicians who would grace and honour the Fellowship are still left in the cold shade. This state of things doubly injures the College. Every man who practises as a Physician in England should desire to be a

Member of the London College, and every Member should wish and hope to be able to attain its Fellowship. But while matters are thus managed, or mismanaged, Physicians are led, and will daily become more and more inclined, to question, in no very friendly spirit, whether the advantages of the Membership and Fellowship of the College are at all equal to the cost of obtaining them. The cost of the Membership is not small, and its advantages and privileges may, in these days when registration gives a right to practise, be considered very small. Apart, indeed, from its being a requisite qualification for Hospital appointments, which is daily less rigidly insisted upon, they may be said to consist almost entirely in the right to attend a few lectures annually, and in the being eligible for the Fellowship. The greatest devotee of lectures can hardly rate the former privilege at any very high value; and a Physician of great position and influence has shown what he estimates the Fellowship at by refusing it. It is certainly a very costly dignity, and every instance of delay in recognising a just claim to it makes men more apt to doubt whether its possession confers any equivalent advantage.

As it is most desirable that the College should not decline, but grow and increase in influence and power, it is most important that all these causes of discontent should be removed, and with the hope of impressing this necessity upon the College we shall take an early opportunity of recurring to the subject.

THE WEEK.

CASE OF CHOLERA.

At the London Hospital on Wednesday afternoon an autopsy was made by Mr. Little on the body of a woman who had died, it was believed, of cholera. For the particulars of the case we are indebted to Dr. James Jackson, the Resident Medical Officer of the Hospital, and to Dr. Hughlings Jackson for the results of a few inquiries he made of Mr. Rees Llewellyn. The patient was a German woman, the servant of a Dutch cattle dealer, and had only come over from Holland on Friday, July 6. On the voyage she was very sick, but after that nothing attracted her master's attention until Tuesday last. At about nine o'clock of the morning of that day she began to vomit and was purged; she was purged about six times, but was not seen by a Doctor until half-past two o'clock, when Mr. Evan Llewellyn was called in. Mr. Llewellyn, who has had experience in two former epidemics of cholera, believed her to be suffering from that disease, and sent her at once to the London Hospital. When Dr. James Jackson saw the woman she was in collapse, her eyes were sunken, she was cold and livid, and the skin felt clammy, and when a fold was pinched up it remained up for a time. The temperature in the axilla was only 93°. She felt much oppressed, and threw her arms out of bed and complained of extreme thirst; her voice was shrill, and she had severe cramps, which it was observed came on especially when she swallowed. She passed no urine all the time she was in the Hospital, and none was found in her bladder after death. There was but little vomiting and purging after she came in, and that was in the evening. It was observed that the stools were like rice-water. Dr. James Jackson, under whose care the patient was, in the absence of the Physicians, ordered mustard poultices to the arms and to the calves of the legs, applied hot bottles to the feet, and prescribed for internal administration ether and camphor. No opium was given. She took hot brandy and water without being sick.

The patient, as we have said, began to be ill at 9 o'clock a.m., was admitted at 3 p.m., and we regret to have to add that she died at 5 a.m. next morning. She was seen at 1 o'clock a.m. by a gentleman who says that the legs—to which hot bottles were applied—were then warm, and that the trunk was warm. Her arms, which, however, were kept out of bed, were still cold.

Unfortunately the temperature was not taken, but it is at least probable that reaction had set in. At the autopsy blood was found at both sides of the heart, and the lungs were congested throughout. The pulmonary arteries were full of dark blood, but the pulmonary veins contained little. As stated, there was no urine in the bladder. The gall-bladder contained a fair quantity of dark thin fluid, but how much of this fluid was bile, and how much mucous and other fluids, was not decided. The intestines contained a large quantity of flocculent matter, tinged here and there of a yellowish-green colour.

We will only add to these particulars a suggestion which we believe to be a very important one. Dr. George Johnson's views have recently attracted a large share of attention. He dwells, in support of his theory, on the condition of the lungs found *post mortem*; but it must be carefully kept in mind that Dr. Johnson does not say that the lungs are anæmic in those who have died of cholera, but in those only who have died in the stage of collapse. A statement, therefore, as to the condition of the lungs, with no statement as to the condition of the patient at death, whatever importance it may have in itself, is no evidence at all for or against any views held by Dr. Johnson on the pathology of cholera.

ANNUAL DINNER OF THE FELLOWS OF THE ROYAL COLLEGE OF SURGEONS.

Thursday, July 5, this dinner took place at the Albion Tavern, Aldersgate-street, Mr. Wormald, President of the College, in the chair. About 110 gentlemen assembled, a large proportion of whom were provincial Fellows. The usual loyal and patriotic toasts were drunk with all the old enthusiasm, the Chairman specially alluding to the marriage on that day of her Royal Highness the Princess Helena to H.R.H. Prince Christian of Augustenburg, and proposing "bliss and satisfaction to them both." The Medical Department of the Army was acknowledged by Mr. Piper and Mr. Judd. Mr. Busk supported the "Government Committee," and referred the Profession to the Report which had been recently issued. He believed that, if the recommendations of the Committee were carried out, every real grievance of the Medical Department would be removed. The General Medical Council was drunk in silence, the absence of any representative of the Council being generally regarded with some regret. The toast of the Medical Corporations, i the absence of Sir Thomas Watson, was coupled with the name of Dr. Camps, who made a few observations respecting the College of Physicians, which were well received. The Provincial Schools, by Mr. Hilton, followed. He was greeted with loud and long-continued cheering. He assured them of the proud satisfaction he felt from being re-elected that day, and by such a distinguished majority. There was a feeling of competition between the metropolitan and provincial schools; but it was an honest rivalry which gave strength and force to both. Looking at the heavy labour and expense necessary to keep a large school in working order, he thought that many very able provincial men deserved great credit for maintaining schools which, in a pecuniary sense, could not be remunerative. Guy's School costs £2300 a year for working the machinery only; and although he would admit that students were generally well prepared for their examinations at provincial schools, yet he believed that the time was coming when those schools must inevitably dwindle, owing to the enormous expense necessary to make any school efficient. Mr. Turner, in reply to the toast, said that in spite of distance from London, professional losses, and other inconveniences, he trusted that he had done his duty on the Council since his election last year, and on this point he would appeal to the President and his colleagues. (Cheers.) He had learnt much in the Council-chamber which would be of great service to them in the provinces; and, in fact, he had been a good listener, and had profited much. As regards the utility of provincial schools, if the apprenticeship system is to be continued, future students ought not to remain merely with private Practitioners. Hence one use of provincial schools, but intermediately only—they should not supersede attendance on London schools. Then, again, the former have also done much to secure the efficiency of the Profession in the provinces. The London Schools, with Mr. Partridge, was appropriately acknowledged by delicately eulogising the Surgical merits and distinction of the London Fellows. Mr. Hancock, with some emotion, proposed the health of the Chairman, as "our worthy and beloved President," a sentiment which was honoured, upstanding, with cheers, three times three, and one cheer more, spontaneously. Mr. Wormald warmly thanked them for the enthusiasm with which his health had been drunk; he had never through life been in the habit of grasping and going ahead, but had let things come to him; and now that he was nearly at the end of his tether, he had found that the best policy ever was to be a straightforward, honest man. (Loud cheers.) Extending his right arm, with a large bumper of wine in his hand, "I drink this," said he, "heartily wishing that, in this world, you may all be blessed in your basket and in your store, and when you die may you have your deserts in the next!" (The unequivocal significance of the latter "good wish" did not seem to be fully appreciated.) Sir William Fergusson, on rising, was received with a burst of applause. He proposed the Medical Benevolent Institutions, feelingly alluding to "the tinge of melancholy" associated therewith, and specially commending the Medical Benevolent Fund and the Royal Medical Benevolent College. Mr. Charles Hawkins briefly responded to the toast, thanking the Fellows also for the honour they had that day conferred on him in electing him a member of the Council. He trusted that he should prove himself worthy of the confidence they had reposed in him. The Stewards, proposed by Mr. Holden, was coupled with Mr. W. Adams, who conceded the whole credit of the labour connected with the dinner to Mr. Hulme, the Honorary Secretary. A few words of acknowledgment concluded a very agreeable evening.

SANITARY LEGISLATION.

It is to be hoped that the change of Government which has just taken place, and the consequent inactivity of Parliament during the last three weeks, may not prove fatal to those measures for improving the health of the people which have already passed through a Select Committee of the House of Commons. The measures we allude to are the Vaccination Bill, the Public Health Bill, and the Bill for Improving the Dwellings of the Labouring Classes. These Bills, emanating from the Medical Department of the Privy Council, have already been fully discussed and approved in Committee, and as they involve no party questions and are urgently needed, no excuse can be offered for including them in the general massacre which is certain to take place at the end of the session. We gather from Lord Derby's statement in the House of Lords that his Government have determined to devote a large portion of their energies to reforming the administration of parochial relief and ameliorating the condition of the sick poor. With cholera already close to our shores, and small-pox and fever always ready to spread amongst the courts and alleys of our large towns, the Government cannot do better than inaugurate the reforms they propose by lending a helping hand to pass measures which must tend greatly to reduce preventible disease.

FROM ABROAD.—COLLUSION BETWEEN PHYSICIANS AND DRUGGISTS ILLEGAL IN FRANCE—APPOINTMENT OF AN ADJUNCT AT THE VIENNA MEDICAL CLINIC—EARLY DIAGNOSIS OF PREGNANCY.

The *Cour Impériale* of Paris has just had before it a case of illegal collusion between a Physician and druggist. It seems that one Dr. X. (why the name of the worthy is concealed in the report in the *Gazette des Hôpitaux*, unless for some one of the numerous regulations which fetter the Medical press in Paris, we know not) had for some years past been engaged furnishing *gratuitous* consultations at the establishment of a chemist, and afterwards dividing with him the profits ensuing upon the medicines prescribed—an arrangement unfortunately too common among ourselves, and one which we fear our law would not concern itself with. The receipts amounted to some 13,000 or 14,000 francs per annum, and the profits were adjusted to the satisfaction of both parties. However, after some years, the chemist determined (in 1864) to dissolve the partnership, and paid 3000 francs to his partner, the Doctor, as the price of his withdrawal. The Doctor, however, learning that the *pharmacie* had been disposed of for 22,000 francs, made out that he had been deceived as to the receipts, and had been insufficiently paid, and brought his action for the balance. It was decided in the first court that the Doctor had no ground of complaint, and he being foolish enough to appeal to the *Cour Impériale*, a judgment ensued which stigmatised his proceedings as they deserved, the decision being founded on higher considerations than the mere mercantile one. By this decision "it is declared" both parties failed as to the duties and rules of their professions—the Doctor by trading in his art and creating an interest in the prescription of superfluous remedies, and the chemist in lending himself to an abusive speculation and depriving the patients of the sole control they have over faithless or defective medicinal preparations. Moreover, such an association is vitiated in its very principle, since it is based upon a fraudulent combination destined to deceive the public by the temptation of gratuitous consultations which are in reality paid for. It was no other than null and void as a radically illegal pact, which could not serve as a basis for any action whatever. The appeal was therefore dismissed, and the Doctor amerced in all the costs.

Notwithstanding the pressure of war time, the Professors of the Vienna University are endeavouring to render their celebrated clinical school of still greater practical utility. At the request of Professor Oppolzer, the Medical Professors' College has resolved that an officer shall be attached to his clinical chair bearing the title of "adjunct." His duties will consist in investigating points as they arise in physiological pathology, microscopy, and pathological chemistry, and Dr. Stricker, who has given ample proof of his powers of investigation in the Physiological Institution of Professor Brücke, has been unanimously chosen as the first "adjunct." No doubt in the other German clinics similar appointments will take place at no distant period.

M. Mattei, in a recent communication to the Académie de Médecine, stated his conviction that pregnancy may be accurately diagnosed during the four first months by combined deep-seated abdominal palpation and vaginal exploration. He asserts that in this way pregnancy may very often be pronounced upon positively at the end of the first month, almost always at the end of the second, and always during the third and fourth months, unless some exceptional circumstances, which are of exceedingly rare occurrence, are present. The principle upon which this statement is founded is that the uterus cannot be gravid without alteration in its size and without presenting special anatomical and physiological modifications. Another important fact which M. Mattei says he has demonstrated, is that the gravid uterus in four instances out of five is in a state of anteversion, and in once out of five or six times in retroversion, being rarely maintained in the straight line. Each of these positions has its special signs month by month, and which have been studied by M. Mattei by aid of palpation and vaginal *toucher*. For example, in anteversion he has found that the uterine fundus is on a level with the pubes from the end of the first month, or even before that period. When the uterus remains straight or is retroverted, the diagnosis can only be made from the third month. M. Mattei gives rules for the production and perception of the uterine *ballottement*, which is to be distinguished from the fœtal.

PARLIAMENTARY.—THE QUEEN'S UNIVERSITY IN IRELAND.

On Thursday, July 5, in the House of Commons, in answer to a question from Mr. Lowe, Mr. C. Fortescue explained that some three weeks ago the Queen had signed a supplemental charter to the Queen's University in Ireland, giving the Senate power to confer degrees on all who passed an examination, without reference to the place of their education. The Government had also had a Bill in preparation putting the new graduates on the same footing as the old graduates as regarded the privileges of Convocation, increasing the number of senators, and for other minor purposes.

A VISIT TO AMIENS TO SEE THE CHOLERA.

(From a Correspondent.)

Tired of the disputations that are going on amongst us as to the nature and treatment of the cholera, I determined to freshen my ideas by a view of the disease itself. So I set out early on Saturday, July 8, and found myself in the streets of Amiens a few minutes after four in the afternoon. Then the first point was to leave a card at the house of the leading Physician, and request permission to visit the Hospital; next, to the Maire, to ask for official statistics; then, to the office of one of the leading newspapers, for a file of the papers and the latest intelligence of the day. Here I was particularly fortunate in making the acquaintance of M. Challier, proprietor of the *Mémorial d'Amiens*, a man of scientific knowledge and a Physician by profession, who introduced me to his son, an *interne* from Paris, who has Medical charge, during the cholera epidemic, of one of the worst parts of the suburbs of Amiens. Moreover, by the advice of M. le Maire, I dined at the table d'hôte of the Hôtel de France et d'Angleterre, where about a dozen *internes* from the Paris Hospitals are staying, to whom is confided the care of the sick poor at their own habitations. I soon made my object known to some of these gentlemen, and made arrangements for the morrow. The rest of the twilight was spent in taking a survey of the town as a whole with the aid of a map, for though I had been there before, as a tourist, I knew little of the real state of the town.

Let me go on to say how I employed Sunday. At 7.45, was at the Hôtel-Dieu, where M. Tavernier, the chief Physician, received me courteously, and allowed me to accompany him in his visit to the cholera wards. About 9, went to the Château d'Eau, and to the hydraulic machines at the Pont St. Michel, to see the apparatus for supplying the fountains of the city with drinking water. Then about 10, with M. Challier, *père*, to the Faubourg d'Hem, a quarter just below the town, in a swamp on the left bank of the Somme; met M. Challier, *fils*, who took me to see the Pharmacie extemporised in the Curé's house, and explained the arrangements for the relief of the poor, and then showed us over the worst parts of the Faubourg, and the nests where the cholera had flourished. This filled the morning. Next, after a good *déjeuner*, I met by appointment M. C. Duprat and M. Jules Habran, *internes* of La Salpétrière at Paris, and spent a couple of hours with them in visiting the sick poor in the Quartier St. Leu, the very lowest quarter within the city itself. After that, at 4 p.m. met M. Tavernier again at the Hôtel-Dieu; saw several cases brought in, and passed an hour in the wards. Next, at five o'clock, by invitation of M. Constant Marcel, *père*, the Administrateur of the Hôtel-Dieu, I joined some gentlemen who formed the funeral *cortége* of one of the Sisters of Charity, and accompanied it to the cemetery, a couple of miles below the town, on the side of a limestone hill, where my kind conductor insisted on giving me a view of all the realities of the situation by showing me a frightful gash in the side of the hill, like a miniature railway cutting, which was being filled with the dead one by one. The *sœur de charité*, poor girl, was buried in a little garden apart, reserved for the martyrs of the Sisterhood. There, not like the English fashion of leaving the coffin uncovered, the grave was filled in so soon as the body had been lowered, in the presence of the gentlemen and *sœurs* who attended the obsequies, whilst the clergy sang a *Benedictus* and *De Profundis*. After dinner, M. Adolphe Delzenne, of the Hôpital St. Lazaire, at Paris, who has Medical charge, during the epidemic, of the *employés* of the railway at Amiens and their families, took me to see a recent case in the upper part of the town. That used up the rest of Sunday. Monday morning found me again at the Hôtel-Dieu, where I had the privilege of long conferences on matters sanitary and therapeutic with the Administrateur, the very zealous *internes*, and the very amiable *sœurs* who preside over the Pharmacie. Next I had to procure some official returns at the Mairie, and to find out some yet unpublished analyses of the water, in a forthcoming number of the *Bulletin de la Société Industrielle*, of which M. Jeunet, the printer, was so complaisant as to give me a proof whilst I waited at his office. A little shopping and dinner took up the time till 3.30, when I took my leave of the plague-stricken city by the tidal train for London.

Of course I went with my mind charged with questions which I wished to gain some light upon—questions sanitary, social, and Medical. Moreover, having a share in the responsibility of protecting one of the most important parishes in London from the invasion of similar epidemics, I desired to see for myself what difference there was between Amiens and my own part of London. If seventy or eighty people have died in a day at Amiens, is it because they have not used the preservative measures which we are prepared to use, or because these have proved inefficacious? What water do they drink? What air do they breathe? What is the condition and dieting of the people? How far do the observations of our very acute and accomplished brethren, the French Physicians, agree with our ideas as to symptoms and pathology? What treatment have they tried, and with what results? Is one treatment indispensable and applicable to all cases alike, or are there diversities of conditions under which even the most opposite methods may, respectively, be salutary? Such and many more were the points on which I desired light myself; and I have conceived that it might interest the readers of the *Medical Times and Gazette* if I were to state the results (whatever their value) of such inquiries and observations as I was able to make during my short, but by no means idle, visit.

To begin, then, it is clear that the epidemic at Amiens has been one of great severity. The city bears it on its very face. No travellers get down at the station; one cab and one omnibus had myself only for a passenger. Here and there shops are closed, the streets are deserted; no gaiety even on Sunday evening. Instead of the waltz and galoppe, there is the *Dies Iræ* and *De Profundis*, and instead of flowers and perfumes there is chloride of lime. The verger at the cathedral complained that only three English tourists, of whom I was one, had been there this summer. Houses are left half-painted because the workmen have fled; the hotels empty; the long table d'hôte at the Hôtel usually frequented by the English deserted—one hypochondriacal waiter and one chambermaid only to be seen, and, worst of all, the dinners are blighted by the cholera, for they say the Physicians have proscribed fruit and légumes. Should this meet the eye of any of the Faculty in the town, let me implore them to do away with their interdict, and to believe that fresh fruit and vegetables are safer than tough cutlets, fried potatoes, and rice pudding. I must, however, except the *cuisine* at the Hôtel de France et d'Angleterre from this condemnation. I hope I shall be pardoned for laying stress on such a matter; but really, at a time and place like that, one feels, to use Darwin's phrase, that one must either eat or be eaten.

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I am assured that from 10,000 to 15,000 of the inhabitants of the better classes have made their escape, and that at least 300 houses of private people and shopkeepers are closed. Of course the schools are shut up. Spite, however, of the diminished population, the mortality has been frightful. The epidemic began, as usual, with a few suspicious cases in the autumn; then there was a lull. In the beginning of December again, nine cases were sent into the Hôtel-Dieu. Then the disease was hushed till the beginning of June, when it broke out again with fury, and up to July 9 had destroyed 906 persons. The estimated population, as I have said, is 65,000, and the average yearly mortality about 1550, or about 24·5 per thousand per annum. This year the deaths from all causes have already reached 1568. During the first twenty days of June, the deaths from cholera were about 16 per day; during the last week of that month they mounted up to 50 or 60, and on July 3 to 79, but on the date of my visit had again fallen to five or six. Of the proportion of recoveries to cases I have learned little exactly; but the impression is that 60 per cent. of algide cases were lost during the height of the epidemic, but that more than 60 per cent. can be saved now.(a)

If these totals are alarming enough (and, estimating Amiens at 65,000 and London at 2,500,000, such a mortality here would mount to 3000 in a day), some of the details show that the disease on this occasion has surpassed its former self in virulence. In the epidemic of 1832 Amiens lost 700; in 1854, 500; already in 1866, 900. Cases of frightful virulence are reported. A female prisoner who was removed to the Hôtel-Dieu for an attack of small-pox had got well, and was to leave the Hospital on a Friday. On that very morning she fell out of bed, senseless and cold at 7 a.m.; and died in the algide stage at 2 p.m., with the least possible vomiting and purging, if any. One man was seized with cramps, and fell into the cold collapse at midnight; he had one stool only, and died at 11.30. One woman, who was in the Hospital for a wound, took the cholera and died the same day. A young man died there, and his father, a poor peasant, trudged some distance on foot to see him; he took the cholera the same day and died. In the Hospital, as I have said, between fifty and sixty of the inmates have died, including six Sisters of Charity, one *infirmier*, and four out of thirty male patients in the fever wards. But then this Hospital is in the worst quarter, and the cholera must have come of itself even if it had not been brought. Two at least of the leading Medical Practitioners have died: one, M. Léger, a robust person of about 50 years of age, who had the day before paid 110 Medical visits, and was out of bed most of the night in consequence of a neighbouring house on fire, was seized in the morning of June 19, passed into the typhoid state, and died on Saturday. Another, M. Auguste Thouiller, a younger man, Professor of Midwifery at the School of Medicine of Amiens, seems to have been of feeble constitution, and to have suffered from diarrhœa for some days before the fatal stage of collapse. He is described as a man of the greatest scientific zeal and ardent philanthropy. M. Pillot, an exemplary clergyman, curé of the parish of St. Leu, also died; and, if I am rightly informed, probably about thirty other persons of good circumstances, most of whom were in bad health to begin with. At any rate, 8-9ths of the mortality fell on the lower orders, living in the conditions to be presently described.

Here, then, we have a good lesson set before us. The cholera is raging furiously in a town not more than half a day's journey from London. Let us see what the conditions of that place and people are, so that we may be able to estimate our own chances of safety if the scourge should visit ourselves.

Amiens is an old cathedral city, twelve times the size of Salisbury, and I cannot describe it better than by supposing that twelve Salisburys, such as that city used to be, had been welded into one. The river Somme flows through the city from east to west, through a flat marshy valley bounded by limestone hills. Entering the city, the Somme divides and subdivides into very numerous branches or *rivières*, which form a network, crossed by numerous bridges. On the petty strips of islets between these *rivières* is built the oldest and worst part of the city. Old, musty, tumble-down wooden houses overhanging the streams; here and there a water wheel to serve as motive power to some petty factory—such is a fair description of the lower third of the town. The Faubourg d'Hem, which I visited with M. M. Challier, is a modern manufacturing village, in a swamp just below the town. Above and below Amiens are peat swamps of variable width. The better two-thirds of the town, including the cathedral, are on a gentle limestone slope, which ascends above the swamp on the left bank of the river.

An account of the drainage, or sewage, as we understand it, would be like a history of the snakes in Iceland. There are, it is true, channels for the rain-water, and there are gutters by the sides of the street, which are mostly running with clear fountain water. Orders are issued, but not obeyed, against putting dirty soapy water into them. The corners of the streets are forbidden to be defiled by passers-by, and not a dog can lift his leg without being followed by a dose of the *chlorure de chaux*. But in the upper part of the town every house has a cesspool; and it is remarked, as a special excellency of the limestone subsoil, that some of these never require to be emptied for generations. Everything is sucked up by the earth. Of course, in the lower part of the town amongst the *rivières*, all filth is summarily cast out into the streams.

The condition of the dwellings of the lower orders ranges from pretty good to bad as possible. In the upper parts I saw some tidy airy cottages; in the lower parts are courts which would vie with Whitechapel or Southwark, supposing these latter had no drainage. In one large court in the Quartier St. Leu I noticed two disgusting-looking *latrines* with doors off the hinges, in full view of all the inhabitants. In the Faubourg d'Hem I saw a row of cottages, called the Cour du Pont, the site as low as possible, close to the river; gardens in front filled with vegetable refuse rotting in the sun; no pavement; a filthy open gutter in front of the doors for slops; and a *latrine* close to the river. Another, called the Cour Voiturier, in the same faubourg, consisted of a double row (seventeen) of the filthiest cottages. Here had been eight cases and four deaths of cholera, and all the children had had cholerine. The people living here were, as a companion said, literally *accroupis dans leur fange*—squatting in their own filth—men, women, and children, sordid, filthy, apathetic in all save scratching their heads—to do them justice it should be added, miserably poor, a man with wife and two children living on a shilling a day; their fare bread and potatoes; the houses overcrowded, and ventilation impossible.

One arrangement there was in all the poor houses which deserves imitation in some respects. It was, that instead of a wasteful open fireplace, the coal was burned in a little stove the size and shape of a garden flower-pot, to the top of which various vessels for cookery are adapted, and which has a pipe going up the chimney. The advantages of economising of fuel and absence of smoke are evident, but unluckily the wide chimney is usually stopped up to secure a draught for the stove-flue; hence the heat and vapours were almost stifling. The number of beds in a room, and the number of people who sleep in the

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(a) In the Hôtel-Dieu from December 3, 1865, to July 8, 1866, had been treated 282 patients, of whom about 50 were inmates of the Hospital; of these about 20 were treated before June, and the remainder in June and July. They comprised—

Men . .	123;	of whom	recovered,	38;	died,	59;	remaining	26.
Women . .	102	,,	,,	30	,,	52	,,	20.
Male children	7	,,	,,	2	,,	3	,,	2.
Female ,, .	9	,,	,,	2	,,	4	,,	3.
Soldiers . .	61	,,	,,	37	,,	6	,,	18.

This list does not comprise four Sisters of Charity who died, nor one who went back to Paris ill and died there of cholera. The slight mortality of the soldiers is referred by M. Challier to the early stage of the disease at which they were sent, and to their previous robust health.

beds, are just what they are amongst the same class of people in England, where no sanitary laws are enforced.

The water supply of Amiens is admirable, and, with English ideas, of course my attention was turned to it at once. There is a spring, *la Fontaine des Frères*, at the upper part of the town, in the Faubourg Beauvais, close to the railway, which flows into a deep trench surrounding an old brick bastion, which I had often noticed in passing by the train to Paris. This water, and that from a similar fountain called the *Fontaine Marie Caron*, flow through pipes down to an hydraulic machine at the Pont St. Michel, where an engine, worked by the waters of the Somme, lifts it into other pipes which supply fountains in every part of the town. I subjoin an analysis of this water by M. Poiré, Professor of Chemistry, and may say that, although lifted by the Somme water, I do not believe it is mixed with it. The one is clear and colourless, the other green and turbid. As to contamination of these sources by sewage, there is no evidence of it whatever. The water is delicious, and it is impossible that the cholera at Amiens can be traced to this source. The analysis of M. Poiré, and the various papers on Water which have been printed in the *Bulletin de la Société Industrielle d'Amiens*, show that the able French chemists are not likely to have let their people drink foul water. (See *Appendix.*)

On the other hand, there are the *rivières*, which are interlaced amongst the houses of the low quarter, and one branch of which runs right alongside of the cholera wards of the Hôtel-Dieu, and into which all the sewage, including, of course, the cholera discharges, are put without ceremony. Everybody but one whom I questioned denied that this water is ever used for drinking or cooking purposes. The one man who affirmed it ought to know, for he was the keeper of the hydraulic engine, and declared that many of the poor used it indiscriminately. But let us suppose that they do not, *eo nomine*, use it for drinking or cooking. Every house has a pump dipping into it. I saw a man in a yard pump up a bucketful and wash himself in it. They use it for washing themselves, their clothes, and their houses; and supposing that they never drink it by design or accident, yet they live in its vapours.

Hence it is clear that the cholera at Amiens has sought out its old haunts and its old victims—the low dirty dwellings on the banks of streams contaminated with sewage and inhabited by ill-fed, ill-washed, ill-aired, poor-blooded people. Doubtless it was brought to Amiens in the autumn, and its poison has lingered ever since in the filthy sediment of the *rivières*.

In dismissing the Somme, let me say, that its water, though green and turbid, is not black nor stinking; the streams are rapid, used as motive power, and full of fish, which the people catch and eat.

So much for etiology, such as it is. Next let me give what I gathered from the very zealous young Physicians whom I accompanied, on pathological points, and the results of my own brief view of the disease. Let me say that the *internes* who were good enough to answer my multifarious questions were quite unconscious of any of the theories and disputes prevalent on this side of the Channel.

In the first place, the universal opinion of all with whom I came into contact was, that the algide cholera, the "true blue," the collapse, or so-called state of asphyxia, was a condition *per se*, to which any condition of the intestinal canal was a possibly important but by no means necessary accompaniment. As a curious illustration of this, let me say that on Sunday afternoon there came to the Hôtel-Dieu a Physician practising in Paris, M. le Docteur Klopsk, a Hungarian by nationality, who, like myself, had come to study the disease. His first observation to me was, "Are you sure this is cholera? I see no vomiting and purging, and suspect that we have to do with a typhus!" There were at the time 30 patients in the wards, doubtless in a sufficiently grave state of illness, but 25 of them in the consecutive stage, with no very prominent bowel symptoms. It was clear that the disease might kill without any bowel disorder, and that any bowel disorder which had existed might subside, leaving the patient still to die of the disease.

The very intelligent and obliging *interne* who allowed me to interrogate him, and whose name I unfortunately omitted to secure, gave me the following answers in substance:—What is the relation between loss of fluid by the bowels and the algide symptoms? "None of necessity; patients may die, algide, who have scarcely had a stool. (Here some of the cases mentioned above were related to me.) A patient who vomits and purges is safer than one who does not; not that the vomiting and purging are causes of safety, but that the worst cases die without them. There is no doubt that a more favourable prognosis would be formed of a patient who vomited much than of one who did not vomit at all. M. Thouiller expressed himself much relieved after vomiting. Post-mortem examinations of patients who died in the *foudroyant* attacks, revealed no alteration in the intestinal canal; the spleen very small; the lungs bloodless; clots in the right side of the heart; ecchymoses on the serous membranes and pericardium."

The blood profoundly altered, the sympathetic nervous system in a state of *sideration*, the capillaries paralysed and the chemical changes which go on in them arrested—such seemed the essential phenomena. In some of the worst cases a copious viscous sweat seemed to take the place of the diarrhœa.

Nothing that I heard or saw tended to confirm the opinion that the symptoms of algide cholera depend on mere want of oxidation, or spasm of the pulmonary capillaries. Most of us have seen patients dying of asphyxia from lung disease, or heart disease, or embolism of the right heart; and no phenomena can be more unlike than the bluish dusky colour of apnœa and the damson purplish-blue tint of the choleraic; the staring eyeballs of the one, the hollow orbits of the other; the frightful struggles and fighting for breath, the quick breathing of the one, and the slow, calm, deep breathing of the choleraic; the fluttering, *wobbling*, indistinct heart and wrist pulse of the one, and the slow, regular, weak beat of the other. For example:—(1) Boy of 17; cold hands and face; damson-blue lips; incessant retching; pulse small, very distinct, 84; respirations very full, deep, somewhat laboured, 20. (2) Man of 56, in state of imperfect reaction; skin cool; pulse 76 breathing 24. (3) Child of 2; second day of attack; cheeks and hands cold; pulse 120, very distinct; breathing 28. (4) Woman of 60; *hands* quite warm, cheeks quite cold; no voice; pulse 96; breathing laboured, 24. (5) Woman of 30 (admitted with two children, one of two, the other of six weeks—all three cold and wet); pulse 96; breathing 21; face cold, hands warm. (6) Woman of 26; sixth day; hands cold; pulse 72; breathing 20. (7) Woman of 24; fourteenth day; pulse 68; breathing 16.

To say that the persistent coldness of cholera is a kind of tertiary phenomenon, which two other conditions must precede—viz. altered blood and pulmonary spasm—seems a very roundabout statement.

If, then, we abstract the essentials of cholera—the algide state—from the abdominal accompaniment, we find a condition of altered blood; great coldness of the exposed parts of the surface and of the extremities; slow, feeble circulation; and such a condition of capillaries as hinders the blood from passing, whether in lungs or surface; still, where the blood does circulate, as in the hands of some of the foregoing patients, where a circulation was forcibly maintained by sinapisms, there was a state of tolerable warmth. The thermometer marked 96·50° F. in the axillæ of patients whose face and hands were cold as stones.

I have not yet got the figures, but it is clear that the stage of consecutive fever was very general and very severe, and especially with cerebral complications and suppression of urine. It may be added that the strange phenomena of augmented heat and irregular muscular movement after death have been observed here now, as elsewhere and heretofore.

So far, then, we can picture to ourselves the algide cholera; existing absolutely as an essential and primary malady; not depending on any tangible antecedent disorder in the bowels or elsewhere, and passing into a state resembling that of typhous (or paludal) fever, of which coldness, weakness, defective excretion, and brain disturbance, are characteristic. But equally evident was it that there was another condition whose occurrence was morally certain to lead to algide cholera, and which passed into it by insensible stages without gap or interval, and that this condition was *diarrhœa.* But it will be more convenient to consider this part of my subject and that of treatment together.

Here I may be permitted to say that no words of mine can do justice to the thoughtfulness, the consideration, the minute and careful investigation, the conscientious discrimination of cases, the mixture of tenderness and gravity, which marked the conduct towards the sick of the very humane and intelligent Physicians whom I have quoted as letting me see their treatment. Great diversities there were in the remedies used, but never have I seen less routine, or less of what may be called *sectarian* treatment. On one point, however, all were unanimous—that in the great majority of cases the cholera was preceded by diarrhœa; that this diarrhœa, if continued, would lead to the algide cholera; and that it must be suppressed; and that in the right cases the old treatment of trisnitrate of bismuth and opium in large doses is the sheet-anchor.

Of course it is not to be pretended that the diarrhœa could be checked in every case; nor that even if checked cholera might not follow. They told me of the case of M. Thouiller, whose diarrhœa went on in spite of remedies, so that (to use their own graphic expression) *il cholérisa entre les mains des Médecins.* Other like cases were told me. One there was, too, of a lady who had severe diarrhœa on Wednesday, was well apparently on Thursday, and *cholérisa* and died on Friday.

The case which I saw on Sunday evening with Mons. D. may be an example of the benefits of opiate treatment. A woman of 30, mother of four children, living in what seemed a high and pretty healthy clean cottage above the town, had had painless diarrhœa for three days, during which she went about her ordinary work and ate her usual food. On Sunday morning she awoke extremely ill; had seventeen rice-water stools, and vomited similar matter, so that the floor was quite wet with it. Mons. D., who was called, found her, as he believed, on the verge of collapse, but the malady had not yet got beyond *cholerine;* there were no cramps nor blueness. He ordered a large dose of bismuth and laudanum, injections of starch and laudanum, a sinapism to the stomach, and ice for the vomiting. In the evening she expressed herself as much relieved. The vomiting and purging had ceased, and *the tongue perfectly clean;* the abdomen so empty that the only thing felt was the aorta beating on the backbone; the pulse 80, small, distinct. As we walked away we could not help remarking how absurd and murderous any emeto-purgative routine would have been in such a case. There was the *tongue clean;* the *belly empty;* all experience showed that the woman was passing into a state of collapse; and the result of treatment showed the opiate to be not only beneficial, but unattended with any drawback.

But if we take this as the type of one class of case in which the opiate astringent treatment is called for (*i.e.* premonitory painless diarrhœa, clean tongue, debility, no headache), we may also make out another class which was described to me by all my informants as cholera preceded by *embarras gastrique* with or without diarrhœa. The word *embarras gastrique* is Englished by *derangement of stomach and liver;* foul, loaded, œdematous, sodden tongue, marked by the teeth; want of appetite, nausea, eructations, and frontal headache. This state might pass into algide cholera, with no purging, but constipation. These are the cases in which English Practitioners would probably begin with a dose of calomel; the French seem to dread calomel as a purgative, and seem not to have the custom of combining it as we do with the opiate; they do not realise its power of bringing down thick coloured fæcal matter; and their equivalent is ipecacuanha, two or three doses of which, so as to produce free vomiting, are used where there is a complication of *embarras gastrique* before opium is given. In the low quarter of the town this condition seemed very prevalent, and it was this which, as before said, attracted the attention of M. Klopsk. Instead of the red clean cholera tongue, most of the patients had tongues thickly coated with white or dirty fur.

There was another well-marked endemic condition pointed out to me by MM. Habran and Duprat, a thing peculiar to the ancient Picardy and valley of the Somme, as an occasional precursor of cholera, and that is *la suette,* a thing I had never seen before. I saw one case in a respectable man with the gentlemen named. It consists in debility, *embarras gastrique,* white furred tongue, and copious periodic cold perspirations. Our patient woke up early in the morning, weak and sweating; he was cool, with a quiet pulse; the sweat stood in beads on his forehead. *La suette* may exist in all degrees from an acute, possibly fatal, malady with miliary eruption, to mere copious cold perspiration complicating some other asthenic malady. I must not go into this part of the matter at length, neither shall I quote from M. Foucart's treatise on "La Suette Miliaire," (b) to which my attention was drawn by M. Delzenne. But I may say that all these young Physicians particularly called my attention to *la suette* as a prodrome, or coincident, or complication of cholera. Then we must recollect that *la suette* is the true living, though degenerate descendant of the old *sweating sickness,* and that it, like the cholera, keeps to its old haunts, and destroys the same victims. Three-fourths of its symptoms are those of *embarras gastrique* with obstinate constipation—that is, of a foul state of alimentary canal, whose epithelial lining, under influence of swamp, filth, and misery, grows abnormally, and may be (on the hypothesis of a cholera poison) the nidus and starting point of the true algide cholera. The remedies are ipecacuanha, followed by cinchona. Certainly one glimpse at *la suette* gives one broader and truer views of the nature and relations of cholera.

The discrimination between the cases in which the opiate astringent treatment should be begun pure and simple, and those in which it should be preceded by ipecacuanha, seemed rational in itself, and accordant with the views of most of us here.

Amongst other remedies used for the out-door poor were the sulphuric lemonade—which I think might have been more employed in some of the low swampy parts with advantage—preparations of cinchona and other bitter tonics, infusions of aromatic herbs, etc. Ipecacuanha, too, seems to have been relied on by some to avert collapse by the agitation of vomiting.

In M. Tavernier's wards at the Hôtel-Dieu, I found that patients when admitted are put to bed with weak sinapisms bound round their forearms and legs, and to their stomach. The comfort of this, and its power of relieving cramp, were great. Whilst vomiting lasted, as little drink as possible was given—only small lumps of ice and a little lemonade; small doses of morphia, a small blister to epigastrium dressed with morphia, cherry-laurel water, chloroform draught, and saline effervescent draughts were also used. During the algide stage, carbonate of ammonia with small doses of laudanum; tea with a little rum or brandy, and warmth; afterwards cinchona. M. Tavernier, if I understood aright, never gives any ipecacuanha, or purgative, or calomel; his treatment seems careful and discriminative, and seems calculated to give the patient his best chance without over medication. M. Alexandre, whom I regret that I was unable to pay my respects to, uses the sulphuric lemonade largely. So much for treatment;—which seemed to me rational, discriminative, and as successful as any treatment is likely to be in such a malady, with such patients as the inhabitants of the swamps of the Somme.

Laudable, however, as are the intelligence, the humanity, and success of the treatment of the sick, I must venture, with humility, to reproach our French *confrères* for their apparent backwardness in all that concerns prevention. A long sanitary report to the Emperor appears in the papers, all about quarantine; not a word about the means of suppressing the epidemic when within the walls. They lack the English sanitary insight and faith. They have no sanitary creed. They talk of "influences," "epidemics," "constitutions," etc., but do not realise what we English at last have got to believe—viz. that the cause of cholera is not a metaphysical abstraction, nor an idea, but some *thing—matter* in some state or other—and most probably some lowly organised germinal matter—which is imported into Europe; lives and grows in low, dark, damp, dirty places; at times, flourishes and breaks out into a fit of activity, then withers and vanishes away; but, after all, which is *matter* capable of being breathed and swallowed, of flourishing and multiplying in the bowels and blood of the victims whom it gets access to, and which is emitted from the bodies of the sick in infinite virulent multiplication. And what is the corollary from all this? Why, that this matter must be attacked and destroyed anywhere and everywhere. The vomit and dejecta of the sick should be destroyed by chemical antidotes before they leave the chamber; the secretions of the skin, the bedding, the floors, and everything soiled should be disinfected; the old foul papers be stripped off from the walls of the chambers; the walls and ceilings be washed with *lait de chaux;* the brick floors well drenched with some of those *mélanges* of chlorine and phenic acid which a local chemist manufactures; the outside walls be washed also with *lait de chaux;* the *latrines* dosed daily with *chlorure de chaux,* or carbolic (phenic) acid, or some cheap disinfectant of iron; all the gutters similarly cleansed out; the rotting refuse to be removed and buried or burned; the dust to be swept up. Such are the measures which we in England believe in. If there be a cholera poison, and if it lurk in filth, by so acting we destroy the poison; and if there be no cholera poison—why then we only destroy the filth, of which process we may say, as an eminent theologian once said of psalm-singing, that "it hath no inconveniences."

(b) Paris; Labé. 1854.

Amongst the foregoing precautions, that which is most necessary, most obvious, most reasonable, is that of disinfecting the discharges from the sick, and on this point I laboured hard, and possibly with some success, to impress English ideas on every one with whom I came into contact. I took with me several copies of the "Memorandum" issued by the Metropolitan Medical Officers of Health, and distributed them wherever I could; and likewise, partly for my own protection and partly because I thought I might do some good, there was amongst my baggage a square deal box, containing some shilling bottles of Condy's cheapest Solution of Permanganate of Potass and of Calvert's Carbolic Acid. I was amused at the sympathetic readiness with which the *douaniers* at Calais and the *octroi* man at Amiens let that box pass, still more at the curiosity of a few idlers about the Hôtel, who waylaid me, believing that I had brought *un vrai remède contre le choléra.* However, I had the privilege of being admitted to the Pharmacie at the Hôtel-Dieu, where I harangued the estimable *sœurs* and the most humane and zealous Administrateur on the efficacy of disinfectants and the use of Condy's permanganate and of the carbolic acid. A little of the Condy was dropped into some fountain water (which stood the test remarkably well), then into some water mixed with organic matter, and the loss of colour noted. Then we mixed some of the carbolic acid and stirred it up in water, and I prayed the *sœurs* to exert their influence that all *dejecta, vases, latrines,* etc., should be well dosed with one or other; I told them that the Condy was well adapted for washing the hands and mouths of the ladies before taking their repasts, and recommended the carbolic acid for cleansing floors, bedding, linen, etc., which might be damaged by mineral disinfectants. I only hope I impressed on them how much, according to English views, their safety depended on such measures.

Next let me speak of the moral phenomena of the town; and here, much as I have praised what I saw of the Medical system, equal praise must be given to the courage, the charity, and the devotion of the whole municipal body. Copious subscriptions flow in; medicines, clothes, and, above all, nourishing food, are provided for the sick. House-to-house visitation is effected by the *internes* from Paris, who live in their respective districts, and are constantly in the streets, so that not an hour can pass without Medical aid; and the demeanour and language of the poor told eloquently of the kindness and skill with which it is rendered. The dead, by the way, are buried one at a time, side by side in the trench, and the site of each body carefully numbered and registered. Meanwhile the clergy not only are assiduous in urging their flocks to charity and penitence, but have issued most edifying pastoral letters, supplied them with abundant forms of prayer, have exposed relics, and used all the other weapons of their spiritual armoury. But what strikes us as strange is, that these reverend personages, so far as we can gather from these documents, never seem to think that they have anything to do with the physical or material topics, just as if that were an altogether different department, presided over by a different divinity from Him who rules the soul and the spiritual world. Surely the man who prays fervently to God and the saints to preserve him from cholera might be told to take a besom and a pail of whitewash and cleanse his cottage as an acceptable work. But 'tis the same with the clergy here. Whether it be cattle plague or cholera, they preach against vice in the abstract, and leave unnoticed the most crying sins against the laws of creation, as if they belonged to another department. Would to Heaven that they would add to the seven Corporal Acts of Mercy that of Cleansing the Filthy!

Amiens is paying a huge tax in this epidemic. A few of her best citizens, and hundreds of her poorer population, have lost their lives. The town has lost its trade and the influx of tourists, and has contributed largely to the relief of the sick poor. *Quære:* Would not all this expenditure have been better employed last autumn in cleansing the *rivières,* shutting up some and replacing them by tubular pipes, as they have done at Salisbury, draining the town, pulling down some of the worn-out old houses (why should a house last for ever?), building a new Hôtel-Dieu on a height above the town, doing, in fact, as they ought to do, but will not, in the parallel old cathedral city of Winchester?

The view of such a city, in such an epidemic, more strongly impresses one than ever with the reality of Dr. W. Farr's observations on the limited period of epidemics. For if the cholera poison preserve its pristine activity, it must sweep off all the population of the low quarters. There have been no attempts at "stamping out," and no possibility; cholera found the place filthy, flourished in the filth, and will leave it filthy still. If the place had not been filthy, cholera could not have flourished there. Still it is but a lodger, a passenger, and not a denizen, and the Almighty's Law of limited duration of epidemics is the only hope of the people.

Here I must conclude these hasty notes. I confess that I have been confirmed in my faith in the English "sanitary" system in house-to-house visitation, and the adoption of measures to improve the health of the poor, and in the discriminative treatment of premonitory symptoms; I think we shall do more than ever to avert the disease and remedy its sequelæ. But as for the actual algide state, at the beginning of an epidemic, I have most faith in what does least harm.

R. D.

APPENDIX.—DRINKING WATERS OF AMIENS.

The water of the *Source des Frères* is described by M. Poiré Professor of Chemistry, as cool, limpid, inodorous, and agreeable to drink. It gives by evaporation 295 milligrammes per litre of saline residue. It contains—

Of solid material—

Carbonate of lime . . .	158	milligrammes
Sulphate	20	,,
Hydrated chloride . . .	54	,,
Carbonate of magnesia . .	16	,,
Sesqui-oxide of iron and alumina	12	,,
Silica	33	,,
Loss	2	,,
	295	,,

Water of the *Source Marie Caron*—cool, limpid, agreeable; has 421 milligrammes of solid residue, chiefly carbonate of lime, with a trace of organic matter.

These two waters combined at the Pont St. Michel form the fountain water of Amiens.

The water, taken from the fountains themselves, was analysed in 1862 by M. Poiré, and the results published in the *Bull. de la Soc. Industrielle d'Amiens,* tome 1, No. iii., May, 1862. It yielded 350 milligrammes per litre of solid residue, consisting chiefly of sulphate, chloride, and carbonate of lime, with mere traces of organic matter. In round numbers this is equal to about 22 grains per gallon, which is again equal to the highest quantity of solid contents of the water of the London water companies in winter.

In a subsequent number of the *Bulletin* (No. iv.), M. Poiré published the analysis of the water of the Somme above Amiens. Total solid contents 264 milligrammes per litre, of which 19 were organic. Below the town the water of the Somme contained 317 milligrammes per litre, including phosphoric acid, and 29 organic. The Selle, a small river which runs through the town into the Somme, contains ·249 solids per litre, organic ·016. The analyses of various *wells* in the town are given, whose waters are rich in nitrates, in chloride of sodium, and organic matter. I quote these things to show that the local chemists are quite alive to the condition of their water, and that we cannot always accuse drinking water of being the vehicle of cholera.

REVIEWS.

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Owen's Comparative Anatomy and Physiology of the Vertebrate Animals. 8vo. Longmans. 1866.

Two volumes have recently appeared which form the greatest part of the valuable contribution to anatomical science which has been so long looked for at the hands of Professor Owen, and which is destined to be the crowning stone of the mighty edifice which he has raised to the honour of our English biological literature. We shall offer no abstract of this production, as every student in future who desires to master thoroughly and exhaustively the principles of comparative anatomy must, of necessity, possess and peruse Professor Owen's gigantic treatise. The proximate publication of the third volume during the forthcoming autumn will render more complete a series of detached volumes, each of which is, however, in itself thoroughly complete. Professor Owen has not only published a work which, to students of anatomy, is indispensable as a *vade mecum*, but has now for the first time to the general public laid before them his opinions on the great biological problems which ever and anon demand solution at our hands, but with which those students only who have enjoyed the confidential privilege of his oral teachings have become thoroughly acquainted.

The great point in which the present work shows itself to be a step in advance of contemporary Biological science (at least in England) is the space which Professor Owen devotes to the investigation of comparative embryology. During the last ten or twenty years embryological science (especially in Germany) has progressed in a manner which English students can scarcely appreciate. To take advantage of this fact, and to incorporate the latest knowledge on the subject into Professor Owen's work, was a task which not merely required the highest comparative knowledge, but a careful retrospect over the vast field of modern anatomical literature. Let us examine how Professor Owen applies this method.

He justly points out that certain structures which are transitory or rudimental in existing species are persistent and developed in extinct ones—*e.g.*, the caudal vertebræ are laid down in a gradually decreasing series of cartilaginous nuclei in the embryo of modern bony fishes; but in the course of ossification they become massed and blended together to form the base of a vertically-extended symmetrical tail fin. In birds a corresponding modification prevails, but the embryos in all existing species show the terminal vertebræ distinct in a tapering series, and the solitary evidence of an ornithic skeleton from the secondary rocks (*Archæopteryx*) shows a like retention of this embryonal character in the adult. Thousands of similar evidences might be cited, all tending to prove the truth of the great law which affirms the more "generalised" structure of the earlier forms of life. This law Prof. Owen has battled for during many years, in conjunction with the venerable Von Baer, of St. Petersburg. The law has in England found little opposition, but much neglect. Englishmen to whom a philosophical generalisation is presented, generally prefer to content themselves with avowing their entire ignorance of the subject. To investigate would require too much labour, while the time of leisure which the Professional man may enjoy is often spent in pursuits quite irrelevant to the examination of a controverted point in transcendental anatomy. No practical good appears to arise from the discussion whether animal structures have progressed in time from the "general" to the "special." Yet it is on the acceptance or denial of this elementary principle that there rests the supreme enigma of Biology—whether animals, and man amongst the number, have progressed from a high or from a low scale of life. And if we accept the second alternative, the hypothesis is then open to us whether the generalised types of organisation which the vertebrate, articulate, molluscan, and radiate forms of life respectively present, were mere metaphysical ἰδέαι, exemplars of a primitive archetypal pattern, or whether they were real entities, which are related to the existing forms of life by virtue of genetic relationship. To study this question thoroughly in the vertebrate sub-kingdom, for example, the method of inductive investigation necessitates a comparison between the diagram given at Professor Owen's 30th page, and the diagrams given on his 47th page of the skeleton of *Lepidosiren annectens* and the tadpole of *Rana esculenta* respectively. Without going into minute points of anatomical comparison, any unprejudiced observer must be struck with the close resemblance which prevails between the embryo Batrachian, the protopterous fish, and the ideal archetype. The bearing of this comparison on the theories of progressive development is so strong, that Professor Owen thinks it right to warn his readers against a too rash acceptance of the doctrine of progressive development in the following words:—

"Much ingenious conjecture has been expended on the influence of external circumstances and internal volitions and efforts during the struggles for existence in the origin of species by progressive transmutation; and their succession on this planet has been speculatively assigned to such causes. In the metamorphoses of the Batrachia we seem to have such process carried on before our eyes to its extremest extent. Not merely is one specific form changed to another of the same genus; not merely is one generic modification of an order substituted for another; the transmutation is not even limited by passing from one order (*Urodela*) to another (*Anoura*): it affects a transition from class to class. The fish becomes the frog; the aquatic animal changes to the terrestrial one; the water-breather becomes the air-breather; an insect diet is substituted for a vegetable one. And these changes, moreover, proceed gradually, continuously, and without any interruption of active life. . . . . . The external gills are not dried and shrivelled by exposure to the air, nor does the larva gain its lungs by efforts to change its element and inhale a new respiratory medium. The beak is shed, the jaws and tongue are developed, and the gut shortened, before the young frog is in a condition to catch a single fly. The embryo acquires the breathing and locomotive organs—gills and compressed tail—while imprisoned in the ovum; and the tadpole obtains its lungs and land-limbs while a denizen of the pool; action and reaction between the germ and the gelatinous atmosphere of the yolk, or between the larva and its aqueous atmosphere, have no part in these transmutations. The Batrachian is compelled to a new sphere of life by antecedent obliterations, absorptions, and developments, in which external influences and internal efforts have no share."

The most remarkable part of the present work, however, is the mode in which Professor Owen endeavours to impress on the minds of his readers the existence of a continuously operating secondary law, which has produced the various species of animals by the natural process of derivation. A firm opponent of the theory which a few years ago was in vogue, that species were called into being at spasmodic intervals of the earth's history—as stratum succeeded stratum, new groups arising to supply the place of those others which cataclysms had destroyed—he has, on the contrary, shown distinctly the doctrine of the permanence of generic types; how one species survives throughout several phases of stratigraphical succession, while the range of variation to which it may have been subject has been slight, but perceptible. It is not so generally known as it ought to be, that Professor Owen himself, in the year 1850, was the first to propound the theory that the concomitant changes of climate, and other conditions of a country affecting the sustenance or well-being of its indigenous animals, may lead not only to their modification, but to their destruction. He pointed out then the characters in the animals themselves calculated to render them most obnoxious to such extirpating influences, and applied his remarks to the explanation why so many of the larger species of particular groups of animals have become extinct, whilst smaller species of equal antiquity have remained. Messrs. Wallace and Darwin, having accepted Professor Owen's theory as a whole, enlarged its basis, and founded thereon the well-known theory of Natural Selection. This theory has been now before the public for seven years, and, although the fierce opposition with which it was greeted at first has led to a large number of respectable zoologists adopting it for the mere sake of opposition to the vulgar ideas of the populace, yet it cannot be denied that during the last two or three years a reaction has set in, and the "liberal" school of scientific men are less and less inclined to adopt Darwin's theory. The most reliable observers in botany at the present day who have investigated the range of variation to which individual species are subject, entertain the greatest doubts that these varieties, artificially produced, or even produced in a state of nature, have within themselves that constancy of character which makes the permanent species. The battle of the derivative hypothesis will have to be fought, not, however, on species, of which the limited extent of our experience precludes the arrival at any fixed generalisation, but on the larger groups. It is after a comparison of the type forms of some of the large extinct fossil orders of animals that the mind of the student becomes strongly imbued with the idea of the derivation of the successive types of animals from some common origin. When the law of the "combination of characters" presented by the more ancient animals becomes distinctly manifest, the only two ideas which can present themselves to our mind are—1. The metaphysical theory, that the earlier types represented the primitive idea of the Creator's mind, from whence, as necessity arose, modifications (foreseen or unforeseen) took place to meet the exigencies of external nature. 2. The derivative theory, that we have in such elder forms as, *e.g.*, *Archegosaurus*, the real primitive protoplasts, from whence, let us say, Lacertilia, Crocodilia, and Batrachia diverged. Either of these theories may be supported with a show of plausible argument, and accepted according to the bent of the student's mind. No physical reason can be offered why the first may not be true. Many analogies would lead one to give due weight to the strong evidence in favour of the second. Possibly there may be a germ of truth in each. To which Professor Owen himself inclines, our readers may themselves judge, when they read this passage, which forms the concluding sentence of the preface to his first volume. After investigating all the chief evidences for and against the derivative hypothesis, and giving due weight to the opinions of many of his most eminent contemporaries, he sums up by the following pregnant declaration:—

"With the present psychical and structural characteristics of the human species, it may be reasonably concluded that those of other existing species, especially of the distinctly marked vertebrate classes, will be at least concurrent and coenduring; and in that sense we may accept the dictum of the French zoologist—'La stabilité des espèces est une condition nécessaire à l'existence de la science d'histoire naturelle.' At the same time, indulging with Lamarck in hypothetical views of transmutative and selective influences during æons transcending the periods allotted to the existence of ourselves and our contemporaries, as we now are, we may also say, 'La nature n'offre que des individus qui se succèdent les uns aux autres par voie de génération, et qui proviennent les uns des autres. Les espèces parmi eux ne sont que relatives, et ne le sont que temporairement.'"—P. xxxvi.

Another striking part of this work is the way in which Professor Owen attempts to inculcate an exactitude in the use of scientific terms which is far in advance of the usual careless way in which the nomenclature of science is used. He points out that the systematic and zoological sense in which a word is employed is often at variance with the sense in which the same word is also correctly used in philosophical anatomy. To give an example, the *Anoplotherium* of the Paris Eocene, was described by Cuvier, its discoverer, as being devoid of "canine teeth"—*i.e.*, that an unbroken series of teeth occupied the whole jaw. Yet, morphologically, the teeth intervening between the incisors and the molars are undoubtedly homologous with true canine teeth. An objector may thus say, with perfect truth, either that the *Anoplotherium has*, or that it has *not*, canines, according to the way in which he uses the word in systematic or in philosophical anatomy. Of course, Professor Owen points out that all anatomy should be philosophical. Experience, however, teaches that it rarely is so, and we are very glad to see that Professor Owen gives a practical exemplification of accuracy which is not always presented by modern scientific men.

The third volume of the work, now in the press, will contain the muscular system of man and the other mammalia, as well as the nervous, digestive, absorbent, circulatory, respiratory, urinary, tegumentary, and generative systems. To students of anthropotomy, or human anatomy, this volume will possess a charm not known to a large proportion of the readers of the two previous volumes, who, perchance, may have neglected to perfect themselves in that accurate knowledge of the structure of the inferior animals on which human anatomy correctly taught, and distinctly understood, alone depends. Sooner or later our examining bodies will feel the necessity of requiring a knowledge of comparative zoology which will necessitate the diligent perusal of the present or some other accurate and comprehensive text-book.

Professor Frankland.—This eminent chemist has just been elected a Corresponding Member of the Chemical Section of the French Academy of Sciences, by the votes of twenty-eight of the thirty-five members of the Academy present.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, May 1.

Dr. Peacock, President.

Dr. Wilks showed a specimen of

SYPHILITIC CIRRHOSIS OF LIVER FROM AN INFANT.

The liver came from a child a month old, and weighed 1½ lb. It was smooth on the surface, and remarkably hard—cutting, indeed, more like a fibrous tumour than a liver, and none of the ordinary structure being visible to the naked eye. The microscope showed that a new material, consisting of delicate nucleated fibre, pervaded the whole organ, the natural tissues of the liver being healthy and unaffected. A small corner of the organ remained healthy, and thus the difference between the normally soft structure and the indurated parts could be well observed. There was no change by iodine. Dr. Wilks observed that this was a good example of the disease, first described by Gubler, and which he had failed to meet with in an extreme degree until he had seen the present example. The question he asked himself was, whether this condition constituted the first or active stage of the disease found in the adult; for, seeing that the liver in adult age is generally observed to be cicatrised and full of fibrous nodules, it is reasonable to suppose that a condition previously exists when the new material is more diffused and in a more plastic form. Moreover, patients with syphilis have long been observed to suffer often with hepatic disorders, and the liver at the same time to be sensibly enlarged; also, that such enlargements are curable. Looking at the present specimen, there seemed no reason why the new adventitious material should not be absorbed under appropriate treatment. There could be little doubt that some more active stage must exist previous to the formation of the nodules which are not uncommonly found in the adult who has suffered from syphilis; and the question was, whether this form of disease, found in children the subject of congenital syphilis, constitutes this preliminary stage, or whether it is altogether a different affection.

Dr. Wilks also exhibited a specimen of

DILATATION OF ŒSOPHAGUS.

This specimen was sent by Dr. Rootes, of Ross, and came from an old man who had suffered all his life from difficulty in swallowing his food. The œsophagus was as large as an ordinarily sized colon, and was very thick, from the greatly increased muscularity of its walls. It was of pretty uniform size throughout, and measured 6½ inches in circumference in its undistended state. Where it entered the stomach it was much narrower than usual, but there was no trace of disease at this part whereby the constriction had been produced. The stomach was of ordinary size and healthy.

The patient from whom it came was 74 years of age and died of pneumonia. Dr. Rootes stated that he believed the condition to be congenital, or, at all events, the patient had suffered from rejection of his food since boyhood. He had consulted Sir A. Cooper forty years ago, who easily passed a bougie into the stomach. He never could take any meal without eating very slowly and masticating very carefully, and at the same time taking a draught of fluid to wash down every bolus of food as soon as it entered the gullet. To this end he was in the habit of taking a pint of cider for his breakfast. He never partook of any meal but he brought back some portion, and he always persisted in saying that he was never sick. He was, in fact, a ruminating animal.

Dr. Cobbold and Dr. Ogle remarked on the great similarity of the symptoms in dilatation and constriction of the œsophagus.

Dr. Broadbent showed a specimen of

PATENT VITELLINE DUCT.

The child had occasionally passed fæcal matter from the umbilicus, but as the child was the subject of congenital syphilis, nothing Surgical was done. There was a coil of intestine in contact with the umbilicus, and there was a slender tube passing to it. This was the first instance in which Dr. Broadbent had seen the duct quite patent.

Mr. Holmes then gave particulars of a case which occurred in the practice of Dr. Jenner, at the Hospital for Sick

Children. In this case Mr. Holmes had intended to operate, but he lost sight of the patient.

Dr. Ogle showed

TWO SPECIMENS OF SOFTENING OF THE SPINAL CORD

from cases, one of general paralysis of the insane, and the other of suicidal melancholia. In one case, the patient, a married man, was 45 years old. He had received a blow on the head four years before admission into the Wells Lunatic Asylum; after which symptoms of general paralysis set in, from which he recovered, and was sent out of the Asylum. He was readmitted two years afterwards in the last stage of the disease, with retention of urine. He was seized with a cataleptic-like attack, and died in four days. After death the spinal cord was found softened throughout, and blood was found effused into the spinal canal. Increased fluid existed in the cerebral ventricles. In the other case the patient was aged 78, who had threatened to commit suicide, and in whom, in addition to softening of the cord, cancer of the lungs, mesenteric glands, and pancreas was found. Dr. Ogle was indebted to Dr. Boyd for the opportunity of exhibiting these specimens.

Dr. Ogle next exhibited

A PORTION OF THE ANTERIOR CEREBRAL HEMISPHERE,

containing a firm white mass of material in its substance, extending to the surface of the lateral ventricle, removed from a patient who had been epileptic from childhood. He took iodide of potassium for several months without benefit, and died comatose. Microscopical examination shows the deposit in the brain to be very unusual in character. It consists a good deal of fibrous tissue, and contains numbers of large peculiar rounded bodies with rough tuberculated mulberry-like surfaces, the nature of which Dr. Ogle had not made out.

Dr. Ogle also exhibited

ANEURISM OF THE COMMON ILIAC ARTERY

which burst into the peritoneal cavity. This was removed from the body of a woman, aged 71, who had been fourteen years in the Somerset Lunatic Asylum under Dr. Boyd's care, and who suffered from fainting fits some time before death, and died shortly after an attack of fainting. She had never complained of any pain.

Dr. Ogle then brought forward a

DRAWING OF A POUCHED OR DILATED CONDITION OF THE LOWER PART OF THE PHARYNX,

in which symptoms like those of stricture existed. The pouch was equal to a bantam's egg in size, and projected down behind the œsophagus, which was itself healthy and free from stricture. The patient was a man, aged 63, who for many years had suffered from inability to swallow food. After the end of a meal he would return small portions of food, and this would go on more or less for some hours. He died from inflammation of the lungs.

Dr. Ogle next exhibited a specimen showing a peculiar

ELONGATION OF THE UTERUS,

which contained a long polypus-like body attached to its inner surface. There is also a large cyst of the ovary; and it would appear as if the peculiar shape of the uterus was due to traction exerted on the uterus by the diseased ovary. There was no history in any way connected with the uterus, which was unexpectedly found to be diseased.

Dr. Dickinson showed a specimen of

MENINGEAL APOPLEXY WITH PURPURA.

The patient, a man 40 years of age, had been in St. George's Hospital for purpura several times, and had had purpura with jaundice. The last time he was in the Hospital head symptoms were associated with jaundice. He became delirious; had pains at the back of the head and rigors. There was found, after death, blood in the sub-arachnoid space and in the arachnoid cavity. There was no disease of the small vessels, and the extravasation therefore was due, Dr. Dickinson thought, to the altered condition of the blood. The patient had had tumours in various parts of the body consisting of blood.

Dr. Wilson Fox said that amyloid disease of the capillaries and waxy disease of the muscles had been found in cases of purpura, and he thought that hæmorrhage in purpura was quite as likely to have been due to disease of the vessels as to alteration in the blood.

Dr. Dickinson had examined the vessels for amyloid disease, but had found them healthy. The blood was much altered, and was like juice from a damson pie. There was no separation into clot and fluid.

Mr. Henry Smith showed parts removed in a

CASE OF EXCISION OF THE KNEE-JOINT.

The case was interesting as regards the age of the patient and the duration of the disease. She was 42 years of age, and the knee had been diseased 20 years. The joint was much diseased.

Mr. Christopher Heath showed a cast of a

MALFORMED HAND.

There was a perfect thumb and little finger, but the middle fingers were rudimentary. The metacarpal bones could be felt. Mr. Annandale, Mr. Heath remarked, gives a drawing of a specimen resembling it, but the thumb was double, and two metacarpal bones were wanting.

Mr. Christopher Heath next showed for Mr. Holt a specimen of

CANCER OF THE TONGUE REMOVED BY THE ÉCRASEUR.

One vessel only required ligatures. Mr. Heath referred to a case at the Middlesex Hospital in which bleeding came on during removal of the tongue by the écraseur.

Mr. Moore said that in the case referred to the bleeding was in the line of the wound by the écraseur, and there had been no difficulty in taking the vessel up.

In reply to Mr. Holmes, Mr. Heath said the specimen was exhibited as one of removal of cancer of the tongue, and not as one of removal of the whole tongue for cancer.

OBITUARY.

JOSEPH TOYNBEE, F.R.S.

Our readers will be sorry to hear of the sudden death, at the age of 51, of Mr. Toynbee, F.R.S., of Savile-row.

Mr. Toynbee, who was the son of a large farmer, was born at Heckington, in Lincolnshire; and after being placed for some time under the care of the family tutor was sent to school at Lynn. He was especially proud of his birthplace, to the associations of which, and those of the grand old city of Lincoln, he may have partly owed that love for art and refined appreciation of its beauties which in his later years proved so marked a feature in his character. His choice of a profession was emphatically his own. At an early age he was articled to Mr. Wm. Wade at the Westminster General Dispensary, at that time recognised by the examining bodies. Subsequently, we believe, he entered at St. George's Hospital, and there worked assiduously under Sir Benjamin Brodie and others. He was known as a very distinguished student of Anatomy, frequently assisting young men in preparing for their examinations, and at an early age was elected to the Assistant-Curatorship in the Museum of the College of Surgeons, then under the direction of Professor Owen. He obtained the Fellowship of the Royal Society on account of researches demonstrating the non-vascularity of the articular cartilages of bones and other tissues, and was one of the youngest Fellows of the Society. He commenced practice in Argyll-place, and in a little while was elected Surgeon to the St. George's and St. James's Dispensary, and, soon after joining that Institution, introduced the Samaritan Fund, by which the poor were supplied with coals, bread, soup, flannels, wine, and emphatically the means of ventilation; whilst by his own personal activity he raised its annual income to between three and four hundred pounds. After his resignation of the office of Surgeon the fund languished, but still remains as a memorial of his exertions. At a very early period he devoted his attention especially to aural Surgery, and rapidly attracted a large attendance of patients suffering from diseases of the ear.

It is well known that Mr. Toynbee for many years past had made a very large number of dissections of the ear, both in its diseased and healthy state; indeed, at the time of his death he possessed by far the largest collection; ten years ago it numbered 1659 specimens. He has been assisted in the arrangement of his museum by Mr. Hinton. His contributions to the literature of aural Surgery are very large. In the *Transactions* of the Royal, the Medico-Chirurgical, and Pathological Societies, etc., are some sixty papers altogether; his work, "The Diseases of the Ear; their Nature, Diagnosis, and Treatment," is the standard book on the subject.

The immediate cause of his death was the inhalation of chloroform. Mr. Toynbee for some time past had been carrying on a series of experiments with the view of determining the possibility of passing medicinal vapours from the mouth through the Eustachian tubes into the tympanum. This line of research, it appears, was not novel to him. Some three or four years ago he employed the instrument-maker to devise him some mechanism by which his object might be more easily attained. It appears that on the Thursday before his death the inhalations which he had then been making produced some uncomfortable sickness, so much so as to prevent his dining with the Fellows of the College of Surgeons. On the day of his death, Saturday, July 7, he had been following the usual routine of his Profession, and had seen a patient about four o'clock; he then told his servant not to disturb him needlessly, and appears to have recommenced his experiments. About five o'clock he was found apparently asleep on the sofa, with a layer of cotton wool over his face. It was at once seen that something serious had happened, and the assistance of Dr. Markham and Dr. Leared was procured, but their attempts to restore life were unavailing. Before him lay memoranda of the previous experiments, and of that which he was then conducting. He had evidently become insensible, and continued to inhale the vapour in the cotton wool which was found covering his face.

Mr. Toynbee was essentially a man of large views. His introductory address, recently delivered at the opening of the Medical Session at St. Mary's Hospital, entitled "*Beneficence in Disease*," showed in how philosophical a spirit he regarded the problems presented by the study of medicine. Though conducting a special practice, he was anything but a specialist in mind. "I'll rescue aural Surgery from the hands of the quacks," he said to a friend, and he kept his word. On another occasion, when told by an eminent member of the Profession that he would make nothing of aural Surgery, he said, "I will work at it for ten years, and then if nothing can be made of it I will tell you why." The present position of aural Surgery justifies his resolve. Nothing, however, not even the establishment of his own position (in his case, as in others, a long and tedious process), blunted his zeal for the well-being of the poor, and especially for the improvement of their dwellings. So much was this the case, that it became a saying that going to consult him for your ears, whether you came away improved or no in hearing, you would at least be in possession of the most advanced notions on ventilation; and it is a fact that so numerous were Mr. Toynbee's public labours some time since, that his private practice considerably suffered, and he was compelled to withdraw at least his name from many benevolent associations, lest a narrow-minded public should deem it impossible that a man of sympathies so large should be able to concentrate his mind on their special wants.

As he began his life he ended it. He was till his death Treasurer of the Medical Benevolent Fund, and anonymously contributed to it a donation of £500. To him is due the movement in favour of local museums, which he believed opened to the poor man not only an opportunity for the enjoyment of Nature, but a ground on which he might meet on equal terms the classes socially above him.

"Tongues in trees, books in the running brooks,
Sermons in stones, and good in everything,"

he believed, were the common property of man. The governing principle of his life cannot be better expressed than in his own words, used when advocating the use of good air:—

"In what I am about to say I do not desire in the least degree to frighten you, for, to confess the truth, I have very slight confidence in *fear-force*—that force which undoubtedly makes a man move onward, but which, nevertheless, does not leave his mind quite decided that he is not running away. On the contrary, I have great faith, unbounded faith, in *reason-force*—that force which, slowly taking possession of a man's brain and heart, increases as opposition increases, and carries him persistently and irresistibly forward, until it places him at the goal he has aimed at from the beginning."

At the time of his death, Mr. Toynbee was a member of most of the learned societies at home and abroad, Consulting Surgeon to St. George's and St. James's Dispensary, Consulting Aural Surgeon to St. Mary's Hospital, and the Asylum for the Deaf and Dumb. He leaves a wife and nine children, with whom the whole Profession profoundly sympathises.

Prince Anton of Hohenzollern, who was severely wounded in one of the late battles, is being treated by Drs. Langenbeck, Middldorff, and Wendt.

MEDICAL NEWS.

◆

Royal College of Physicians of London.—At a general meeting of the Fellows, held on Monday, July 9, the following Members of the College were duly admitted Fellows of the same:—

William Morse Graily Hewitt, M.D. Lond., 36, Berkeley-square; George Buchanan, M.D. Lond., 63, Harley-street; Wilson Fox, M.D. Lond., 22B, Cavendish-square; Charles Chadwick, M.D. Edin., Leeds; William Ogle, M.D. Oxon., 37, Clarges-street, Piccadilly; Randle Wilbraham Falconer, M.D. Edin., Bath; Reginald Southey, M.D. Oxon., 32, Montague-place, Russell square; James Andrew, M.D. Oxon., 59, Russell-square.

Royal College of Surgeons.—The following gentlemen have just passed the preliminary Examinations in Arts, etc., for the Fellowship and Membership of the College—viz. for the former qualification:—

C. H. Allfrey, Edward Bellamy, F. W. Braine, E. L. Fenn, J. W. Haward, Edward Smith, and W. M. Vores.

For Membership, the following:—

M S. Allen, J. W. Anningson, Richard Aubrey, J. J. Allen, Hugh Adcock, F. C. Batchelor, William Beesley, Edward Bovill, Edward Barber, John Booth, F. H. Bodman, William Beatson, Herbert Curtis, Alexander Cartwright, J. E. Clarke, E. R. L. Crespin, Robert Caldecott, R. J. Cope, C. W. Chinery, A. E. Davies, C. J. Davis, W. H. Davies, W. A. Dunn, Alfred Dix, Thomas Dewhurst, C. W. Evans, F. H. Edmonds, Edward Elsmere, Joseph Farrar, J. E. C. Ferris, S. W. Fitt, F. D. Grayson, William Garratt, Charles Glasier, J. E. Gabb, E. H. Gibbon, Charles Gosse, Henry Gibbs, Thomas Harvey, R. W. Hewetson, W. C. Heane, H. E. Hudson, Edwin Hemsted, C. W. Harvey, G. A. Jennings, F. W. O. R. Jones, S. A. Julius, T. J. Jones, L. J. King, W. L. King, H. A. Leapingwell, J. B. Lyth, J. L. Leckie, J. A. Lewis, E. C. Ling, H. C. Lacy, Arthur Lascelles, George Millson, B. P. Morison, J. Oliver, C. R. Plowright, Edwin Price, A. M. Palmer, C. W. Price, W. J. Powell, R H Paterson, G. O. Risdon, E. C. Rogers, E. C. R. Roose, J. G. Roberts, Tom Robinson, E. G. Roche, F. G. Ree, Wadham Robinson, William Rendall, W. M. Rosten, G. E. Rundle, W. A. Satchell, M. A. B. C. Stevens, K. F. Sylvester, Henry Thompson, W. H. Thompson, T. H. F. Tothill, H. O. Taylor, T. C. Temple, H. T. Tatum, G. D. Thane, J. H. Thomas, R. L. Verley, C. L. Vasey, C. W. Vickers, S. J. Wolton, A. D. Wray, and Adam Young.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, July 5, 1866:—

Frederick Needham, York; Isaac Taylor, York; Evan Lloyd, Cross Inn, Llanelly; Thomas Lloyd Place, Wickham Market, Suffolk; Alexander James Low, St. Brelares, Jersey; Francis William Underhill, Tipton, Staffordshire.

The following gentlemen also on the same day passed their First Examination:—

Benjamin Walker, Guy's Hospital; William James Bennett, Guy's Hospital; Charles Trew Winckworth, Westminster Hospital; George Amsden, King's College Hospital.

APPOINTMENTS.

Badcock, S. C., M.D., has been appointed House-Surgeon to the Brighton and Hove Dispensary.

Barlow, G. H., M.D., has been appointed Physician to the Asylum for the Deaf and Dumb.

Draper, William, M.R.C.S., has been appointed Resident Obstetric-Assistant to the Middlesex Hospital.

Upton, H. C., M.R.C.S.E., has been appointed House-Surgeon to the Western Branch of the Brighton and Hove Dispensary.

Watson, Eben., M.D., has been appointed Surgeon to the Royal Infirmary, Glasgow.

BIRTHS.

Cupiss.—On July 3, at Great Grimsby, the wife of F. P. Cupiss, M.R.C.S. of a son.

Fox.—On July 7, at Helme Lodge, Kendal, the wife of W. Fox, M.D. (of Cavendish-square), of a son.

Hutton.—On July 5, at 26, Lowndes-street, Belgrave-square, the wife of C. Hutton, M.R.C.P., of a daughter.

MARRIAGES.

Humphreys—Reynolds.—On July 5, at Thame Oxon, M H. Humphreys, M.R.C.S., to Anna Emily, only daughter of W. H. Reynolds, M R.C.S.

James—Morris.—On July 5, at Christ Church, Forest hill, A. James, M.D., to Mary, eldest daughter of John Morris, Esq.

Stanford—Tindal.—On July 3. at St. Mary's, Donnybrook, W. H. N. Stanford, L.R.C.S.I., to Merelina Frances, elder daughter of the late Rev. N. Tindal.

DEATHS.

Furnari.—Dr. Salvator Furnari, the distinguished oculist, residing many years in Paris as an exile, and, on the establishment of the Italian monarchy, appointed Professor of Ophthalmology in the University of Palermo, has just died, universally regretted.

Kingsley, E. A., M R.C.S., at Wotton-under Edge, on July 8, aged 33.

Mackinlay, J., M.D., at Isleworth (formerly Surgeon H E.I.C.S.), on July 8, aged 62.

Middleton, William, F.R.C.S., at Leamington, on July 4, aged 63.

Toynbee, J., F.R.C.S., at Beech Holme, Wimbledon, suddenly, on July 7, aged 50.

Turnbull, George Alexander, on June 28 (for many years Superintending-Surgeon Hyderabad Contingent.)

Young, N. L., M.D. (of Barbadoes), at 30, Warrior-square, St. Leonard's-on-Sea, aged 76.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Carlisle Union.—Dr. Wheately has resigned the St. Cuthbert's District; area 9321; population 14,293; salary £70 per annum.

Chorlton Union.—Dr. Watson has resigned the Workhouse; salary £170 per annum.

Dartford Union.—Mr. William P. Hoare has resigned the Workhouse; salary £65 per annum.

Horncastle Union.—Mr. R. P. Tickler has resigned the Tetford District; area 19,173; population 3725; salary £35 per annum.

Llandilofawr Union.—Mr. Henry Davies has resigned the South District; salary £27 per annum.

Romford Union.—Mr. James J. Macaldin has resigned the Fifth District; salary £70 per annum.

Tunstead and Happing Incorporation.—Mr. John Dix has resigned the Smallburgh District; area 15,721; population 4228; salary £67 10s. per annum. Also the Workhouse; salary £20 per annum.

APPOINTMENTS.

Altrincham Union.—Thomas F. Nicholls, L.R.C.P. Edin., L.F.P. and S. Glas., to the Workhouse.

Basford Union.—James Butler, M.R.C.S.E., L.S.A., to the Beeston District.

Braintree Union.—Henry J. Shirley, M.R.C.S.E., L.S.A., to the Finchingfield District.

Carnarvon Union.—John Williams, M.R.C.S.E., L.S.A., M.D. St. And., to the Llandwrog District.

Cheltenham Union.—Alfred Fleischmann, M.R.C.S.E., L.S.A., to the Workhouse.

Ely Union.—William J. Merlin, L.R.C.P., L.F.P. and S. Glas., L.M., to the Sutton District.

Plymouth Incorporation.—Vincent E. Noel, M.R.C.S.E., L.S.A., to the Fourth District.

Salford Union.—George Clements, M.R.C.S.E., L.S.A., L.M., and Robert N. Ingle, M.D. St. And., L.R.C.P., M.R.C.S.E., L.S.A., to the Workhouse.

Order of the Bath.—The *Gazette* of Friday, July 6, announces that the Queen has given orders for the appointment of Sir James Clark, M.D., one of the Physicians in Ordinary to Her Majesty, to be an Ordinary Member of the Civil Division of the Second Class, or Knights Commanders of the Most Hon. Order of the Bath.

Royal College of Surgeons.—The annual election of officers of this Institution took place on the 12th inst., when Mr. Richard Partridge, F.R.S., Professor of Anatomy to King's College, and Surgeon to King's College Hospital, was elected President in the vacancy occasioned by the retirement, in the prescribed order, of Mr. Wormald, Senior Surgeon to St. Bartholomew's Hospital; and Mr. John Hilton, F.R.S., and Surgeon to Guy's Hospital, and Mr. Richard Quain, F.R.S., Surgeon to University College Hospital, were elected Vice-Presidents of the College for the ensuing year. At the same meeting of the Council, Dr. W. O. Priestley, M.R.C.S., Professor of Midwifery to King's College, and Dr. Robert Barnes, M.R.C.S., Examiner in Medicine at the Royal College of Physicians, were elected members of the Midwifery Board; and Mr. Charles Hawkins, the Government Inspector of Anatomy, and recently elected Councillor, took the oaths and his seat at the Council. Before separating, the unanimous thanks of the Council were awarded to Mr. Wormald for the admirable manner in which that gentleman had carried out all the duties of President during the past year.

The Sutton Gang.—At a trial at the Old Bailey, occupying the entire of Thursday, those notorious quacks John Potter Sargeant and Sutton were again found guilty and sentenced to the full punishment prescribed by the law—viz., twelve months. Dr. Hawkins gave evidence on the part of the Medical Council, with Messrs. Roope and Bell, and Messrs. Trimmer and Stone on the part of the Royal College of Surgeons.

M. Husson and the Whitechapel Guardians.—The Chairman of the Whitechapel Board of Guardians has written to the *Times* in defence of the conduct of the Board in not admitting M. Husson, the President of the Poor law Board for France, to inspect the workhouse. He states that three other gentlemen came with M. Husson, the latter only bearing a letter of introduction from Mr. Farnall. On the master declining to admit the other three, the whole party withdrew.

Cholera in Shields.—Within about six weeks three vessels have reached the Tyne, the first from Stettin, the second from Hamburg, and the third from Antwerp, each of which has had a fatal case of cholera among its crew, one dying at sea, and the other two after the vessels have reached the harbour.

A considerable number of Surgeons formerly attached to the Hanoverian Army have entered the Prussian service.

Cholera at Berlin.—On Monday, July 2, 39 cholera cases were reported at Berlin, 15 of which ended fatally within a few hours. The total of cases since June 16 is 129; total of deaths, 79.

Poor-law Medical Reform.—Mr. R. Griffin has written a letter to the new President of the Poor-law Board, Mr. Gathorne Hardy, urging upon him the necessity of reform in the system of the Poor-law Medical service, and requesting Mr. Hardy to receive a deputation on the subject.

King's College, London.—The distribution of prizes, etc., to the students of the Medical Department of the College took place on Friday, July 6. The Lord Bishop of Lichfield presided. The chairman was supported by the Dean of Westminster; Dr. Acland; Dr. Budd; the Rev. Dr. Jelf, Principal of the College; Rev. E. H. Plumptre, Chaplain; Professor Bentley, Dean of the Medical Faculty; Professors Sir W. Fergusson, Bart.; Partridge; Miller; Guy; Johnson; Priestley; Guy; &c. The Rev. Dr. Jelf opened the proceedings by congratulating the students upon their general good conduct and diligence, and by expressing his great satisfaction at again seeing amongst them the Bishop of Lichfield. Professor Bentley, the Dean, then gave a most satisfactory account of the Medical School, which he said exhibited a considerable increase in numbers during the last year. The Scholars and the several prizemen, etc., were then addressed by the Chairman, and the prizes, etc., delivered to them in the following order:—*Scholarships*—Richards, William Alsept, senior scholar; Garrod, Alfred Henry, 2nd year scholar; Cotterill, Alfred, Hoar, Charles Edward, and Torry, George Ernest, junior scholars; Gibbings, Alfred Thomas, and Whitmore, William Beach (elected for three years), Hoar, Charles Edward (elected for two years), Warneford scholars, Class I.; Herbert, Samuel Lymas, Warneford scholar, Class II. *Prizes and Certificates of Honour, Winter Session*, 1865-6—Warneford: Dabbs, George Henry Roque, 1st prize; Richards, William Alsept, 2nd prize; Herbert, Samuel Lymas, extra prize. Leathes: Milles, George Ridley. Divinity: Herbert, Samuel Lymas, 3rd year; Curnow, John, 2nd year; Kidger, Alfred Armitage, 1st year. Anatomy: King, Daniel, prize; Baxter, Evan Buchanan, and Fiddian, Alexander Paull (equal), Curnow, John, certificates of honour. Physiology: Baxter, Evan Buchanan, prize; Milles, George Ridley, and Fiddian, Alexander Paull, (2nd year); Pritchard, Urban (1st year), certificates of honour. Chemistry: Curnow, John, prize; Fiddian, Alexander Paull, 2nd year; Pritchard, Urban, and Gibbings, Alfred Thomas (1st year), certificates of honour. Medicine: Withers, Walter Owen, prize; Herbert, Samuel Lymas, and Willcox, Robert Lewis (equal), Parsons, Frederic William, certificates of honour. Surgery: Blythman, Clement Samuel, prize; Herbert, Samuel Lymas, and Robinson, Richard Holt, certificates of honour. Clinical Medicine: Withers, Walter Owen, prize. Clinical Surgery: Blythman, Clement Samuel, prize; Penfold, Oliver, certificate of honour. *Prizes and Certificates gained in the Summer Session*, 1865.—Practical Chemistry: Milles, George Ridley, prize; Curnow, John, and Hunt, William Alfred, certificates of honour. Forensic Medicine: Robinson, Richard Holt, prize; Parsons, Frederic William, certificate of honour. Botany: Lawson, Marmaduke Alexander, B.A., prize; Garrod, Alfred Henry, and Milles, George Ridley (equal), certificates of honour. Obstetric Medicine: Parsons, Frederic William, prize; Dabbs, George Henry Roque, and Robinson, Richard Holt, certificates of honour. Materia Medica: Fiddian, Alexander Paull, prize; Curnow, John, and Hunt, William Alfred, certificates of honour. Comparative Anatomy: Wood, Miles Astman, prize; Johnson, William Murray, certificate of honour. Clinical Medicine: Dabbs, George Henry Roque, prize. Clinical Surgery: Bell, John Hougham, prize. Todd Clinical Medicine: Kelly, Charles, prize. *Names of those recommended by the Principal and Professor for Election as Associates of King's College, London.*—Bell, William; Beverley, Michael; Bond, Thomas; Bradshawe, Paris; Brown, George Arthur; Burge, Frederick John; Curme, Decimus; Eddowes, William; Fenn, Edward Liveing; Gooding, Ralph: Howells, Thomas; Kelly, Charles; Nankivell, Herbert; Pearson, Thomas Robert; Philpot, Charles William; Richards, William Alsept; Trimen, Henry. The interesting ceremony was brought to a close after a cordial vote of thanks proposed to the right rev. chairman by the Dean of Westminster and seconded by Dr. Acland.

University College, London.—Resignation of Mr. Quain.—At a Session of Council on Saturday last, the resignation tendered by Mr. Quain, of the offices of Special Professor of Clinical Surgery and of Surgeon to the Hospital, was accepted with regret by the Council; and it was resolved that in future the title of the Special Professors of Clinical Surgery and of Clinical Medicine be the Holme Professorships of Clinical Medicine and of Clinical Surgery respectively.

The Charges against the Whitechapel Board of Guardians.—The Whitechapel Guardians through their clerk, Mr. G. Adams Farr, have addressed a letter to the Poor-law Board in which they contradict or explain away most of the statements of neglect and cruelty in the sick wards of the Workhouse published by Mr. E. Hart. They call attention to the fact that a short time previously to Mr. Hart's visit the wards had been inspected by Dr. E. Smith, who, by pulling down the bed-clothes and examining the patients, had satisfied himself as to their condition. Mr. Hart has published an energetic rejoinder.

Lothians Medical Association.—There must be some bounds to human endurance, and at last the patient Doctors of the Lothians have formed an association for the protection of the interests of their body. The Chairman, Dr. Fowler, of Corsterphine, stated that such a combination was absolutely necessary, especially in such a fluctuating population, and added, what was very true, that though in no case the rules of the society should be allowed to come into collision with the claims of humanity, and there was not one of its members who would not do his best to maintain the reputation of the Profession for liberality, still each must look out for a rainy day, and they knew that many patients, well able to pay their Medical man, did not do so. This we believe to be more frequently the case in the south of Scotland than anywhere else. The patient will have no scruples in sending miles for a Medical man from a long distance and in any weather, and putting him to expense and inconvenience without even alluding to his fee. More than one man has been ruined by this. A Surgeon may be kept constantly at work, under the impression he is earning a considerable income, when really his travelling and other Professional expenses are not covered by the honorarium he may be grudgingly given after a considerable lapse of time. This, no doubt, is partially owing to a habit of underselling which unfortunately prevails, but more from the patient's confidence in the north-country pride of the Doctor, who he well knows must be very hard up indeed before he asks for money. This delicacy on the part of the latter, of course, wears off as his knowledge of life and its exigencies enlarges; but the patient knows that he can call in at any time a younger man, keeping his old friend for the severer cases. We once knew a man calling himself a gentleman thus solicit the advice of a young man now a well-known Practitioner in Glasgow; he had to drive twelve miles to the patient, and was offered just one penny per mile for his fee. Some shrewd men will not stand this, and those they call "Professors"—a word of great power in the North, and most appropriate—get better treated, but he who, without private means, must really earn his bread by fees for advice or Surgical assistance, requires a long purse or a very long and locally trained head. When men whose services are so valuable as Drs. Fowler and Gordon require to take such a strong measure, things must have grown very bad, and we admire their courage in coming forward as they have done to insist on a proper value being placed on their knowledge, acquirements, and Professional services.

Obtaining Medical Registration under False Pretences.—On Saturday, June 30, at Marlborough-street Police-court, the notorious John Potter Sergeant, otherwise Crowther Smith, of No. 2, Pavement, Glasgow, described as a Surgeon, and John Sutton, commonly called Dr. Sutton, of No. 36, Bloomsbury-street, dentist, were charged—Sergeant with procuring himself to be registered under the Medical Registration Act by false representation, and with attempting to do so; and Sutton with aiding and abetting. Mr. Oppenheim and Mr. Clarke were for the prosecution; Dr. Kenealy was for the prisoners. Mr. Edward Trimmer, Secretary of the Royal College of Surgeons of England, produced the certificate of birth and the schedule of the certificates of John Potter Sergeant, to whom a diploma was granted in May, 1836. No other diploma had been granted to any one named John Potter Sergeant since 1825. The baptismal register of John Potter Sergeant, born in 1812, was put in and proved in the usual way. Mr. John Rooke, clerk to the Medical Council of England, proved the registration of the prisoner as John Potter Sergeant, Member of the Royal College of Surgeons, and his production of the diploma; also that after his name had been removed from the register by order of the Council, he had applied for re-registration, and, on this being refused, for a mandamus against the Council. Sarah Smith said she knew John Potter Sergeant when in Leicester. He was articled to Messrs. Needham and Paget, Surgeons to the Leicester Infirmary. She had seen his diploma from the College of Surgeons. He received the diploma in 1836. She also saw his diploma from the Apothecaries' Hall. She was present at his death. He did not practise; he gave private instruction to Medical students. After his death she went back to Leicester and took the diplomas of the deceased with her. She had the diplomas at Swindon after she was married. In 1856 she missed the diplomas and a tin case in which they were kept. Neither of the two prisoners is the John Potter Sergeant she had known. After some further evidence, Mr. Knox said, as far as the case against Sergeant was concerned, it was clearly one for the Central Criminal Court. He should, therefore, remand him without bail. The complicity of Sutton had not been fully proved, and he would remand him on bail with 24 hours' notice. On July 6 the prisoners were again brought before Mr. Knox, who committed them both for trial.

Meeting of Poor-law Medical Officers.—Presentation of a Testimonial to Mr. Griffin.—A meeting of the Poor-law Medical officers and others was held at the Freemasons' Tavern on Friday, July 5 (C. J. F. Lord, Esq., in the chair), to present Richard Griffin, Esq., J.P., of Weymouth, with some acknowledgment of his labours in the cause of Poor-law Medical Reform. Amongst those present were—Dr. Robt. Fowler, East London; Mr. Bury, Barnet; Dr. Rogers, Strand; Dr. P. L. Burchell, Shoreditch; Dr. R. W. Griffin, Southampton; Dr. G. E. Nicholas, Wandsworth and Clapham; Dr. L. Owen Fox, Stockbridge; Mr. Wm. Mercer, Wadhurst; Mr. Prowse, Amersham; Mr. A. D. Harston, Islington; Dr. T. Dudfield, St. Margaret's, Westminster; Dr. F. Turtle, St. George's East; Dr. Edward Ray, Dulwich, Camberwell; Mr. Robert Lamb, Islington; Mr. Ernest Hart; Dr. Tilbury Fox; Mr. Young, of Reading; Dr. Alexander Henry; Dr. F. C. G. Griffin, of Southampton; Dr. Robert Barnes; Dr. Whiteman, of Putney; Dr. J. N. Workman, of Reading; Dr. C. J. Workman, of London; Dr. W. Vawdrey Lush, of Wilton; Samuel Lover, Esq.; the Rev. Dr. Stebbing, F.R.S.; Dr. Dickson, R.N., and others. The Chairman, in alluding to the special object of the meeting, sketched the progress of Poor-law Medical Reform during the last few years; the labours of Dr. Webster and Dr. Hodgkin; the timely co-operation of Mr. Griffin, who came to the rescue, and for the last eleven years had with indomitable perseverance carried on the contest. Dr. Fowler, in moving the first resolution, explained that the "testimonial" movement was originated by Mr. Prowse, of Amersham, who suggested in 1864 a shilling subscription; nothing, however, was done until the following year, when Dr. Fowler put the matter into practical operation. A committee subsequently formed decided that a silver épergne, of the value of 100 guineas, should be given to Mr. Griffin, that the design chosen should represent the act of the "Good Samaritan;" in addition, it was thought that a photographic album containing the likenesses of the Poor-law Medical Officers and other friends who had subscribed to the testimonial fund would be acceptable to Mr. Griffin. Dr. Fowler then moved that the thanks of the meeting be offered to those gentlemen who not being medical officers had given their support to the testimonial. Dr. Nicholas, of Isleworth, seconded the resolution. Dr. Barnes, in returning thanks, said it was a great privilege to testify their esteem to one who had devoted himself with such true single-mindedness to the cause which they espoused. Dr. Rogers (Strand) moved the second resolution, "That this meeting, while especially thanking the weekly Medical press for the kind assistance it has given the Griffin testimonial, desires further to express a feeling of grateful obligation to the press in general from the whole of the Poor-law Medical staff. It likewise expresses a hope that public opinion through the press may be continuously directed to the Poor-law Medical question till the Legislature shall have provided a system of relief just alike for the sick poor, the Medical officers, and the ratepayers." Dr. Rogers paid a tribute to the good effected by Mr. Griffin's efforts and generalship. Mr. Ernest Hart said that the Medical press in affording publicity to the wishes of those who desired to bear testimony to Mr. Griffin's efforts, had acted in accordance with the traditions that always guided it, and which involved the duty of affording consistent and steady support to the body of General Practitioners; and as far as the directors of the press have been able to understand their interests, they have never deviated from upholding them. The chairman then, in the name of the meeting and of those gentlemen whose names were recorded in the album, asked Mr. Griffin to accept the testimonial as a small tribute of the esteem in which he is held. He gave an amusing account of a visit he once paid to Mr. Griffin's house, which seems full of papers, letters, and documents relating to Poor-law matters. The chairman observed that Mr. Griffin must consider him this day privileged to give expression to the wishes and feelings of Mr. Griffin's friends throughout the country, to thank him for the immense amount of work he has accomplished for the cause of Poor-law Medical Reform, to express a hope that he may long live to enjoy the well-earned satisfaction his own mind must give him, and to look upon the old familiar faces which he would find in the album. Mr. Griffin said he knew not how to express his thanks for the kind and beautiful gift that had been presented to him. He was very pleased with the emblem of the Good Samaritan, which he felt was exemplified by the Medical Profession, which always did its duty to the poor without adequate remuneration. Without the press he could never have done as much as he had; it had saved them a large sum of money in affording publicity to their doings. He thought it only proper that they should turn the present meeting to practical account, and proceeded to point out the various measures that had been adopted up to the present time to secure an alteration in the present system, and suggested that they should petition the Poor-law Board at once upon the subject. He remarked that he accepted the gift they had given him, not only as a testimony of their kind feelings towards him, but their warm interest in the cause he advocated. A vote of thanks to the chairman terminated the proceedings.

The Case of Poisoning by Hydrocyanic Acid at Brighton.—An inquest was held on Wednesday last, on the body of Dr. Alfred William Warder, who had been found dead in the Bedford Hotel on the previous morning. He was living in furnished apartments at 36, Bedford-square, and his wife, who was a sister to Mr. Richard Branwell, a Surgeon resident in the town, appeared to be in her usual health till about five weeks since, when she became unwell, and Dr. Taaffe, of Brighton, was requested by her brother to see her. In the absence of other symptoms and guided by Mrs. Warder's complaints, Dr. Taaffe prescribed for hysteria, and she got better. Dr. Warder told him that she had experienced great pains in the region of the bladder, for which he had administered tincture of aconite, a continuance of which remedy Dr. Taaffe objected to. As no one but her husband was allowed to attend upon her in serving her with her meals and giving her the medicines prescribed, and as her health fluctuated considerably during the five weeks which he visited her, Dr. Taaffe's suspicions were aroused that something was being administered improperly, and these suspicions were increased when certain symptoms presented themselves. He consulted with the lady's brother, and they resolved to call in another Medical man. This was on the Saturday, but Mrs. Warder died the following day. She had brought a substantial marriage portion to Dr. Warder, and this being the third wife who had died under peculiar circumstances, Mr. Branwell and the Medical men desired a post-mortem examination. The result was, the stomach and portions of the intestines, with their contents, were forwarded to Dr. Taylor, of Guy's Hospital, for analysis. An inquest was also called, which Dr. Warder was requested to attend. He was, however, suddenly seized with sickness and vomiting, the symptoms from which his wife had suffered prior to her death, and the inquest was adjourned till Friday, by which time it was thought Dr. Taylor would be prepared with his report. Dr. Warder recovered from his attack on Friday, and attended the funeral of his wife on Saturday, returning to his apartments in Bedford-square immediately afterwards. Being afraid that he would not voluntarily attend the adjourned inquest, Mr. White, the chief officer of the borough police, served him with a subpœna to attend, and his movements were pretty closely watched. On Monday he left Brighton for London, but returned at night, and went to his lodgings as usual; but, as it appeared, as soon as the landlady of the house and her servants had retired to bed, he left the house and went to the Bedford Hotel, where he obtained a bed, in which he was found dead in the following afternoon. The deceased was about 45 years of age, and his wife about ten years younger. Mr. Richard Branwell deposed that deceased married his (Mr. Branwell's) sister, about five months ago, without the knowledge of any member of the family. He was a perfect stranger to witness till he came to Brighton about the end of May last. The last time that he saw him alive was on Saturday, at the funeral of his wife. Witness never observed the slightest symptoms of insanity in deceased; on the contrary, he was a remarkably cool and collected man. By the Jury: I did not speak to him at the funeral of my sister, because the circumstances of her death rendered it disagreeable for me to do so; in fact, I believe him to be her murderer. Miss Charlotte Lansdell, the landlady of 36, Bedford-square, deposed that the deceased had lodged with her since the 23rd of May last, and the last time she saw him alive was on Monday evening at about nine o'clock. He required nothing done for him then, and said he had dined; but asked her for his account. She sent it up the next morning by her servant, and it was then discovered that he had not retired to bed, but had left the house. She subsequently received a letter, which was given her by the police. It was addressed, "To be forwarded immediately. To Miss Lansdell, 36, Bedford-square," and was as follows:—"My dear Miss Lansdell,—You have already suffered enough through me and mine, and another death in your house would of course be worse. When you receive this have the kindness to telegraph to Miss Gunning, 7, Sydney-street, Brompton, London, S.W., to whom you give up what I have left in your house. I have left on the table the cash for the bills, and £3 in addition, as some compensation. Believe me truly yours, A. W. Warder. P.S.—Inquire for my keys and watch." Evidence was then given by the servants at the hotel of the arrival of the deceased at a quarter to 12 o'clock on Monday night, and of his being found dead in bed on Tuesday afternoon, when the chambermaid went to the room in consequence of being told that he had not been seen. Dr. James H. Pickford was called to see the deceased, and described his appearance, which was characteristic of poisoning by prussic acid. He appeared to have been dead about 12 or 14 hours. On a table by the side of the bed was a small blue bottle, which would contain ten fluid drachms, and there were in it about four drachms of what witness believed to be Scheel's prussic acid. Four of the six drachms of which the bottle was deficient, supposing the bottle to have been full, would cause almost instantaneous death, unattended by convulsions, and witness believed that quantity had been taken by deceased, from the easy position in which he lay and the undisturbed state of the bed-clothes. In one of his trousers pockets the chief officer of police found a very small bottle, which contained two pills, each containing four grains, if not wholly, principally of opium. Witness, at the close of his evidence, asked the Coroner if he could give permission for the body to be examined for the sake of Medical science. It was not absolutely necessary for judicial purposes, as there was no doubt of the cause of the death, but it was very rarely that a case occurred in which such an extraordinary quantity of prussic acid had been taken, and for the sake of science he wished to ascertain its action on the body. The Coroner said he could give no such permission, unless the jury thought it requisite that a post-mortem should be made, but he thought there could be no objection. Mr. White, the chief officer, then gave evidence, and deposed to finding at his lodgings three other small bottles, which he produced. One of these bottles contained tincture of aconite, purchased from a chemist—Mr. Colby, in the Western-road; another contained spirits of wine, but whether it held anything in solution the Medical men present were unable to say; and the third bottle was empty, but labelled "Opium.—J. Buchanan, Physician and Surgeon, Cambelton." The Coroner remarked that Cambelton was in the extreme north of Scotland, where one of the other of deceased's wives died. Deceased's first wife had four children by him when she separated from him, but was subsequently induced to return and live with him. She died a few weeks after renewed cohabitation. His second wife, whose life he insured, died eight months after their marriage. As the inquest was being brought to a conclusion, a gentleman, who said his name was Eland, a solicitor, of Trafalgar-square, London, entered the room, and said he had been requested to attend and watch the case on behalf of Miss Gunning, who had received a telegram announcing Dr.

Warder's death. In reply to questions asked by the Coroner, Mr. Eland said that Miss Gunning was the sister of deceased's first wife; and he produced three letters which she had received from him since the death of his last wife. The first letter was dated July 3, the day after she died, and before the inquest upon her was held. It requested her, "in the event of anything happening to me," to see to the disposal of his property, which it detailed, among his children. It consisted of land in New Zealand, deposit notes, shares in various speculations, etc. The second letter was dated July 9, in which he said, "I thought it best to leave this little property in your hands to take care of. I will write to you again." The third letter was dated the same day as the second, in which deceased said, "I write to you for the last time. When you receive this I shall be no more. I feel happy in leaving the children in your care. When you write to the girls, don't tell them all things." The remainder of the letter consisted of instructions as to what interest certain shares realised, and telling Miss Gunning what to sell out and what it would be better to keep. Mr. Eland then said that it was represented to him that members of deceased's family had exhibited insanity, and that his own conduct at times had been that of a madman, but he was not at present in a position to prove it. He asked for an adjournment. The jury considered this point, and after half an hour's deliberation they said they had carefully weighed the application and the grounds upon which it was made; but they felt that, assuming the fact stated to be proved, they could not in the face of the evidence before them alter an opinion which they had formed as to the state of his mind at the time of his committing this act. They would, however, direct an examination to be made of the deceased's brain, to ascertain if there was any organic disease in it, and would adjourn for a day. What their verdict might be if such disease were found they could not say; but if no such disease existed they would certainly find that he was of sound mind when he destroyed himself, and return a verdict of *felo-de-se*.

THE following are the last week's Cattle Plague Returns.

Census Divisions.	1. Attacked.			Back cases reported in the week ended June 30, 1866.	2. Result of reported Cases from the Commencement of the disease.				
	Week ended June 16.	Week ended June 23.	Week ended June 30.		Attacked.	Killed.	Died.	Recovered.	Unaccounted for.
Metropolitan Dist.	3	5	..	..	7901	3420	3713	318	450
South Eastern Co. .	10	4	1	..	4878	1704	2538	465	171
South Midland Co.	50	60	28	2	20640	8644	10068	1541	387
Eastern Counties .	9	10	8	..	11413	5386	4842	789	396
South Western Co.	..	..	..	..	1758	658	822	207	71
West Midland Co. .	117	43	41	5	14715	6199	6092	1518	906
North Midland Co.	67	39	39	8	18895	10863	6268	1218	546
North Western Co.	190	205	127	159	71351	24344	35018	8386	3603
Yorkshire . .	33	15	7	..	34533	7884	18351	5936	2362
Northern Counties.	9	2	3	..	8636	4931	2613	974	118
Monmouthshire & Wales . . .	27	7	3	..	8289	1144	5791	1057	297
Scotland . .	18	15	3	..	46857	6260	28087	10707	1803
Totals .	533	405	260	174	249866	81437	124203	33116	11110

The Return shows that 260 attacks were reported to have occurred during the week ended June 30, being a decrease of 145 on the previous week.

Correcting the total by adding an estimated average of attacks commencing during the week, but which may be subsequently included under the heading "Back Cases," the number for the week will be 312.

Note.—6 Inspectors who reported cases last week have not reported in time for this return—viz., for the county of Bucks, 1; Chester, 1; Lancaster, 1; York (West Riding), 1; York (East Riding), 1; and the "Metropolis," 1. These inspectors reported 37 cases last week.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

We decline to publish Dr. James Edmunds' letter. We consider his statements injurious to the Profession, and his statistics require a great deal more sifting than we think it worth while to give them.

Dr. A. R. Paterson's unique and interesting case of diphtheria shall be published immediately.

I Want to Know.—Yes, as soon as possible.

D. M.—We thought that a dispute of the kind referred to had better not appear.

The King's College Students' Dinner.—A correspondent, A. K. C. L., calls attention to the fact that the report of the King's College old students' dinner did not mention the name of the honorary secretary, Mr. Francis Mason, whose activity in promoting the success of the entertainment was above all praise. Amongst the Professors present should have been mentioned Professor Bentley, the Dean of the Medical Faculty, K.C.G.

Dr. Thompson.—Mr. James Ware, the founder and first promoter of the School for the Indigent Blind, died in 1815, aged 60.

A Candidate.—The list appears in another column. It would encroach too much on our limited space to give the educational establishments.

Mr. Williams, Southsea.—William Turner, M.D., was Dean of Wells as well as a Doctor of Physic. He died in 1568, and was the author of the first English Herbal, in great estimation before the celebrated one of Gerard.

A Fellow, Southampton.—Mr. Charles Hawkins took his seat at a meeting of the Council on Thursday. The election of President and Vice-Presidents was made the same day.

Collegiate Election.—At the recent election of Fellows of the Royal College of Surgeons into the Council of that institution, 226 gentlemen recorded their votes—viz., 190 metropolitan and only 36 provincial Fellows. The former number included the few officers of the public Medical services in town at the time.

OFFER OF WINE TO THE HOSPITALS OF LONDON.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Will you allow me through the medium of the *Medical Times and Gazette* to make to the Medical officers of the Metropolitan Hospitals what I think will be regarded as a good offer on the part of a French gentleman, a friend of mine?

I am to offer a cask of wine—twenty-two gallons—to each of twelve of the principal Hospitals, and to request that the resident Medical officer of each Hospital for which the wine may be accepted will afterwards favour me with his opinion as to its value and usefulness for Hospital purposes.

My friend is himself a Doctor of Medicine (Paris), though he is not engaged in practice. His object is to offer to the Medical officers of our Hospitals an opportunity of judging of the therapeutic value of French wine in a pure state direct from the vineyard, and *without passing through the hands of any trader or agent.* Accordingly I beg to offer sample casks to University, Bartholomew's, Charing Cross, Guy's, Great Northern, King's, London, Middlesex, St. George's, St. Mary's, St. Thomas's, Westminster. My friend says twelve in his letter, so I name twelve; but I shall be happy to receive and convey to him any request from the Medical officer of any other Hospital, or from the proper authority of any large Infirmary, Workhouse, or other, to be supplied with a sample of the wine. I have no doubt he would willingly accede to such requests. The wine offered is a sound claret. It is grown and made upon my friend's estate in Hérault. I may add that I have used it for some years, and have procured it, at their request, for several friends and relatives of mine, who constantly use it in their families, and think it an excellent and very wholesome wine.

It is to be understood that the duties and charges on the consignment be paid by the authorities of the Hospitals on behalf of which the foregoing offer may be accepted. These will probably amount to less than 30s. per cask. And on receiving a note from the resident Medical officer of any or all of the Hospitals I have named (or other responsible person) that the said freight and charges will be paid to me on delivery of the wine, I shall cause the same to be forwarded on arrival. Afterwards, or at any future time, my friend will, if requested, send this wine direct to Hospital at a price very considerably lower than any prices quoted in trade lists, even for the worst descriptions, at a price which I shall be happy to mention on request to those concerned, and which, I may say, would be thought impossibly low, except by the very few who are well informed upon the question of what is possible in this matter.

In conclusion I wish it to be distinctly understood that I have no personal interest in recommending the wine, but am simply acting in the matter as the friend and at the request of the grower.

I hope the gentlemen addressed in this letter will not feel aggrieved by me for taking this means to save myself the trouble of writing eleven or more duplicates of this letter, as I am a hard-worked man and have very little leisure—in fact, none. And I hope, Mr. Editor, that the advantage offered to the Hospitals will serve to justify me in your estimation for asking you to insert it. I am, &c.

University College, London, July 4. JOHN BONUS.

THE GRIFFIN TESTIMONIAL AND POOR-LAW MEDICAL REFORM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Allow me space to offer my warmest thanks to the subscribers of the testimonial presented to me on July 5. To have 400 gentlemen scattered over the length and breadth of the land thus coming forward is an honour which I highly prize, as it proves to me that the course I have hitherto pursued is one that is approved of by a large body of my Medical brethren. To those gentlemen who are not Poor-law Medical Officers I am especially indebted. To those that are, my thanks will be best proved by my devotion to the cause of Poor-law Medical Reform, the accomplishment of which will, I feel confident, be not only beneficial to them, but to the nation at large. To Fowler, the hon. treasurer and secretary to the testimonial fund, I know not how sufficiently to express my thanks for all the trouble he has taken in the affair. I can only say I thank him very sincerely. To the Medical press my acknowledgments must ever be due, for without their aid I could never have been placed in a position to merit the testimonial I have received. The subject of the testimonial (The Good Samaritan) is one which must ever make me feel it to be a religious duty to relieve suffering humanity. As a work of art the testimonial is nearly perfection; the expression of the countenances of the figures cannot be better. The album of photographs of my Medical friends I greatly prize, and yet hope the few gaps in the volume will be speedily filled.

To all and every one my thanks are due.

I am, &c. RICHARD GRIFFIN.

The following gentlemen have forwarded their subscriptions to the funds of the Association:—Greensill, J. M., Martley, 5s.; Robson, R. N., Durham, 10s.; Hughes, James, Northwich, 10s.; Jones, T T., Chesterfield, 5s; Simmond, H. M., Newington, St. Mary, 10s.; Verenne, E. G., Witham, 10s.; Pearce, Arthur, Hartismere, 5s.; Price, T. L., Wigan, 5s.; Freeman, T. A., Hartley Wintney, 10s. 6d.; Peacock, W. A., Halifax, 10s.; Robinson, John, Halifax, 10s.; Pugh, T. L. P., Halifax, 10s.

CONTRIBUTIONS FOR THE WIDOW OF A DECEASED SURGEON.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The following further contributions for the widow of a deceased Surgeon have been received by Dr. Letheby and myself:—M. A. F., £2; Geo. F. Helm, Esq., F.R.C.S., £2 2s.; W. G. Wedge Vaughan, Esq., £2; J. J. H., 5s.; Dr. Letheby, £1 1s. I am, &c.

W. SPENCER WATSON.

27, Montague-street, Russell-square, July 11, 1866.

GRIFFIN TESTIMONIAL FUND.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The following subscriptions have been further received on behalf of the above fund, the balance-sheet of which I hope to forward next week:—H. M. Simmonds, Esq., Newington, 10s.; Thomas Harper, Esq., Plymouth, 5s.; Thomas Taylor, Esq., Braintree, 10s. 6d.; John Harrison, Esq., Braintree, 10s. 6d.; George Greaves, Esq., Chorlton, £1 1s.; Henry Bencraft, Esq., Southampton, 10s. 6d.; A. P. Rayner, Esq., Shrewsbury, £1 1s.; Dr. J. H. Lloyd, Anglesey, £1; Dr. T. Orme Dudfield, St. Margaret and St. John's, Westminster, 5s.; W. B. Brown, Esq., Windsor, 10s.; Messrs. Clark and Wilton, Sutton, £1 1s.; amount previously announced, £186 6s. 9d.; received at *Lancet* office, £13 11s. 6d.

I am, &c.,

ROBERT FOWLER, M.D., Treasurer and Hon. Sec.

145, Bishopsgate Without, July 9, 1866.

STEDMAN'S TEETHING POWDERS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The enclosed was sent to my niece a few weeks after the birth of her infant was in the paper.

Is this person a "Surgeon?" These powders, which contain mercury, are extensively given to infants by their mothers.

I am, &c., β.

"23A, East-road, Hoxton, London.

"Mr. Stedman has taken the liberty of forwarding a sample packet of teething powders, and begs for them a trial, feeling confident that their well-known virtues will give satisfaction, and gain for them constant use.

"Mr. Stedman begs to add that any written communication on the subject of children's diseases shall have his prompt and earnest attention; and having been Surgeon for many years to an Infirmary for children, where over 15,000 were attended annually, he claims for himself considerable experience in the treatment of children's diseases. Fee, 2s. 6d.

"J. STEDMAN, Surgeon."

THE ACCUMULATIVE (?) PROPERTY OF CHLOROFORM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE

SIR,—Your correspondent, Dr. Osborn, must forgive me if I am somewhat sceptical as to that which he considers the accumulative property of chloroform. In the first place, he is in error in thinking that chloroform passes out of the body by the kidneys. It is eliminated almost entirely by the lungs, slightly by the skin, but, as MM. Lallemand, Perrin, and Duroy state, "the kidneys do not participate in this elimination." (a) I have pointed out this in my book on chloroform (p. 34).

Dr. Osborn having administered small doses of chloroform in a mixture during a few days, and then having suspended the administration for three, four, or five days, was surprised one day to find an odour of chloroform pervading the room in which the patient was. From these premises he argues that the chloroform was retained in the system for these three, four, or five days, to be eliminated at the time at which he observed the odour. With all respect for his conviction, I must yet demur to the conclusion. The odour test can scarcely be called satisfactory, and the surrounding sources of fallacy are very numerous.

I think it will require no argument from me to induce the conviction that if the chloroform in this case had been absorbed and retained in the system, it must have remained suspended in the blood. That is to say, it is impossible for a body of the volatility and peculiar physical properties of chloroform to remain latent in any part of the intestinal canal. How long can chloroform remain latent in the blood? In the case of a dog completely anæsthetised it is found that the whole of the chloroform is eliminated in an hour and a half after the restoration of respiration. If it be objected that by the method of administering chloroform by the stomach the elimination may take place in a much more prolonged manner, I must answer that the researches of Dr. Snow go far to prove that the symptoms of anæsthesia are caused by the existence in the blood of a definite quantity of chloroform—that whereas the patient never was narcotised by the chloroform administered there never could have existed in the blood so much as even twelve minims of chloroform (b) at a given time. I think it must be obvious that the chloroform must have been eliminated in a much more rapid manner than that which your correspondent imagines. It is stated that two or three drachms of spirits of chloroform were administered for a few days. Three drachms of spirits of chloroform per day would be equivalent to thirteen grains and a half of chloroform—*i.e.*, a gross quantity of fifty-four grains in (assuming) four days. Is it possible that this small quantity, even if it were retained in the body and none of it eliminated for several days, should at the end so load the products of expiration as to betray its presence in the air of a room? And in what condition would a patient be who was eliminating a sufficient quantity of chloroform to be detected by the smell of the air of the apartment?

I must apologise for the hurried character of these observations. I would beg Dr. Osborn to receive them rather as hints for further inquiry than as dogmatic assertions. I am, &c.

29 Duncan-terrace, July 10. A. ERNEST SANSOM, M.B.

MEDICAL RESPONSIBILITY IN THE CASE OF WORKHOUSE INFIRMARIES.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Throughout the whole course of the inquiries, official and otherwise, into the flagrant wrongs which have been shown to exist in these Infirmaries, there has been a curious omission, intentional or not, to place the blame where it chiefly lies. It has been assigned in no sparing proportion to the Guardians and to the Poor-law Inspector, Mr Farnall; but while I admit that no small share of it belongs to them, I cannot avoid the conviction that with the Medical officers of each Workhouse respectively where these wrongs have been proven to exist rests the greater part of the blame. Mr. Farnall has given us some sort of exculpatory defence, but the pleas he urges cannot be allowed to the Medical officer. His duty being not only to prescribe all remedies required by his patients, but also to ascertain (his Professional knowledge herein lending him every necessary aid) whether these have been duly administered, the inference is forced upon us that failures in carrying out these orders must become known to him. Then, if such continuous failure be known, the further inference is that by his retaining the office he lends himself to the perpetuation of a system of abuse which has been as severely as universally condemned. I think we all know what kind of excuse will be here advanced—"that if I (Dr. A.) refuse to hold the office under the conditions imposed by the Guardians, Dr. B. will gladly accept it, and the change may not after all be to the advantage of the sick poor;" that is to say, all Medical men open to accept the office in question have no other paramount sense of duty than what consists with a tenacious regard to their own pecuniary interests. The odium of this conclusion rests not with me—it belongs to him who would advance the excuse stated; and, shirk the point as we may, this is the conclusion which must be come to if such excuse be admitted, and the sooner it be brought home to the practical consciousness of the Profession the better. I am not ignorant of the severe strain upon conscience which the just performance of Hospital duty too frequently entails, nor have I to learn how much of contumely, ill will, and unseemly altercation (not to speak of pecuniary loss), the Medical man is exposed to in the faithful discharge of his duty: but, notwithstanding all this, his course is clear before him, and if he shrinks from it he must be prepared to have the only construction placed upon his conduct which is demanded. It is not necessary for me to intrude upon your space by pointing out how much the guilt now sought to be palliated is aggravated by the fact that those who suffer from all that neglect so lamentably existing are the wretchedly poor. Let any one read of the disclosures brought to light by the present official inquiry at the Paddington Workhouse, or by Mr. Ernest Hart in his late letter to the *Times*, both of these proofs demonstrating a state of foul wrong still existing after all that has been said, and then consider that all this wrong and terrible suffering are inflicted upon those who have no power to help themselves. The thought must instantly arise in the minds of the most leniently judging that there is more than guilt in him or them with whom the responsibility of all this rests I say nothing to show why I hold the Medical officer really answerable, because, as I conceive, this is so apparent; and at all events, if this my conclusion be denied on anything like sufficient grounds, I shall then ask you to allow me the opportunity of proving it by a more lengthened statement. Assuming, then, that the blame lies chiefly where I here venture to place it, what should be done? Admitting that much good has been effected by the inquiries already instituted into the gross evils in question, it needs no very humble estimate of human nature to fear that such good will be neither sufficiently extensive nor permanent unless we determine to affix responsibility where it is due. Every Medical officer should know whether his orders be carried out; if they be not, he is bound by every honest and honourable inducement to wash his hands of the whole business. There is generally enough said as to what is due to the Profession, as to the demands of Medical etiquette, and so forth, all matters claiming every proper attention; but such a system of continuous wrong, suffered by the sick poor under the voluntary charge of the Medical officer, as has been shown to exist in our London Workhouses, reflects more discreditably on the Profession than many of those things about which Medical men so frequently clamour. It is not only in justice to the sick poor, but in justice to our Profession, that I now ask for the blame to be placed where it ought. If this were done, this result would, I believe, follow Guardians would find that their contemptibly unjust system of Medical relief could not be carried out by honourable men; this would give its own impress to Professional opinion, making it as discreditable to hold the situation of Medical officer to a London Workhouse, under present conditions, as it is now viewed to be consulting Surgeon to an "anatomical museum." But I need scarcely say that, long before things came to this state, Professional and public opinion alike would have produced such a change as to make my hypothetical comparison entirely irrelevant.

To avoid all room for misunderstanding, perhaps I should add that the responsibility here meant is that which belongs to the voluntary commission of an act. The Guardians are doubtless the persons primarily implicated, but their Medical officers are the willing agents by whom their will as a body is put into action, and therefore must these officers be held responsible for all practical purposes and so far as the sick poor and the public are concerned. I am, &c.

J. B. FAIRMANN, L.R.C.P. Edin., etc., etc.

Hanley, Staffordshire, July 4.

THE PENSION WHICH OUGHT TO BE GIVEN TO MRS. THOMSON.

The following letter appeared in the *Times* of the 10th inst.:—

"Sir,—Allow me to call your attention to one of the last acts of Earl Russell.

"For several years Dr. R D Thomson analysed, as your readers are aware, the waters of the metropolitan companies, and thus contributed to that improvement which leads us to hope that, while cholera rages around us, the inhabitants of London will not again suffer as they did in past years. The waters of ten or twelve companies were analysed twelve times a year, and were published in the Registrar-General's weekly tables. These chemical analyses, which at the ordinary charges would have cost a large sum annually, were performed gratuitously.

(a) "Du Rôle de l'Alcoöl et des Anésthésiques dans l'Organisme," p. 354.

(b) Snow on Chloroform, p. 74.

"Dr. Thomson, after distinguishing himself by his labours in chemistry and in hygiene as one of the most meritorious health officers, was cut off in the prime of life, and left children and a widow, herself the daughter of one of the greatest chemists England has produced—the late Regius Professor of Chemistry in Glasgow.

"The facts were brought, by a well-known nobleman and other persons interested in sanitary science, under the notice of Lord Palmerston, who looked into the case and at once recognised the value of Dr. Thomson's services by placing his widow's name down for a pension, as she was kindly informed through the nobleman in question.

"In the meantime Lord Palmerston died, and Earl Russell was immediately informed both of the services and of Lord Palmerston's promise. A person who knew both Ministers well did not hesitate to say that so far from expecting Earl Russell to respect Lord Palmerston's expressed intentions, he felt assured that Earl Russell would take some pleasure in treating them with disregard. As a Reformer I believed that the matter was safe in Earl Russell's hands. It turns out that I was wrong. The list appears in your columns without Mrs. Thomson's name.

"Do not such acts as these account for some of the disaffection in Earl Russell's ranks? I am, yours, etc., AQUA PURA."

COMMUNICATIONS have been received from—

Dr. EARLE; F. J. GANT, Esq.; Dr. R. C. BREE; J. FAIRMANN, Esq.; W. H. LYDALL, Esq.; Dr. DUNCAN MACINTYRE; Dr. THOROWGOOD; R. GRIFFIN, Esq.; Dr. SHERATON; Dr. ERNEST SANSOM; Dr. FOWLER; W. SPENCER WATSON, Esq.; A NOVICE; Dr. F. E. JUNKER; Dr. B. W. RICHARDSON; Dr. HUGHLINGS JACKSON; Mr. J. CHATTO; Mr. J. G. FRENCH; Mr. R. BARWELL; Mr. F. H. MARSH; Dr. MACCORMAC; Dr. LUMLEY EARLE; Dr. BLANDFORD.

BOOKS RECEIVED—

Six Days on the Mast—Dental Review (July)—Donders, On the Constituents of Food—Annual Report of the Edinburgh Asylum—Abbotts Smith, On Hay Fever—Robert, Sur les Eaux Thermales Sulfureuses de Schinznach—Medico-Chirurgical Review (July)—Microscopical Journal—Half Yearly Abstract of Medical Sciences (Vol. XLIII.)—Edinburgh Medical Journal (July)—Dick, On Gleet and Stricture—The Journal of Mental Science (July)—The Westminster Review (July).

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN JUNE, 1866.

The following are the Returns of the Metropolitan Association of Medical Officers of Health:—

	Total Solid Matter per Gallon.	Loss by Ignition. (a)	Oxidisable Organic Matter. (b)	Hardness.	
				Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	18·05	0·67	0·62	13·5	3·0
West Middlesex	17·02	0·71	0·40	13·0	3·0
Southwark and Vauxhall	18·12	0·68	0·62	13·5	4·0
Chelsea	17·73	0·74	0·48	13·5	3·5
Lambeth	18·60	0·80	0·72	13·5	3·0
Other Companies.					
Kent	28·23	1·00	0·00	17·5	8·0
New River	16·06	0·56	0·14	12·0	3·0
East London	17·70	0·94	0·23	12·5	4·0

(a) The loss by ignition represents a variety of volatile matters as well as organic matter, as ammoniacal salts, moisture, and the volatile constituents of nitrates and nitrites.

(b) The oxidisable organic matter is determined by a standard solution of permanganate of potash, the available oxygen of which is to the organic matter as 1 is to 8; and the results are controlled by the examination of the colour of the water when seen through a glass tube two feet in length and two inches in diameter.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 7, 1866.

BIRTHS.

Births of Boys, 969; Girls, 981; Total, 1950.
Average of 10 corresponding weeks, 1856-65, 1721 3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	688	604	1292
Average of the ten years 1856-65	602·7	551·7	1154·4
Average corrected to increased population	..	..	1269
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.
West	463,388	1	8	4	2	5	2	16
North	618,210	9	8	7	2	4	16	23
Central	378,058	4	4	5	—	8	6	18
East	571,158	11	14	10	3	7	4	26
South	773,175	8	12	13	1	8	7	19
Total	2,803,989	33	46	39	8	32	35	102

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·410 in.
Mean temperature	56·3
Highest point of thermometer	70·3
Lowest point of thermometer	46·4
Mean dew-point temperature	50·3
General direction of wind	S.W. & W.S.W.
Whole amount of rain in the week	1·18

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 7, 1866, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending July 7.	Deaths.		Temperature of Air (Fahr.)			Rain Fall.	
				Corrected Average Weekly Number.*	Registered during the week ending July 7.	Highest during the Week.	Lowest during the Week.	Weekly Mean of the Mean Daily Values.	In Inches.	In Tons per Acre.
London (Metropolis)	3067536	39·3	1950	1400	1292	70·3	46·4	56·3	1·18	119
Bristol (City)	163680	34·9	109	73	‡167	64·7	47·8	54·	2·45	247
Birmingham (Boro')	335798	42·9	176	163	109	67·0	45·6	56·	0·88	89
Liverpool (Borough)	484337	94·8	368	281	349	63·2	51·7	57·6	1·11	112
Manchester (City)	358855	80·0	254	203	‡198	67·0	43·2	54·3	1·38	139
Salford (Borough)	112904	21·8	108	57	65	63·4	41·7	52·8	1·02	103
Sheffield (Borough)	218257	9·6	129	115	103	65·6	45·0	53·	0·58	59
Leeds (Borough)	228187	10·6	107	116	159	68·0	38·5	54·8	0·55	56
Hull (Borough)	105233	29·5	69	49	37	..	..	..	..	..
Nwcastl-on-Tyne, do.	122277	22·9	94	65	53	..	45·0	55·4	0·62	63
Edinburgh (City)	175128	39·6	119	84	81	64·7	45·0	54·2	1·00	101
Glasgow (City)	432265	85·4	294	252	210	71·3	40·6	54·	1·33	133
Dublin (City and some suburbs)	318437	32·7	178	†156	123	66·9	42·0	54·	0·95	96
Total of 13 large Towns	6122894	34·4	3955	3014	2846	71·3	38·5	54·	1·09	110
					Week ending June 23.	Week ending June 23.				
Vienna (City)	(1863) 560000	..	..	..	324	..	..	§ 64·4	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·410 in. The atmospheric pressure fell to 29·12 in. on Tuesday, and rose to 29·96 in. on Saturday.

The general direction of the wind was S.W. & W.S.W.

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* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 66·3°.

APPOINTMENTS FOR THE WEEK.

July 14. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p.m.

16. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

17. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

18. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

19. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

20. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

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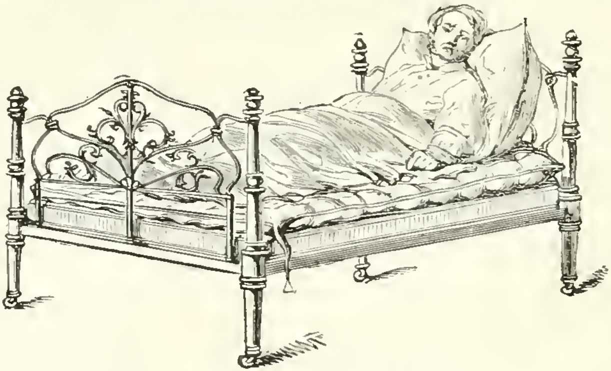

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In sending an order the Width of the Bedstead should be stated.

Three-quarter Size Water Mattress.

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SPIRAL SILK ELASTIC ABDOMINAL BANDAGES for Pregnancy, &c.
" " STOCKINGS for Varicose Veins, &c.

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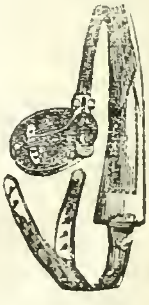

JOSEPH F. PRATT,

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Mr. Baker Brown's Instruments for Operations of Vesico-vaginal Fistula, Ruptured Perineum, Ovariotomy, New Ovariotomy Clamp, Mr. Philip Harper's New Midwifery Meterotome, Dr. Marion Sims' Uterine Dilator, Improved Bandages and Belts for Umbilical Hernia, Ladies' Belts and Abdominal Supporters, variety of New Pessaries, New Femoral Truss, and Trusses for Infants, with prepared leather, &c.

AGENT TO M. A. P. BOISSONNEAU FOR ARTIFICIAL EYES.

ORIGINAL LECTURES.

LECTURES ON SOME MEDICAL SUBJECTS.

By F. C. SKEY, F.R.S.,
Consulting Surgeon to St. Bartholomew's Hospital.

Lecture II.

I now claim your especial attention to the subject which relates to the causes of disease, than which none connected with the practice of our Profession can be more critical or interesting. If you inquire into the recent history of a person suffering from disease or illness, whatever form almost it may assume, you will learn of some event or circumstance of recent occurrence that has drawn more or less suddenly whether on his circulating or nervous system, by which the vital powers of his body have been reduced. This condition is commonly known under the term exhaustion, and is the result of a sudden draught on the powers of the constitution, by which the relations hitherto existing between the physical frame and the powers of life inhabiting it, are for the time deranged.

So long as health is undisturbed by any counteracting agency beyond the natural wear and tear of time, life will be prolonged to its full term of years, but in our path through life we are liable to disturbing influences which destroy the equilibrium. These accidents draw on the vital powers and reduce them below the level of standard health, and disease follows as an almost certain result. Let us suppose a man to consume each day a given amount of food. Accident deprives him of a portion of this food, which I will conclude equal to one-half of a day's ordinary consumption. To this amount he fails in the supply of material of blood making, and his circulation is weakened in proportion. That man has become more susceptible of disease, in a ratio with his loss of blood, than he was prior to the occurrence.

Another man, under circumstances whether of choice or compulsion, sustains an unusually great and prolonged physical effort, whether in walking, or riding, or in rowing, of which we see abundant examples in the annual folly of the University boat race. Inasmuch as the serious consequences of these physical efforts, on which the reputation for learning of the great Universities of England depends, are remote, they are not detected. I have seen several examples of disease developed in men who have undertaken a walking tour in Switzerland, who have overtasked their powers of endurance, have returned home exhausted by the effort, and have been laid up ill for months.

Any cause which tends to reduce the quantity of blood in the system, whether by direct abstraction or by deprivation of food as the source of blood, reduces the vital powers, and disease or illness in some form is the consequence. The same principle is involved in the defective supply of oxygen to the lungs, and indeed is applicable to any and all causes that either reduce the blood in quantity or impair its strength for circulation. Any great and unusual physical effort reduces the powers of life in proportion to its degree, more especially when coupled with loss of sleep. Exposure to cold, when severe or prolonged, is a source of subsequent derangement of health, and among other causes may be included either shock to or exhaustion of the mental powers, such as great anxiety of mind or mental emotion and laborious and continued mental labour. Of the above causes of disease, direct or indirect loss of blood and deficient food are the most common; and although I have above referred to them, as also to the remaining causes, as sudden, they may be more or less chronic both in their nature and in their consequences. I referred rather to sudden and severe illness or disease as the result of some sudden and palpable change in the routine of life of the individual, in which the evidence of cause and effect is conclusive. I believe, then, that in the large majority of illnesses you may trace back the malady, be it what it may, to one or other of the above incidents as its direct and obvious cause; and as certainly as one or the other of these causes has existed, you may with reason and probability look out for its result in some early attack of illness, medical or surgical, local or constitutional. Whatever function or structure is most liable to derangement, the consequences fall upon it in the first place. It may be diarrhœa, or pneumonia, or abscess, or erysipelas, or rheumatism, or general debility. If you will adopt the habit of tracing back the recent history of any or every patient you prescribe for labouring under disease, you will learn something bearing upon it of the nature I have referred to, some effort overtaxing the physical powers or reducing the circulation or nervous powers of the system; and if so, is it not a reasonable inference that all disease begins by a stage of *weakness?* The first link in this chain consists in a reduction of vital power, from which reduction the effort of the Physician or Surgeon consists in restoring the lost power and bringing the patient back to the standard of health. In illustration of these principles I will relate a case that occurred to me recently. A healthy lady, of about 34, consulted me on account of an abscess in the breast. I concluded she was suckling a child, but I was mistaken. Anxious to ascertain the cause of so unusual an occurrence in an apparently healthy person, I made every inquiry into her past recent history. Have you had a blow on the breast? No. An attack of illness? diarrhœa? any unusual or excessive loss of blood? any great muscular effort or loss of food? All these questions she answered in the negative, and I was about to relinquish my inquiry when the lady said, "Perhaps I ought to tell you that a few weeks ago I sat up seven successive nights with a dying child." I thanked her for such important information, and the mystery was solved. Why should this lady have abscess in the breast? She had not borne a child for many years. There must be some cause for abscess, local or general. It might have been produced by a blow, but it was not. Investigation proved it to be the result of sudden reduction of her vital powers by great physical and mental effort. Why it assumed this particular form I know not. I only know that a great cause of derangement of her system had occurred, and the consequence fell on that particular organ. The late Lord ——, whose recent and sudden death caused so painful a sensation, became the subject of phlebitis consequent on severe bodily exercise with a pulse of 50, which no amount of stimulus could raise above it so long as he subjected himself to this daily effort. Here is exhaustion as the cause, phlebitis the effect, and sudden death by embolism.

Inflammation of the uterus or of the venous system below it follows hæmorrhage in parturition. Accoucheurs with large experience will confirm this fact.

Many years ago I was present at the attempt to reduce a dislocation of the femur in a London Hospital. The man, who was to all appearance in perfect health, was bled largely from both arms and from the temporal artery. He also took tartar emetic to the extent of some fifteen grains. The quantity of blood abstracted from his circulation must have rendered the functions of the heart a sinecure, for it amounted to 120 ounces. He survived a week, and died of phlebitis, as I had predicted.

I might multiply these examples, but it is unnecessary if you comprehend the force of the cases I have quoted. The causes of disease I refer to above may be classed as follows:—

1. Loss of blood, whether accidental or effected at the hands of science; catamenial, hæmorrhoidal, etc.
2. Loss of food, or failure of the material of blood-making.
3. Excessive purgation, whether natural and spontaneous, as in diarrhœa, or artificial at the hands of science, carrying off nourishment.
4. Breathing impure air, by which the quality of the blood is deteriorated.
5. Loss of sleep.
6. Excessive muscular effort, as in walking great distances, boat-racing, etc.
7. Extremes of temperature, especially of cold.
8. Great mental emotion or mental shock.
9. Protracted anxiety of mind.

Of the above sources of subsequent illness or disease, the influence of the four first is received more directly by the vascular system, the five latter either partially or entirely by the nervous.

Before speaking of the general treatment of disease, to which I shall shortly come, I wish to say a few more words on the subject of some prevailing doctrines which are so generally adopted by our Profession, and the entire soundness of which appears to me yet open to question and inquiry. Why do you order an aperient in nearly every case of disease you are called to see? If the patient is strong and vigorous, the dose is a full one—if weakly, a milder form; but always an aperient, and generally it is combined with mercury, which indeed forms the staple of the medicine all but universally prescribed. As we commonly go at once to the cause, and prescribe our best remedy, the natural inference is that there is either liver or intestinal derangement as the cause of the disease. You say you desire to unload the liver and to remove extraneous and irritating matters from the intestinal canal; and very good treatment too if the liver is at fault and the alimentary canal demands that kind of relief. But what evidence have you of it? You say the liver is congested. It is a term in the mouth of nine-tenths of the Profession practising Medicine and Surgery in the dominions of her Majesty the Queen. The Practitioners on the Continent of Europe take a different view of these matters, and not without some show of reason, for English doctors, though I entertain the highest respect for their attainments, do not monopolise all the knowledge of the world. In discussing the subject, I am prepared to acknowledge the occasional presence of constipation as the result of torpid action of the bowels, in which condition the liver may, or may not, be involved; but I am myself unable to detect what appears so obvious to others—a congested state of this organ calling for large doses of chloride of mercury, supposing that form of drug to be the best corrective of the evil. As I believe a person who is the subject of disease, itself so commonly the product of exhaustion, should not undergo further reduction of his strength without a good and sufficient reason, and as I doubt the congested state of the liver and find the torpid condition of the large intestine, if it exist at all, an evil on a small scale, I prefer to look to the disease itself (suppose it, if you please, erysipelas or any other malady), and if the pulse is soft and compressible, indicating distinct constitutional weakness, *and not otherwise*, I prescribe at once a tonic remedy. I look upon this torpid condition of the large intestine—for, observe, nearly all constipation is limited to this part of the alimentary canal—as merely a symptom of the general debility, and increased by loss of appetite and the absence of food, and is not to be rudely and violently assaulted by drastic purgatives; and one of the first signs indicating the sound principle of a tonic treatment will appear in the gradual, but certain, restoration of the functions of the alimentary canal to a state of health. Constipation is very commonly, though not invariably, the concomitant of weak health and low vital power, and is caused by defective power of the muscular fibres of the large intestine, which are, when compared to the small intestine, very limited in quantity in relation to the size of the intestine. You treat constipation by means of purgatives which act on the mucous membrane only. I prescribe iron to give tone to the muscular coat. Your treatment affords a temporary and transient benefit; mine is a permanent one. Which will you prefer? And this subject leads me to add a few words on the treatment of disease adopted by my own respected teacher, Mr. Abernethy, who upheld the doctrine that health demanded the daily action of the bowels, and that the liver was an offending organ and demanded the daily administration of a stimulant or a supposed provocative to the secretion of an increased quantity of bile. No doubt Mr. Abernethy's treatment was to an extent successful because, as the tendency of the large majority of diseases is towards recovery at the hands of Nature, his cases prospered like those treated on other principles. In these days one does not quite comprehend how a man of Mr. Abernethy's grasp of intellect could delude himself with the idea either that disease could so generally depend on torpidity of the liver, or on imperfect action of the muscular coat of the large intestine. If it be necessary to obtain as the requisite condition of health a daily action of the bowels, why did Nature give us large intestine sufficient to contain at least a week's consumption of food?

In cases of extreme weakness good service is often rendered by "locking up" the bowels, and reducing their action to that of alternate days.

I consider the treatment of the great majority of diseases to consist in increasing the quantity of healthy blood and giving force to the action of the heart. *You can't cure disease with a feeble pulse.* Mend the pulse, and Nature will do the rest of the work. On this principle disease in general may be treated, so far as my observation has gone, with pre-eminent success. In order to appreciate fully its force, you must start with the conviction that Nature cures and not man—man removes obstructions from her path, and nothing more. This done, he awaits the onward move of the great machine, like to a great ship of gigantic weight, which, quietly held in her position at rest by a few timbers, immediately obeys the great natural law of gravitation on their removal, and glides into the water below. Did man launch this vessel, or did Nature? With as much title may the Physician or the Surgeon declare that he cured a disease. There are of course occasional exceptions to this assertion in some cases of operative Surgery. The object of treatment is to restore the pulse to its normal standard of force and frequency. Give it due force, and the heart will determine the number. As a rule, in cases of debility, it is too frequent, and frequent because the quantity of blood in the system is below the standard of health. Increase the quantity, and the pulse falls. Assure yourselves of this. Unthinking persons jump to the conclusion that brandy or other stimulants necessarily raise the pulse, but this supposes that we start with a healthy pulse at par. I am talking not of health but of disease. In my capacity of Examiner at the College of Surgeons, I often put this question. If you take a pint of blood from a healthy man of 40, with a standard pulse of 68, what effect will be produced on the number of pulsations by the loss? What do you imagine is the frequent reply? "It reduces the number to 60!" And this curious answer explains something of the phenomena of venesection so universally practised some years ago, when in reporting on a case it is said "His pulse rose on bleeding, and so I bled him again." As a rule, you will find that whenever the frequency of the pulse is above the standard of health, *as an indication of debility*, a stimulant will reduce it. I tried this experiment, or rather I obtained this test, for it was not an experiment. On coming out of a Turkish bath of something more than the usual intensity of heat, my pulse had risen to 90; I drank about two ounces of wine, and my pulse fell to 75 within a few minutes.

I have something more to say on common matters relating to the routine of every day's practice. There is great repugnance prevailing in the Medical mind to the employment of stimulants. It is, perhaps, mainly founded on the moral evils of excess. Inebriety is a low vulgar vice, and therefore the agents producing it are morally objectionable and medically injurious; but you must draw a distinct line between health and disease. In health I am the advocate, both in precept and example, of moderation, in disease not. I think one reason why stimulants are so little resorted to in cases of debility is because, being administered in hesitating quantities of doubtful utility, their value is not appreciated. You must not gauge the capacity for alcoholic stimulants in disease by the capacity of the same person in health. Those only who adopt this treatment as a principle are cognisant of the remarkable tolerance of stimulants under great prostration of the vital powers, and when required as the antidote to prostration I maintain they are perfectly harmless. It is the remarkable tolerance of alcoholic stimulants in these persons to which I wish to direct your earnest attention. You can't intoxicate these people; you cannot even unduly excite them. It is a common remark among observant persons under treatment, "I drank three glasses of wine, but it had no more effect on me than so much water;" whereas less than the same quantity during health would have produced partial intoxication, or at all events excitement. These are the persons who demand the free and fearless resort to stimulants, and to whom alcohol is life. Do not, I again urge upon you, measure the quantity to be administered by the glass. Gauge it by its effects, and so long as weakness prevails, indicated by the pulse, persist in its use; and as you proceed in your treatment, and the services of the wine become more and more palpable, you will not fail to see that its consumption becomes less and less essential to onward progress, and in the course, it may be of months, of weeks, or even of days, you will reduce the quantity to the standard of health, for the capacity for wine has passed away with the disease that claimed it. You need never listen to the objection often urged that the resort to stimulants will become habitual; be assured it is entirely groundless. Now listen to the following examples of this principle of treatment. A young lady whose daily consumption of wine has never exceeded two glasses, oppressed by the heat of a crowded room, faints. The heart and the brain have failed in their functions by reason of the imperfect oxygenation of the blood. Recovering from the first stage of sudden depression of her vital powers, her symptoms pass into those of hysteria. We have all witnessed cases of the kind. Ordinary and mild stimulants are unavailing, and make no impression. An hour, two hours, have elapsed, and she is yet prostrate. Before her recovery this girl has consumed three wineglasses, or upwards of half a pint, of brandy and other cordials, and often more. What is the explanation? what is the physiology of this? Had you administered this quantity to your patient during health, you would have done her a serious injury. She now takes it with benefit and with impunity. The shock to her system was for the time dangerous; the stimulant, given at another time, would have proved dangerous also; the two united are harmless. The one has balanced or antagonised the influence of the other. There remains neither headache, nor nausea, nor any evidence of excess, because all the stimulating power of the brandy was required and consumed in re-establishing the circulation. Again :—A gentleman of abstemious habits, ill clothed for the occasion, ventured, in a cold season of the year, to mount to the summit of a mountain in Wales. He was seized with intense and sudden prostration from the effects of the temperature. His suffering was severe. At this opportune moment, a friend supplied him with a half-pint bottle of raw brandy, every drop of which he drank at a draught, as he would have drunk a glass of table beer. The only effect produced on his system was warmth. He drank more brandy at that moment than he had ever before consumed in a week. No evil resulted. The cold and the brandy being in antagonism, each entirely neutralised the injurious effects of the other. I need not say that a similar draught, unprotected by the depressing influence of the intense cold, would have proved almost dangerous to life itself—certainly most injurious to health. I attended in his last illness the late Duke of ———, a man of remarkably abstemious habits. His malady was a mortal one. Some months prior to his death he became the subject of frequent attacks of rigors, which continued with great severity for two or three hours, and left him in a condition of extreme prostration. I called one day opportunely, and found him labouring under one of these attacks. I gave him two-thirds of a wineglass of raw brandy without effect. In five minutes I repeated it, and he took a wineglassful of brandy every seven or eight minutes till the attack passed off. He had then consumed three-quarters of a bottle of pure brandy within an hour. I saw him in four hours afterwards, apparently well. In reply to my question, "How do you feel?" he answered, "Well, I think you gave me pretty large doses of brandy, but I cannot say I feel in any respect the worse for it." Nor was he. Throughout his subsequent illness he had no attack of rigors. The prostration of the vital powers in this case must have been immense. One of the last cases attended by a late eminent Physician—now, unhappily for the cause of Medical science, lost to the Profession—was a gentleman of about 30, who was the subject of hydrothorax. His case was urgent, and I was requested to see him. Concurring in opinion with the Physician in attendance in the necessity of giving immediate relief by operation, I punctured the chest and got away six pints of serous fluid. The cavity thus made was entirely occupied by atmospheric air, to the admission of which I have never yet ascertained the grounds of objection or seen any injurious result therefrom. I have done this operation often, and have never considered it desirable to exclude the air from the cavity within. Though irrelevant to my subject, I cannot forbear asking the simple question, What is supposed to occupy the space from which the fluid has been removed? Certainly the lung will not immediately expand, and the walls will not collapse for a period of weeks or months. At the conclusion of the operation the patient was much exhausted, with a pulse of 130. It was a great object in the treatment to reduce it. What means would you have adopted? what does professional usage demand? Salines, think you, or purgatives? No, on the contrary. He took the only remedy that could have probably saved his life. He was ordered 1 oz. of brandy diluted with an equal quantity of water every three hours, and on the day following his pulse had fallen to 90, and he recovered. If this treatment was not sound, it ought to have proved fatal. I have abundant examples at hand of the efficacy of this principle, but I have quoted sufficient for my present purpose. They go to exemplify this therapeutical principle—viz. 1. That stimulants alone can restore the vital powers under great and sudden prostration; and 2. That under great and sudden prostration the capacity of the system for stimulants is enormous, and may be administered to almost any amount with safety.

Now, Gentlemen, in the prosecution of your Profession, while engaged in the study of by far the most critical department of Medical education—the nature of disease, or diagnosis—have you ever thought of the important distinction which exists between the diseases of Animal and Organic life? And yet they are worth considering. A few years ago I made some calculations on the subject of the relative quantity of blood supplied to each. I have not these calculations at hand, but the quantity of blood so distributed is nearly equal, though rather the larger proportion supplies the structures of Animal life.

The nerves, as you know, are essentially different, animal life being spinal, organic life ganglionic. If we take the whole material of the body into the calculation, the structures of organic life do not exceed one-tenth of the actual weight, yet they receive nearly one half of the whole quantity of arterial blood.

The "two lives," as they were termed by the great French physiologist, Bichat, are more or less independent of each other, both in health and in disease. The diseases of organic life are more serious, because they involve structures more essential to life itself, and the derangement of any one of them involves the whole system more thoroughly than does a similar amount of disease in the structures of animal life.

You will hear a man say "he can't have much wrong with him," because he is capable of great exercise, and can walk any reasonable distance. This is a bad test. So long as the muscular system is not directly involved, and sufficient blood is made to supply both it and the spinal cord from which it derives its nerves, a man may labour under a considerable amount of disease of the structures of organic life without his muscular system being involved. When we speak of a man's "health" in general terms, we refer instinctively to the functions of the interior of the body or of the organs, not of the muscular system; we refer to the functions of the brain, to respiration, to circulation, to digestion, and the assimilation of food, etc. The muscular is but subservient to these other organs which really constitute life itself.

ORIGINAL COMMUNICATIONS.

ON THE

TREATMENT, BUT ESPECIALLY THE PROPHYLACTIC ARREST, OF ASIATIC CHOLERA BY DILUTE SULPHURIC ACID.

By HENRY MAC CORMAC, M.D.,

Consulting-Physician to the Belfast Hospital, Physician to the Cholera Hospital, Visiting Physician to the District Asylum for the Insane and ex-Professor of the Practice of Medicine in the Belfast Medical School.

In acute disease—and Asiatic cholera comes pre-eminently under this designation—it is of paramount importance to arrest it at the earliest possible moment. Any alleged indication that interferes with this is simply homicidal in its tendency. Here, in truth, the value of remedies is in the exactest ratio to their early exhibition. If promptly and vigorously treated, cholera, in most instances, is comparatively manageable. But if time be lost, if the disease be not dealt with at its very onset, it proves fatal and unmanageable accordingly.

Dilute sulphuric acid is of exceeding efficacy not only in the early treatment, but, as I have ascertained, in the prophylactic arrest of cholera. Coupled with strict cleanliness, temperance, and ventilation, dilute sulphuric acid, I aver, will not only very often remedy the disease, but avert it altogether.

During the autumn of 1854, a communication having been opened by some workmen with the adjacent infected town, Asiatic cholera broke out in the District Asylum for the Insane Poor with startling suddenness. Seventeen inmates perished rapidly, and I began to fear for the entire establishment. At this juncture it occurred to me that since dilute sulphuric acid so effectively checks the diarrhœa, it might by anticipation avert cholera altogether. I had recourse to it at once, and the result was, the existing cases having run their course, that no other instance of the malady occurred whatever. To the prophylactic efficacy of dilute sulphuric acid I entirely ascribe the desirable result.

In the treatment of acute cholera, the dilute acid may be given in drachm or half-drachm doses every half-hour or oftener, in mint or plain water; and, as regards the prophylactic arrest of cholera, the same doses may be thus administered night and morning. I draw up these few remarks with the view of giving increased publicity to a means calculated to rescue very many lives and avert great suffering.

Belfast.

Cholera has appeared at Llanelly, where there have been three rapid deaths from it, and one from diarrhœa. Intense heat and unsatisfactory drainage are mentioned in the accounts given of the outbreak.

ON THE PHYSIOLOGICAL CONDITIONS WHICH AVERT A FATAL RESULT IN CHOLERA.

By JOHN GEORGE FRENCH, F.R.C.S.,
Surgeon to the Infirmary of St. James's, Westminster.

The study of this subject is taken from the point of view which is afforded by the recovery of patients from the severest forms of the disease. The cause of the disease is now known to be a poison. In using this term it is necessary to define it. A poison is something which, instead of nourishing or refreshing the body, destroys life. The circumstances which avert the fatal effect of this poison are the following:—

1st. Diminution of the heart's action.

2nd. Diminution of the aeration of the blood.

3rd. Excretion of the poison by the alimentary canal.

The diminution of the heart's action is, in other words, the arrest of the circulation of the poison. In practice we adopt this principle, in the examples of venomous bites, by the ligature and other contrivances to prevent the entrance of the poison into the circulation.

Next of the diminution of the aeration of the blood. This has been mistaken for the condition known as asphyxia. Dr. Edmund Parkes has, however, very clearly pointed out a material difference between the two conditions. Thus, he says, "In asphyxia the cause is the absence of a respirable gas. In cholera there is some condition which prevents the blood from submitting itself to the action of the air." I believe that herein lies the true distinction. Thus, instead of being misled by the analogies of syncope and asphyxia, from which the points of difference are far stronger than those of resemblance, the more reasonable assumption is that poison, the nature of which is to destroy life, is so bad a thing to circulate in the blood that, while it exists in the blood, the less circulation there is of it the better; and this explains the remedial influence of—1st. The diminution of the heart's action; 2nd. The diminution of the aeration of the blood. We now have to consider that part of the remedial process which is assigned to the alimentary canal.

Were it only necessary to relieve the congestion consequent on the abnormal condition of the thoracic viscera, we might regard the profuse evacuations of the alimentary canal as an obvious method of relief; indeed, in certain structural obstructions of the heart's action, we use the elaterium to afford relief by producing similar evacuations, but in cholera we have by this a direct elimination of the poison itself, which, when eliminated, results in a gradual restoration to health.

The most direct proof that the elimination of the poison is really effected by this process is the fact that the drinking of water contaminated with the excretions is capable of giving the disease to any number of people who swallow it.

If, indeed, the poison of cholera is of such mortal tendency that the thoracic viscera cannot safely perform their natural functions, we need not be surprised if a perfectly abnormal duty should be assigned to the alimentary canal, and such, in fact, is the case. Instead of performing its natural function of elaborating fresh material for the supply of the waste of the system, it is wholly and energetically engaged in throwing off the poison from the system.

Now, if the disturbed functions of the thoracic viscera have given rise to fallacious analogies, we may expect to find that the function imposed by cholera on the abdominal viscera would be likely to create equally erroneous impressions, and such is the fact.

Analogies, suggested by some resemblance to the symptoms of all kinds of abdominal disorders, have been freely used, and on them blunders in practice have been engendered wholly at variance with that suggested by the observation of Nature.

For example, the liver has been supposed to be at fault because its secretion is absent from the excreted fluid, while, on the hypothesis here advanced, it would be difficult to assign any possible reason for its presence.

Discussions are also entertained as to whether the process of elimination is to be restrained or urged. This question appears to me to be simply idle and puerile, the truth being contained in the following aphorism:—The diarrhœa of a cholera patient is exactly equal to the poison to be expelled.

So far from the diarrhœa of cholera having anything in common with that of typhoid fever, dysentery, or any local disease, it may be reasonably argued that there is nothing the matter with the intestinal canal at all, except that it is undergoing a reversed action incidental to the accident of the patient being poisoned. My meaning may be illustrated by advertence to the fact that there is certainly nothing the matter with a locomotive engine which, with reversed engines, recedes from, and thus avoids a fatal collision with, an unexpected obstacle, although its arranged business was in the opposite direction; and, to carry the mechanical illustration further, I would suggest that those who interfere with a diarrhœa, so exactly regulated by a natural process, resemble that engineer who, being intrusted with the management of a steam engine furnished with that remarkably ingenious device the self-acting valve, fastened it, with such a result as might be expected.

A mere abstract of all that should be said upon this subject need only be advanced here, and I will only add that, when the poison is expelled, the mechanism of reaction from the state of collapse is carried on by the absorption of water into the blood-vessels, and by the action of vomiting which supplies the place of the *vis a tergo*, but which in the normal circulation of the blood is supplied in another way.

With such a distinct and consistent theory as this to guide us, I believe as satisfactory a course of treatment may be pursued in cholera as any whatever known in the practice of Medicine, not excepting even such remarkable exhibitions of skill as are evinced in the treatment of syncope from all its varied sources, or the best understood mechanical injuries where no mistakes whatever are made—never forgetting that the worst cases of all diseases and injuries are inevitably fatal.

In the clinical treatment of cholera that which most contributes to the recovery of the patient is attention to all those circumstances which most refresh him—the free use of iced water, the most grateful of all, and which, while it assuages a marvellous thirst, requires no digestive power, which is utterly absent. Seltzer water is also free from objection. Strict attention should also be paid to the feelings of the patient with regard to temperature. It is most unwise to submit him in any way to disagreeable heat, which materially adds to his sufferings and danger.

These views are the result of much experience, observation, and reflection, and are founded upon the facts revealed to the writer by all the epidemics of this country, including that of 1832, upon all of which occasions he had the charge of a cholera Hospital.

41, Great Marlborough-street.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

◆

THE LONDON HOSPITAL.

CASE OF CHOLERA—DEATH—AUTOPSY.

(Under the care of Dr. HUGHLINGS JACKSON.)

The following seems to be a well-marked case of cholera, and is the second admitted into this Hospital in one week. Moreover the case was one rapidly fatal, being only of nine hours' duration. We number this case as the second; the first we reported last week.

Mr. J. N. Radcliffe accompanied Dr. Hughlings Jackson to the Hospital several times, and took great interest in the cases. Dr. H. Jackson said he felt much indebted to him for several valuable suggestions.

For the following notes we are indebted to Dr. James Jackson, Resident Medical Officer:—

Case 2.—Wm. C., aged 53, a crossing-sweeper, was brought by two policemen to the London Hospital on Friday last, at 10.30. This man was at his work on the same morning, and about 7 a.m. he was purged, but would not leave his work. At length, however, he was so bad that he was obliged to give it up. He went and lay down on a dunghill. He was found by the police at 9 and was brought to the Hospital. When carried in he was in collapse; his surface was cold, tongue cold, breath cold, skin dark, lips blue; pulse full, and 120. His voice was feeble, but was not much altered, and he was disinclined to talk. He said his bowels had not been moved for "a long while," but he was wet, and when cleaned he soon wetted the bed again by fluid colourless motions. He asked for drink, raised himself up, and drank greedily of cold water. He had had cramps, but "not long." Severe cramps in the legs came on soon after he was brought in, and caused him much distress. Mr. Frederick Mackenzie took the temperature in the right axilla with great care; it stood at 95°. The patient's respiration was very quiet, but was increased in frequency.

Dr. Hughlings Jackson ordered the patient to be put in a well-ventilated room, at the top of the Hospital, by himself, and directed that an extra nurse should be employed solely to attend to him. The head nurse of George's Ward also seldom left him. The man occasionally passed watery evacuations, and these were of the characteristic rice-water kind. He was directed to have as much water as he could drink, and a mixture of sulphuric acid and peppermint-water was prescribed. Hot bottles were applied to the feet. Four ounces of brandy were ordered. Dr. Hughlings Jackson also ordered injections of hot water.

Dr. Hughlings Jackson saw him again, with Dr. James Jackson, at 2 p.m. The patient was worse. His skin was more dusky, his eyes more sunken, and his pulse was 136. He was more restless, moaned, and breathed more quickly, but there appeared to be no respiratory distress. His feet, however, seemed to be warmer, although, from his restlessness, he had not kept them to the hot-water bottle. The temperature in the axilla was 97½. He had had but four motions since eleven, and had not had one for an hour. He had had no vomiting from first to last, but had felt sick. He had had no cramp for an hour, and had not for some time complained much of thirst. He had only taken about one drachm of the diluted sulphuric acid, and but an ounce and a half of the brandy. The injection of hot water did not relieve him, and was therefore discontinued, after it had been given four times, on account of the trouble it caused the poor fellow.

The patient died at 3.45. Well-marked muscular twitchings were observed after death.

The post-mortem examination was made soon after death by Dr. James Jackson and Mr. F. M. Mackenzie. Dr. Hughlings Jackson, Dr. George Johnson, of King's College, whom Dr. Hughlings Jackson had asked to come, and Mr. J. N. Radcliffe, were present. Great attention was paid to the condition of the heart and lungs. Both sides of the heart contained dark blood, and this blood, it was observed, seemed to be more fluid than usual. It, however, soon clotted after exposure. It was observed also that the right side of the heart contained much more blood than the left, and the pulmonary artery was full, while the pulmonary vein contained scarcely any. The lungs occupied little of the thoracic cavity, notwithstanding that they were emphysematous. Wherever they were cut into they were found to be dry and anæmic. The right lung weighed seven ounces, the left six. (According to Gray, the right lung usually weighs twenty-two and the left lung twenty ounces.) The anæmia seemed to be as well marked at the bases as at the apices. The small intestines contained throughout a large quantity of creamy-looking matter, which, under the microscope, seemed to consist of little else than epithelium. There was a large quantity of fluid in them as well. The colon was empty. The gall-bladder was full of a dark fluid. There was no urine in the bladder. Dr. George Johnson drew attention to the fact that the fluid from the bowels when mixed with the black blood from the heart quickly gave it a red tint.

CASE OF CHOLERA PRECEDED BY NEGLECTED DIARRHŒA—TREATMENT BY ASTRINGENTS, FRICTION, WARM BATHS—RECOVERY.

(Under the care of Dr. ANDREW CLARK.)

Case 3.—John R., aged 42, was admitted Sunday, July 15, at 11 a.m. In the Physician's absence, Dr. James Jackson and Mr. F. M. Mackenzie, resident Medical officers, took charge of the case. To the courtesy of these gentlemen we are indebted for the notes of the case.

The patient lived at 2, Tenter-street, Tenter Ground, Spitalfields. He is a night watchman at some timber-sawing works by a canal near Bow-road. His home was in a court, in which court seventeen people lived; there was but one privy in it. No other person in this court had (up to July 17) any diarrhœa.

He had been subject to some diarrhœa every year, as far back as he can remember, and always in the summer, and never dared eat fruit or greens. On *Thursday last* at 7 a.m. he was taken ill with "cramps" in the stomach, and with diarrhœa. He kept at work until Sunday morning, and then becoming very ill, he fell down on his way home, and was picked up by the police, and was brought here at 11 a.m.

The surface was cold; lips and nails livid; skin, when pinched up, remained up; eyes sunken; urgent thirst; cramp in the legs; very restless; vomiting and purging; rice-water stools. The following was ordered to be given every hour:—℞. Acid. sulph. arom. ♏x.; æth. chlor. ♏xij; mist. acaciæ ℥ij.; camphoræ gr. ij.; decocti hæmatoxyli ʒss. Omni horâ s. In the first few doses of this mixture liq. opii sedativus was given, but altogether only 12 minims were taken. The limbs were to be rubbed briskly with flannel every hour. Brandy, eggs, and milk were also given. He was placed in a well ventilated room with a fire.

An hour later further observations were recorded. Pulse 124, very weak and thready; temperature 93½, yet he says he feels very hot. He has had two stools, rice-water. Perspiration and saliva acid. Has retched, but has not been sick since 10.

1 p.m.—One motion since last report; less livid; respiration 20; temperature 95½; pulse 98; no cramps nor vomiting since 11.

It is not necessary to give the full reports of the various notes taken nearly every hour of the day; it must suffice to add the following particulars.

At 8·15.—Pulse 98; temperature 95½; respiration 14. At 9 he was put in a bath (110°) for ten minutes. He said he liked the bath, and his pulse improved in volume, and there was no faintness.

11 p.m.—Sleeping; pulse 94; temperature 98¼; respiration 12; no motion since last report.

2 a.m., Monday.—Sleeping; colour of surface much better; he had one motion at 12; temperature 98.

At 9 a.m. (Monday) much better; had slept well; it must suffice to say that at this time the patient may be considered convalescent. He made no water until Tuesday.

CASE OF CHOLERA—FAVOURABLE PROGRESS.

(Under the care of Dr. HUGHLINGS JACKSON.)

Case 4.—William S., aged 25, a sailor five weeks home from sea, 5, St. John's-hill, Ratcliff-highway, was brought to the Hospital on Tuesday, July 17, at 12 a.m.; collapsed, blue, pulseless; temperature 95; respirations hurried.

In the Physician's absence, Mr. F. M. Mackenzie treated the patient by brandy, friction, and the astringent mixture given in the last case. The patient was seen by Dr. Hughlings Jackson in the afternoon, but as the man was better the same treatment was persevered in.

Wednesday.—It is impossible to report the gradual progress. The patient seems doing well; he feels better, but has an occasional stool; he is still taking the astringent; he has not passed any water since admission.

Thursday, 2 p.m.—This man, it is believed, is now convalescent.

FOURTEEN CASES OF CHOLERA.

(Under the care of Dr. FRASER.)

Since reporting the above cases seven cases have been admitted, and we find it almost impossible to obtain or to report full details of them. The resident officers, Dr. James Jackson and Mr. F. M. Mackenzie, are extremely assiduous in watching the patients, and we feel much indebted to them for their kindness in finding time to give us the following particulars, although they are necessarily scanty:—

Case 5.—Eliza T., 32, living at 14, James-street, Cannon-street-road, Commercial-road, admitted 4 p.m., Tuesday, with severe cramps, rice-water purging, and a condition approaching that of collapse. She began with diarrhœa, also sickness at 11 a.m. It is important to remark that this woman is suckling. Her milk is not suppressed.

Wednesday.—This patient is decidedly better in every way, but has not yet passed any urine. She was treated by friction to the cramped limbs, and by the internal administration of sulphuric acid and water; mustard plaisters to the calves and to the loins.

Thursday, 2 p.m.—Doing very well

Case 6.—Louisa L., 53 (4 p.m., Tuesday), 5, Chapel-street (a street near the one from which Case 5 was brought). Griping, rice-water stools, vomiting, and collapse; pulseless; temperature 93; respiration 34; urine suppressed. She began with diarrhœa and sickness at 11 a.m. She was treated by the astringent mixture, brandy, eggs, milk, friction.

Thursday, 2 p.m.—Doing well.

Case 7.—Elizabeth S., aged 40, 14, Ann-street, St. George's-in-the-East; brought in at 11.30 p.m., Tuesday, in collapse. Diarrhœa began at 4 p.m. Frictions, sinapisms. Astringent mixture.

This patient was suckling, and the milk continues to flow.

This patient died on Wednesday, 7 p.m.

Case 8.—George P., 26, 15, Star-street, Commercial-road; admitted on Wednesday, 9 a.m. Diarrhœa began at 3 a.m. Loss of voice, rice-water purging, pulseless; blue lips; urine suppressed. Treatment as in the other cases.

This patient died 2 p.m. same day in collapse.

The autopsy was made by Dr. James Jackson and Mr. Dove. The right side of the heart contained a good deal of dark fluid blood. The left ventricle was empty, and its walls were firmly contracted. The lungs weighed, one 20 oz. and the other 16 oz.

Case 9.—Samuel B., aged 38; Albany-road, Old Ford. Admitted Wednesday night. Violent cramps, purging, lividity, rice-water stools. Treatment as in the other cases.

Case 10.—A boy, aged 2, who had been transferred from the Surgical side to the care of one of the Physicians for measles, was attacked at 9 a.m. on Wednesday by sickness and diarrhœa. At 9.30 he had convulsions, and died at 10. Another child in the same ward also suffering from measles was attacked at the same time, and is still (Thursday) very ill.

Case 11.—William M., aged 16, of 52, Boston-street, Hackney, was admitted at 10 o'clock on Wednesday with diarrhœa, vomiting, cramps, and purging of a light lemon colour and quite watery. Sinapisms, astringent mixture, brandy, etc.

Thursday, 2 p.m.—Still very ill.

Since these patients were admitted seven other cases have been taken in up to Thursday 2 p.m. One of these patients was dead when brought in. The following particulars were hastily supplied to us by Dr. James Jackson, the resident officer:—

By occupation a sailor, name unknown, went to the Black Boy Hotel, Smithfield, on Sunday evening in good health, and was seen by the landlord at 12 o'clock last evening, when he wished the landlord good night, and left apparently quite well. At 6 o'clock this morning he was found suffering severely from cramps in the stomach and legs. A doctor was sent for, who came shortly after and ordered hot bottles to the feet and friction. The patient was brought to the Hospital dead at 11 a.m. Muscular twitchings of the legs and arms were seen after death.

One of the nurses was seized with diarrhœa early this (Thursday) morning. At 2 p.m., although very ill, it was believed that she would recover.

GUY'S HOSPITAL.

TWO CASES OF CHOLERA—ONE DEATH.

(Under the care of Dr. PAVY.)

[For the notes of the following cases we are indebted to Mr. H. G. Shorter.]

We give below the cases of a child, who died, and of the child's mother, who was doing well at the last report.

Ann L., aged 27, residence 21, Hosier-street, Deptford, admitted in Esther Ward on Wednesday, July 18, at 4.40 a.m. The father arrived from Dieppe on Thursday last, and was taken ill with pains in the back and stomach on Tuesday morning, which pains he attributed to cholera; he gradually got much worse, suffering great pain in the stomach, and died in a barge on the Thames about 9 o'clock on Tuesday evening. His wife and child (the patients) were with him in the barge during the day, and when he died. His wife was taken ill the same evening at 10 p.m., and the Doctor ordered her to apply for admission into the Hospital, and both she and the child were admitted on Wednesday, the 18th inst., at 4.40 a.m., into Esther Ward. The child Ann L., 2 years of age, was taken ill on Tuesday evening at 7 o'clock, and during the time she was ill had violent purging, watery evacuations, and much vomiting, and at times screamed out with pain and seemed to suffer greatly with the cramp. The child died at 5 o'clock. The woman has been very sick ever since she has been in the Hospital, and also previous to her admission, and complains of great pain, of "cramp" in her legs and pains in her back, and, both previous to her admission and up to the present time, has passed a watery evacuation of a "dirty-rice colour, which runs wonderfully fast from her. 5. a.m.—Seems very restless and sick, but not vomiting much. Ordered mist. effervescens. Pulse 150. 7 a.m.—Seems easier; not so restless; complains much of pains in the back and legs; pulse 132, intermittent; not much pain in the abdomen; thinks she is easier if she lies on the right side; tongue white and furred; pupils contracted; complains of great thirst. 11 a.m.—Pulse 120; very restless; since her admission has had two motions, which are of a very watery character; still continues to retch, but does not bring up much. 12 a.m.—Pulse 125, irregular; slightly better, seems more comfortable. 1 p.m.—Pulse 130; very feverish; complains of great thirst.

July 19, 11 a.m.—Still doing well.

Autopsy on the Child Nine Hours after Death.—Body well nourished. Heart contracted; little or no blood in either auricles or ventricles. Lungs healthy; anæmic on the surface, but on opening the pulmonary artery and veins an average amount of blood in a fluid state was found. The blood coagulated very slightly after the body was opened. Liver and spleen gorged with blood. Stomach distended with air and containing no fluid. On opening a portion of the small intestine the contents were found to be acid. The intestines, being kept for further analysis, have not yet been thoroughly examined.

About a fortnight ago a cholera patient was admitted into Clinical Ward under Dr. Wilks' care. This patient recovered.

ST. BARTHOLOMEW'S HOSPITAL.

CASE OF CHOLERA—DEATH—AUTOPSY.

For the particulars of the following case we are indebted to Dr. Andrew, the pathologist to the Hospital.

Wm. B., aged 20, a drover, of intemperate habits, was taken in by Mr. Wood. The patient for the last few days had been engaged in driving cattle from the docks to the cattle market, and had been on board several cattle boats. On Saturday and Sunday, the 14th and 15th instant, he suffered from diarrhœa; and on the morning of Monday, the 16th, at 4 a.m., he was attacked by vomiting and cramps. He was brought to the Hospital about 11 a.m., and died at 6 p.m. The treatment consisted of calomel and opium, acetate of lead and opium, and iced water. About half an hour after his death, the right arm was seen by the sister of the ward to be raised to the side of the head, and again replaced by his side, and the pectoral muscles of the same side were also observed to quiver for some minutes. The body, which at the time of his death was blue and livid, gradually assumed a more natural appearance. When the examination took place, there was nothing in any way unusual in its external character.

Autopsy next day at 12 *midday.*—A considerable amount of livor mortis posteriorly and on the lower extremities; body fairly nourished; pupils natural; rigor mortis well marked; muscles dry, but of natural colour. On opening the thorax, the lungs collapsed, so as to occupy about two-thirds of the pleural cavities. Pleuræ: In the right there were old firm adhesions over the upper lobe. The serous membrane in both was dry and sticky to the touch. Lungs: Weight—right, 15 oz.; left, 15½ oz. At the right apex was some obsolete tubercle. Both the pulmonary arteries and the pulmonary veins contained a considerable quantity of blood. The tissue of the lungs posteriorly was somewhat congested. Trachea and bronchi: The vessels in the mucous membrane were minutely injected with blood, the congestion extending down into the smaller ramifications. The smaller bronchial tubes contained a little mucus; bronchial glands natural. Pericardium contained at least half an ounce of clear serum. Heart, 9 oz: Both the right and left cavities contain a considerable quantity of semifluid blood; valves all natural; muscular structure rather soft, and nowhere in a state of rigor mortis; the internal surface of the left ventricle, and, but to a less extent, that of the right, mottled by numerous small ecchymoses. Abdomen: No tympanitic resonance anywhere. The surface of the peritoneum is fairly moist, and the blood vessels in the walls of the small intestine are somewhat congested. Spleen, 5½ oz., a little soft. Liver appears to be slightly œdematous; in other respects natural; no morbid appearances detected by microscope. Gall bladder contains a considerable quantity of seemingly healthy bile, which passes readily into the intestine. Kidneys: Left, 4½ oz.; right, 4 oz. Their capsules are adherent, leaving the surfaces granular. On section, they are found to be congested. Under the microscope, the contents of the tubules were seen to be very granular. Bladder contains about two ounces of clear urine; its mucous membrane is slightly congested. Infra-renal capsules natural. Alimentary canal: Œsophagus natural; the submucous glands are slightly enlarged. The stomach and intestines contain a large quantity (not less than a gallon) of a brownish-white fluid, tinted with small shreddy flakes. In the stomach it was thinner than elsewhere, and of a faintly acid reaction; in the large intestine it was alkaline, of thicker consistence, and of an offensive fæcal odour; in the duodenum it was slightly tinged with bile. No trace of ordinary fæcal matter was found anywhere. The mucous membrane of the stomach, except a small white softened patch at the cardiac end, was natural. Throughout the small intestine, beginning immediately below the pylorus and extending to the very edge of the ileo-cæcal valve, the solitary glands and Peyer's patches were enlarged, of a bluish-white colour, hard and shotty to the touch. This change was least marked in the middle third of the intestine. There was no increased vascularity round the affected glands. The solitary glands in the large intestine were also slightly enlarged. Mesenteric glands natural. Head: No abnormal appearance, except that the dura mater was firmly adherent to the skull-cap along the line of the longitudinal sinus, and the arachnoid here and there was somewhat opaque. Blood: It was throughout semifluid, containing numerous minute shreddy clots, which became apparent when a little of it was thrown into water; its colour, at the first dark, became rapidly brighter on exposure to the air.

Since this report was printed we have learned that a man, 52 years of age, has been admitted for well-marked cholera. He was brought from Blackfriars, and had lived in a barge. Shortly before going to press we learned on inquiring of Mr. Wood that the patient was doing well.

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Medical Times and Gazette.

SATURDAY, JULY 21.

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M. WORMS ON CHOLERA.

M. Worms, the principal Physician of the Hospital of Gros Caillou, has recently published an important pamphlet, entitled "*Note sur la Période de Réaction consécutive à l'Accès du Choléra Epidémique*," the principal object of which is to call the attention of Practitioners to the nature and cause of the phenomena which commonly succeed to the fully developed disease where not of itself fatal, and especially to the pathology and treatment of the somnolency which ushers them in. The earlier portion of the paper is occupied, however, by a brief exposition of his views as to the pathology of the primary disease, in which he avails himself not only of his own large experience, but of the precise observations of Drs. Buhl and C. Schmidt. We must refer first to these introductory remarks. M. Worms draws attention, amongst other phenomena, to the initiatory diarrhœa, and, during the stage of collapse, to the modification which the reflex function of the nervous system suffers, as shown by the failure of titillation of the nostrils to produce sneezing, and that of sprinkling of cold water on the surface of the body to produce any contraction of the skin. Among the post-mortem conditions, he notices the odour of the body as resembling that of valerian, and that a similar odour is manifested on distillation of the dejections; the general epithelial desquamation in the intestines, and the very great increase in the blood of the proportion of white globules; the gorged condition of the venous system, and especially the venous congestion of the brain, and the existence of liquid secretion in greater or less quantity in the digestive tube. He notices the great loss of fluid and salts undergone by the blood, and the fact that the principal saline loss takes place through the intestines, the dejections containing 8 grammes of salts in the 1000 of water, while the proportion in the vomited matters is only 2 grammes to the 1000 cf water. Regard tn this fact should, he thinks, lead to our considering the intestinal evacuations as of greater importance than the vomitings. With Liebig, M. Worms considers that losing thus its chlorides, the blood loses with them its faculty of producing urea, and, becoming denser and denser, becomes less and less readily circulated. "Organic life at this stage of the disease has, so to speak, ceased; organic decomposition goes on without restitution, the blood has almost entirely assumed the venous character," and the production of caloric becomes too little to make up up for that thrown off by radiation. M. Worms' view of the nature of the choleraic poison is that it is an alkaline ferment, the action of which is facilitated by all those circumstances which retard a complete oxidation of the blood, or which contribute to surcharge it with hydro-carbonaceous products, and impart to it a venous character.

The two great systems which are the source of the development of choleraic poisoning are the sanguiferous and the digestive, and M. Worms considers that of these the blood is the first to suffer, and that the disturbances of the digestive system are secondary to the alterations which this fluid undergoes. One reason which he assigns is, that the fœtus *in utero* may be attacked with cholera, and that then we constantly find the intestines filled as in others with the specific exudation. He thinks that the same conclusion is indicated by the ordinary gradual development of a choleraic attack, which is usually preceded by *prodromata*, during which precursory period a slow and progressive infiltration of the intestinal tissues and follicles takes place, preparing the way for the discharge of the watery constituents of the blood. The more feeble the cause of the poisoning, and the slower its operation, the longer will be the duration of the precursory phenomena, and the stronger the poisoning the shorter the preparatory process will be.

M. Worms thinks that the action of the choleraic poison exhausts itself upon the system in this *hydrorhagia*, and hence when organic life, suspended during the choleraic attack, is about to re-appear, we have nothing more to do with the poisonous principle of cholera, but only with the disorders the foundation for which it has laid. Instead of calling the period consecutive to the attack the period of *reaction*, he prefers calling it the stage of *restitution*.

The view he takes of this period of restitution is much as follows:—During the suspension of organic life the products of decomposition of the tissues remain in place; when the algide stage passes off, that product which is the most readily accessible to investigation, urea, is more readily appreciable in the blood than previously, but the quantity found there is infinitely small compared with that which is found in the cerebro-spinal fluid, the spleen, brain, the muscles of the lower extremity, and in the heart. The cerebral tissue contains the most. A reversal of the flow of water as respects the intestine, so to speak, takes place, and fluid is taken up into the blood, and that which enters the portal venous system is immediately applied to the secretion of bile. He attributes the redness of those parts of the face which were previously cyanosed to the greedy absorption of oxygen by the globules of the blood. In cases where the reaction has followed upon an algide stage of short duration, in a favourable subject, the urine becomes more and more abundant, loses the albumen it first contained, and becomes more acid, while the urea increases, and all goes on satisfactorily. After severe attacks, however, some twenty-four or thirty-six hours from the setting in of reaction, alarming symptoms appear. The first of these is an irresistible tendency to sleep, and as the somnolency progresses, and the eyes become the seat of modifications to be pointed out presently, the pulse becomes slower, calorification becomes again lessened and unequal, and when the coma is finally established, the subject dies with a return of collapse and cyanosis, or succumbs to a kind of nervous exhaustion, or else to a paralysis of respiration, which manifests itself in very visible efforts of the muscles of the chest. "Whenever at this period the Physician can perceive at a distance from the bed the sound of the patient's respirations, he may expect to lose him in a very short time." Should the somnolency happily pass off, other phenomena become apparent; the circulation becomes more active, warmth returns, and a characteristic pyrexia occurs, with a variety of adynamic symptoms which we need not describe, but almost without exception terminating with an eruption like measles or scarlatina, followed by desquamation.

Now, these two conditions, somnolency and the state of consecutive fever, are, in the view of M Worms, two quite distinct phases of the process of reaction, which observers have, as he considers, improperly confounded together under the term "typhoid state," "choleraic typhoid," and "the period of uræmic coma." He thinks that they should be carefully distinguished as to their nature, and no less as to their therapeutical indications. And this is the principal object of the paper.

The characteristic somnolency is mostly accompanied neither with fever nor any particular amount of thirst, nor yet with any notable alteration of the appearance of the tongue, and hence he thinks it has scarcely any analogy to the typhoid state. Neither is it to be confounded with the somnolency peculiar to the comatose pernicious fevers, or with that which terminates fatal dropsies, in both of which cases the coma sets in all at once, while here the patient loses the power of comprehending and answering questions very gradually. The absence of every phenomenon of nervous or circulatory disturbance, and the slow march of the affection, absolutely exclude all idea of uræmia. A remarkable accompaniment of the somnolent condition is a bloody redness of the whole of the conjunctiva, but M. Worms has discovered a still more certain guide to the probable severity of the reaction in a sign which precedes other indications of reaction; and this is, that the globe of the eye becomes hard and decidedly protuberant. Soon after this the patient looks vaguely, as if he were drunk, and the upper eyelid remains lowered, as if it yielded to the pressure of a considerable weight. On examination with the ophthalmoscope an enormous venous development is observed at the bottom of the eye. The cause of this condition of somnolency, and also of the peculiar condition of the eye-ball, M. Worms considers to be an excess of the reparatory process, the carotid sending blood in great abundance to the brain while the venous system is yet gorged. After death, in such a case as this, he has found a turgescent condition of the brain with serous effusion not only between the convolutions, but between the brain and its osseous enclosure. Besides this he has found the humours of the eye, especially the vitreous humour, both more abundant and less constant than usual. Therapeutically the means of relief were to be looked for among those remedies which were calculated to promote lymphatic absorption, and M. Worms considers that he has found a successful method of treatment in the use of the following lotion applied in the form of a tepid epithem to the frontal region of the head, previously removing as much of the hair as is necessary:—Camphorated spirit 150 grammes, solution of ammonia 20 to 25 grammes, infusion of arnica 100 grammes, and hydrochlorate of ammonia 45 grammes. Forty-eight or seventy-two hours of this application usually suffice, but sometimes it has to be continued for eight or ten days. Out of 65 severe cases of reaction he has been successful with this remedy 51 times.

When this phase of the reaction has passed away the typhoid phase appears, which he is willing should be called the uræmic stage, if that term be qualified as meaning a febrile process having for its cause and end the elimination from and by the blood of the organic *detritus*, of which urea is the most readily appreciable representative. M. Worms adds that possibly other means might be successful in combating the somnolency, such, for instance, as venesection, a remedy which he has hesitated to adopt. He says also that with the fomentation to the head he has used blistering of the lower extremities, the use of warm moderately aromatic drinks and sulphate of quinine, sometimes also nitrate of potash.

Lastly, he gives his general testimony in favour of sulphuric acid lemonade as the most effectual remedy, not only in the premonitory diarrhœa of cholera, but in the early stages of the confirmed attack. Many of his patients have taken in twenty-four hours as much as from 5 or 6 to 10 or 12 litres of it without any succeeding evil results. He also adds—and this is very worthy of being noted—that all his cases in the Imperial Guard were treated in an isolated building, that all the dejections were received into covered vessels, where they were immediately disinfected with a strong solution of sulphate of iron, and that the linen was at once exposed to the action of boiling water. To these precautions he attributes the complete freedom from attack of every one engaged in attending upon his patients, and the fact that among 250 other patients that the Hospital held at the time only six or seven cases of cholera occurred.

A short paper has also been published by Dr. C. Searle, formerly of H.E.I.C. Madras Establishment, termed "Cholera: its Nature, Cause, and Treatment, Simply, Scientifically, and Practically Explained." We need not say much about this. Dr. Searle's object is to laud the method of treatment by calomel, which he considers the direct antagonist of the choleraic poison, and which he recommends to be given in the earliest possible stage of its operation, and, when it can no longer be given in any other way with any chance of absorption, to be introduced into the system by fumigation. We can only add that we should be very sorry to be subjected to the method of treatment laid down by Dr. Searle were we ourselves to be unhappily attacked with the symptoms of cholera.

MEDICAL CERTIFICATES OF DEATH.

At the last moment before going to press our attention has been directed to a suggested modification of the present system of registration, with a view to remedy certain defects which militate against a perfect return of the causes of death.

In his letter to the Registrar-General on the diseases, etc., of 1864, appended to the Annual Report just laid before Parliament, Dr. Farr points out with great perspicuity and candour the faults of the existing *modus operandi* of Medical certificates and registration, and recommends various amendments for the purpose of improving the returns.

For the present we can only refer to two or three points which seem to concern the Medical Profession most intimately, and we think it necessary to lose no time in bringing them under the notice of the class whose co-operation is indispensable if any reform is desired.

We are, of course, bound to accept the statement that "thousands of deaths occur without any scientific inquiry into the cause of death;" and we may also give a qualified assent to the position that "in thousands of other cases Medical science seeks in vain to unravel the mystery which enshrouds the extinction of life."

Like all other sciences that which we follow is far from perfect, but it is making rapid progress, and every year adds some victory to the Physician or Surgeon over a disease or injury which was before unconquered. So that whatever imperfection exists in the returns of the causes of death which is attributable to imperfect diagnosis of disease will necessarily be diminished as science advances. That a considerable percentage of deaths in remote districts are still uncertified is matter of regret, and the deficiency of Medical attendance on the poorer classes of the population must be supplied before any improvement in the ratio of uncertified deaths can be effectually established. In London 97 per cent. of the deaths were certified, and only *one* per cent. of the deaths was returned as happening to a person left without Medical advice; but in the remoter parts of Wales, as well as in some English counties, the Medical man lives at such a distance as to be absolutely beyond the reach of large numbers of the people, and hence many uncertified deaths are returned.

Dr. Farr warmly acknowledges the support which the Medical Profession has freely given towards overcoming the many difficulties connected with the registration of causes of death on a uniform plan throughout the country, and he frankly says that "under the present administrative arrangements little further progress can be made." The urgent need of improvement is therefore discussed on the plane of legislative amendments of the Act now in force, and it must be admitted that a very strong case is made out against leaving things as they are. The possibility of fraud arising from the fact that there is no check on the veracity of informants of death, no actual identification of the body, with the particulars registered, and no certain means of detecting fictitious entries in the registers in cases where the informant is unable to check the record himself, has led to this anomaly—that while the Act expressly declares that a certified copy of an entry sealed at the General Register Office shall be received as evidence of death, the Bank of England, nevertheless, refuses to accept such certificate. As long as the law recognises informants who are so ignorant as to be unable to read or write, and does not insist upon proof of the identity of every person registered, so long will it be possible for unscrupulous registrars to manufacture fictitious entries, as was done in Marylebone, Liverpool, and South Shields in past times.

Imperfect registration not only vitiates the evidence which the registers ought properly to afford as affecting property, and the use of the records for scientific induction; but, what is of greater importance, it deprives human life of a most powerful safeguard. If no body had been allowed to be buried without a certificate from a legally qualified Practitioner, such cases as the Essex and Norfolk poisonings could hardly have occurred and not only secret murder and attempts on life, but also deaths of old people and young children from neglect, could rarely have escaped detection.

It not unfrequently happens that deaths occur which are publicly known, but no qualified informant such as the Act requires being forthcoming, they go unregistered. Violent or accidental death, where no crime is suspected, goes unregistered when, from considerations of expense, an inquest is dispensed with. Nobody, perchance, was present at the death, and so there is nobody qualified to sign the register-book as informant.

To remedy these defects, Dr. Farr proposes certain alterations in the law to enable the Registrar-General to amend and extend the system of Medical certificates which has for many years been in partial use, and to prevent the burial of any body without the Registrar's certificate as a warrant to the burying officer for the interment, in conformity with the general practice on the Continent.

The amended Medical certificate would testify that the Medical attendant *had seen the deceased on the day of death, or had seen the body subsequently for identification.* No penalty would attach to the refusal of the certificate by a Medical man, who would have the option of declining to give it if the family objected to pay him whatever fee he thought proper to charge as a remuneration for his trouble. It is hardly likely, however, that any difficulty would result from this arrangement between a family and their regular Medical attendant. For pauper patients the Poor-Law Medical Officer should be entitled for his certificate to a fee fixed by the Commissioners.

In all cases of death without Medical attendance, or where the Medical attendant refused to certify, an officer should be specially appointed in every district, whose duty it would be to visit the body, and, if all was clear and admitted of satisfactory determination, to certify the probable cause of death to the Registrar, who would upon his receipt register the death and issue his certificate for burial in the usual course. This Registration Medical Officer would have the power of withholding his certificate, if there was any suspicion or obscurity in the case, until an inquest had been held or refused by the coroner, whose inquiry should by no means be superseded. He should be specially qualified to conduct post-mortem examinations, and on being summoned might appear as Medical witness at the inquest. In districts where there is a Health Officer it might be convenient to combine the duties of Registration Medical Officer therewith, and thus we should acquire an organisation which might be turned to most valuable use in sanitary and other important public matters. We are glad to find that Dr. Farr disclaims any desire to substitute the certificate of this new functionary for that of the family Physician, and that he only proposes his intervention in cases where otherwise there would be no Professional witness to the cause of death. The prohibition of burial of the uncertified dead would occasionally give rise to inconvenience, which would be obviated by the establishment of decent dead houses, especially for poor families in towns. No still-born child should be allowed to be buried until it had been seen by the Registration Medical Officer, whose certificate alone would authorise its burial without funeral rites. He would keep an account of all still-born children, which should not appear in the Registrar's returns, as those ought always to be confined to the record of persons born alive.

Such is a hurried *résumé* of the principal suggestions put forward by Dr. Farr for the improvement of the national registers. All that we can say about them at present is that no one has a greater right to be heard on such matters than himself; and speaking as he does from some twenty-eight years' experience of registration, there is every probability that his recommendations will stand the test of thorough investigation.

The interests of the Medical Profession are certainly not opposed to those public ends which Dr. Farr has evidently a sincere desire to promote.

THE WEEK.

CHOLERA IN THE LONDON HOSPITALS.

UNFORTUNATELY there can now be no doubt that Epidemic Cholera has appeared in London. Last week our Hospital reporter supplied us with the particulars of the case of one patient who died in the London Hospital. We regret to be obliged now to report that since her death thirteen other cases have been admitted, and that altogether there have been five deaths, and of those under treatment several were in a precarious state at 2 p.m. to-day (Thursday). We hear also from this source that there have been several fatal cases in the neighbourhood of the Hospital. A large ward has been set apart for the reception of cases, and it is filling pretty fast. Very prompt measures have been taken to ensure careful treatment and attention to each case. Many extra nurses have been appointed, and in addition to the present resident Medical staff two other Medical men have been appointed. We regret to have to report that one of the nurses, a young active woman, who had been very assiduous in her attention to the cholera patients, was seized with diarrhœa and other symptoms of the disease early this morning; but our reporter was informed this afternoon at 2 p.m. that she was doing well. One patient was brought in dead. Our Hospital reporter has also made special inquiries at the other large Hospitals. No case had been admitted into University College Hospital on Wednesday afternoon, and none into St.

George's or the Westminster on Thursday morning. A drover died of cholera in St. Bartholomew's Hospital on Monday, and a second case was admitted into that Hospital this morning. For details of these cases we refer our readers to our Hospital Reports. It is perhaps needless to dwell on the necessity of attending to premonitory diarrhœa in a Medical journal; but some of the poor patients have sadly neglected this warning. Several of the patients who have died had had diarrhœa for a day or more before alarming symptoms came on.

WIGHT *v.* WIGHT AND FIELD AND FIELD.

As Medical journalists we are not generally concerned with the proceedings of the Divorce Court; but our attention has been specially called to this case by the testimonial and letters we publish in another column. It appears from a careful review of all the evidence that Mr. Field has been simply dragged into the affair because he was a relative of Mrs. Field's, and her Medical attendant. Mrs. White's condition of mind necessitated her confinement in a lunatic asylum in 1861, and the reliable evidence in the case seems to us utterly inconsistent with the theory of the prosecution. We very much regret that the Medical witnesses for the defence were not called. Had it been otherwise there can be little doubt that the jury would not have separated without giving a verdict exculpatory of Mr. Field.

THE BRIGHTON TRAGEDY.

The jury summoned to inquire into the death of Alfred William Warder having again met and received evidence from Dr. Pickford that the brain presented no appearance of disease, and no fresh evidence of insanity being forthcoming, returned a verdict of *felo de se.* Warder's personal property is therefore forfeited to the Crown, and his body was buried at night in unconsecrated ground without any religious rite.

The inquest on the body of Mrs. Warder has also been resumed and concluded. The evidence of Professor Taylor showed that no poison, organic or mineral, was discovered in her body. Dr. Wilks deposed that with the exception of a high degree of congestion of the lining membrane of the kidneys, indicating recent inflammatory action, and some irritation of the tongue and œsophagus, the organs were all healthy, and exhibited no appearance which might account for death. The scientific evidence of poisoning was therefore simply negative, but unfortunately the moral evidence left no doubt on the matter. Professor Taylor seized on the fact that aconite had been confessedly administered by Warder to the deceased, and was found in his possession, to construct, with the ingenuity for which he is famous, a theory of poisoning by small doses of aconite, although some of the principal and distinctive symptoms of aconite poisoning were confessedly absent, and the symptoms which the poor creature exhibited might as well have been produced by half a dozen other poisons. Why do not toxicologists confine themselves to statements of fact? There is one point, however, on which we must correct Dr. Taylor. If the following report of a portion of his evidence, which we take from the *Brighton Examiner*, be a correct one, he has been misinformed as to Warder's Professional history :—

> "Dr. Taylor remarked that he knew Warder to have been a lecturer on Medical Jurisprudence. He lectured at the Grosvenor-place School on poisons, and perhaps no other man knew how to administer aconite either for good or mischief better than he. At the time of the trial of the poisoner Palmer, Warder was one of the 'school' who came forward to defend him."

Warder was the son of an officer of Chelsea Hospital. He was apprenticed to Mr. Godrich, of Chelsea, and was a pupil of St. George's Hospital and of Mr. Lane's School of Medicine. He was a somewhat distinguished student, and gained some prizes; but there were always a peculiarity and oddity about him, which led to his being known amongst his fellow-students as "Mad Warder." His conversation is described by a friend who met him in society as eccentric and disgusting to a degree. During a short time, whilst the school still belonged to Mr. Lane, Warder attempted to lecture on Forensic Medicine, but his teaching was a complete failure, and, as we are informed, he resigned from a feeling of his own utter incompetency. He left the school in the session 1853-4, and never entered it again. The school afterwards took the name of the Grosvenor-place School, and passed from Mr. Lane's hands. Palmer's trial took place in May, 1856, and of the sixteen Medical witnesses who appeared for his defence, two only were connected with the Grosvenor-place School. We need not add that Warder had nothing whatever to do with the case. We think that Dr. Taylor might find it an agreeable and courteous act to retract a statement which may wound some Professional friends, and can benefit nobody.

THE QUEEN *v.* TOOMER.

We doubt very much whether twelve women could have been found who would have convicted the man Toomer who was found guilty of a rape at the last Abingdon Assizes and sentenced to fifteen years' penal servitude. It is said that women are more harsh in their judgment of their erring sisters than are men, but we suspect that this may be partly due to their having a higher appreciation of a woman's power of resistance. Be this, however, as it may, there can be no doubt that before deciding on the guilt of a man accused of rape, the greatest caution is necessary in sifting evidence and in weighing circumstances. According to the evidence of Miss Partridge, the accuser, she remained alone with only one maid-servant in Toomer's house for weeks after she had found herself deceived by a false advertisement, and, as she asserted, for a week after she was ruined by him on June 6. She even took a walk with him on June 10. She refused to share her bed with the maid-servant on June 11, and left her bedroom door open. The following day, he having spent the night with her, she preferred a charge of rape against him—not, be it understood, for the offence of June 6, but for the second offence on the night of June 11. She was examined on June 12 by Mr. Maurice, the Surgeon to the Berkshire County Gaol, who, twenty-four hours after the alleged rape, failed to detect the slightest mark of violence; and yet a jury found the prisoner guilty! We thank the Medical men of North London who, by an opportune letter in the *Times*, first drew public attention to the flagrant injustice of this case.

FROM ABROAD.—REGULATION OF PROSTITUTION IN FRANCE—MEDICAL OFFICERS OF THE ITALIAN ARMY—PRIZE QUESTION ON EMBOLISM.

We are accustomed to talk of the regulation of prostitution in France as so well organised that we have only to imitate what is there done to secure a vast degree of immunity from the ravages of syphilis; but when the thing comes to be looked into it is remarkable to how small a share of the existing prostitution these regulations apply. This might indeed be inferred *à priori* from the fact that syphilis is as rife in Paris as in any of our large towns, although the class of persons from whom it is contracted may somewhat differ in the two countries, a great deal of the prostitution, which with us is barefaced and outraging by its shameless publicity, being in France carried on in a quiet, clandestine way among the female working classes. The Practitioners of Lyons, however, believe that police regulations do a vast deal in checking the prevalence of the venereal disease, and even went so far, in a discussion at the Medical Society, as to anticipate a possibility of extinguishing it by an increase in the sphere of their application. In the portion of the army stationed at Lyons such supervision has diminished the proportion of venereal cases from 1 in every 8 men in 1860 to 1 in 16 in 1866. M. Lefort, criticising the conclusions come to by the Lyons Society as far too sanguine, judging from his experience at Paris, admits the great efficacy of the system of Medical inspection in diminishing disease among the licensed prostitutes of Paris, and in rendering connexion with them comparatively safe. But while these amount in number to only 5000 or 6000, there are at least 20,000 other women in Paris who resort to prostitution clandestinely; and supposing that these could be retained within the police net, there would still remain numbers of workwomen, dancers, and the like, who would propagate the disease. And to bring these 25,000 women within the police regulations would involve such an amount of interference with personal liberty as would not be tolerated; and really the persons who expose themselves to the risk of infection have scarcely a right to claim these exertions to be made in their favour. All that the French Government professes to do is to guarantee the great comparative innocuity of the women found in the licensed houses, and that such guarantee is a real one is shown by the small number of cases of syphilis which trace their origin to this source. M. Lefort regards the propositions of the Lyons Society for the extension of this guarantee by a large extension of the system of inspection as quite impossible of execution. In Hamburg, where prostitutes are classed with a minuteness unknown elsewhere, the authorities acknowledge that any regulation of clandestine prostitution is beyond their power.

The Italian Government has just published the revised schedule of the rank and pay of the Army Medical officers. The President of the Medical Council, with the rank of Major-General, is to receive 9000 lire; Inspectors, to rank with Colonels, 7000; Chief Medical Officers (*Medici Capi*), to rank with Lieutenant-Colonels, 5500; Medical Directors (*Medici Direttori*), to rank with Majors, 4100; First and Second Class Medical Officers of Regiments, to rank with Captains, from 3100 to 2800; and First and Second Medical Officers of Battalions, to rank with Lieutenants, from 2000 to 1800. The pay is to be increased in every rank by one-fifth every five years until it has reached the amount of that of the rank immediately above it; and the computation of increase of pay is to be retrospective. It is the same pay that is given to the corresponding ranks in the Engineers.

The Imperial Society of Medicine of Bordeaux, believing that the subject of embolism, especially in relation to the sudden deaths of puerperal women, stands in need of further critical investigation, involving a searching examination of what has been written on the subject by the aid of new experiments and microscopic researches, offers a gold medal 500 francs in value to be adjudged at the end of 1867 for an exhaustive memoir on the subject, in which the proportions of sudden deaths due to emboli in different diseases, and especially in the puerperal state, are duly set forth. The essays, written in French or English, are to be sent in by August 31, 1867.

PARLIAMENTARY.—CAPITAL PUNISHMENT AMENDMENT BILL—POOR-LAW MEDICAL OFFICERS (IRELAND)—THE PROPOSED CHARTER TO THE QUEEN'S UNIVERSITY, IRELAND — THE POLLUTION OF RIVERS—THE METROPOLITAN WORKHOUSE HOSPITALS.

IN the House of Lords on Thursday, July 12,

The amendments to the Law of Capital Punishment Amendment Bill were agreed to.

On Friday, the same Bill was read a third time and passed.

On Monday, July 16,

Sir H. Bruce asked the Chancellor of the Exchequer whether he proposed to relieve the Irish poor-rates from the payment of Medical officers and the expenses of workhouse schools; and, if so, when.

The Chancellor of the Exchequer said the question put by his hon. friend referred to the circumstances which were brought before their notice by a motion of the hon. member for Meath. Having been in favour of that motion, he should certainly be ready to take all the steps that were necessary to afford the relief which appeared to be justly required. All he could do was to give instructions to that effect when the next Estimates were prepared.

A long discussion took place on the supplemental charter which the late Government proposed to grant to the Queen's University in Ireland. The granting this Charter was opposed by Sir Robert Peel and Mr. Lowe, and was defended by Mr. Gladstone and Sir George Grey. The debate was terminated by the Chancellor of the Exchequer, who assured the House that the subject should receive full and earnest attention from the present Government.

On Tuesday, in the House of Lords, the Earl of Shrewsbury gave notice that he should move for a Committee to inquire into the best mode of disinfecting sewers and preventing the pollution of rivers.

In the House of Commons,

Mr. Fawcett asked the President of the Poor-law Board, first, whether it was the intention of Her Majesty's Government to introduce during the present session any measure for improving the sick wards in the metropolitan workhouses; secondly, if not, whether the right hon. gentleman would state what could be done under the existing law, and explain exactly the means and powers which the Poor-law Board possessed for remedying the evils complained of; thirdly, he wished to know how Mr. Farnall and others whose duty it had been to inspect these workhouses had not made known the lamentable condition of these sick wards until attention was directed to the subject by non-official persons.

Mr. G. Hardy: In reply to the questions of the hon. gentleman, I beg to state, in the first place, that her Majesty's Government do not intend to propose during the present Session any legislative measure on the subject. I should think I was extremely rash if, during the very short time that I have had access to the official information of the Poor-law Board, I should undertake to introduce a measure of such importance at a time when the House could not possibly give it sufficient attention. I quite admit the present evil condition of these infirmaries throughout London, and of course the subject will receive my earliest attention. But if I had taken steps to introduce any great measure on the subject it could not have dealt with the present evils. With these evils I propose to deal under the powers, which I believe sufficient in the main, now possessed by the Poor-law Board, but which I believe have not always been sufficiently enforced. I trust with the assistance of the Boards of Guardians and the Medical officers we shall not be obliged to ask the Legislature to confer powers which have not hitherto been used, and that it will not be necessary to exercise powers under seal to compel the guardians to the proper discharge of their duties. It may be necessary that I should ask the House to give me one certain power intended to be conferred by the original Poor-law Act. The 25th clause of that Act was framed with a view to compel the alteration and enlargement of workhouses when required, but it was never once put into force in consequence of a proviso at the end of the clause to the effect that no parish should be charged with a larger sum than £50. Consequently, where several parishes were combined, one parish was enabled to put an end to the proposed alteration. To correct that defect I will ask the House to enable me to go to the extent of £500, with a view of enforcing such alterations as may be necessary. As to the powers at present possessed by the Poor-law Board, it has the right to seek for sufficient accommodation, to regulate the numbers to be accommodated in the workhouses, to prescribe how many beds should be in a room, and what amount of space should be afforded for each bed. If the asylums of the poor should be filled up to the highest point, it is then necessary for the guardians to find additional accommodation or to give relief to the persons for whom they have not accommodation out of doors upon a scale appropriate to the evils and sufferings of these poor people. It is in the power of the Poor-law Board to take care that there is efficient and sufficient Medical superintendence, and that the salaries of the Medical officers should be fixed at a proper sum. It is also in the power of the Poor-law Board to take care that there is sufficient nursing, by providing that there should be a suitable number of nurses, and also that proper salaries should be given to them. I say I think these powers have not been put in force, and I think I ought not to ask the House to legislate until I have tried them. I trust that the House will allow me a little time, now that I am wading through a vast mass of information, for I can assure hon. gentlemen that I am as desirous as the hon. member for Brighton or any other man to apply a speedy remedy. I came to this office without anything in the past to fetter my conduct. I don't wish to make any reflection on the past. I look forward simply to the future, and my endeavour shall be to bring the sick wards in the metropolitan workhouses into a proper condition. In the next Session of Parliament, I shall be prepared to state what course I may think proper to recommend with respect to any new legislation. The third question relates to what is past. I thought it right, when the hon. member wrote to me, to lay the question which he put, and which at that time referred to Mr. Farnall alone, but now takes in others also, before Mr. Farnall, and he has sent me a paper which, with the permission of the House, I will read. The paper is as follows :—

"As regards the proceedings of Mr. Farnall in reference to the metropolitan workhouses, he desires to refer to the many reports which he has made from time to time to the Poor-law Board, and to the entries in the visitors' books of those places, which will be fully laid before the house if the motion of Sir John Simeon be assented to."

This refers to a notice of motion by the hon. member for the Isle of Wight, and, if the motion be assented to, it will then be seen how far Mr. Farnall has discharged his duties as official inspector. The paper goes on to say :

"His observations, recommendations, and advice will then appear, and it will be seen how far he has discharged his duty as the Metropolitan Inspector. In that return will appear what steps have been taken by other Poor-law Inspectors who had temporary charge of the district (while Mr. Farnall was in Lancashire), as well as by the Lunacy Commissioners, who are required by law to inspect and report upon the state of the pauper lunatics in workhouses."

I think I have now answered all the questions which the hon. member has asked me. I can only add that my desire is, for the sake of the House and the public, that every information with respect to the abuses which have occurred should be laid before the House and the country ; and I trust that for the future the House will extend to me its confidence, which I hope to deserve by endeavouring at least to amend these evils.

THE CHOLERA AT LIVERPOOL.

(*From a Correspondent.*)

The Chancellor of the Exchequer characterised as "canicular heat" the high temperature under which the free and independent electors of Bucks dissolved in perspiration, while he, as cool as a cucumber—one phase of the Asian mystery—went on, with charming wit and flowing diction, to speak his confidence of the present and his hopes of the future. We have had here two bouts of such canicular heat within the last four weeks. One is oppressing us now while, without coat or waistcoat, I pen these hurried lines. The first began on the 20th of June and lasted until the end of the month. During this the thermometer ranged, on an average, as high as 80° Fahr. in the shade, reaching, on the 25th, to 82° Fahr. The intense heat of these dog days was accompanied by great stillness of the air and remarkable electrical sultriness of the weather. It made a fellow long for the breeze on mountain, moor, or shore, or to

> "beside the brink
> Of haunted stream, that by the roots of oak
> Rolls o'er the rocky channel, lie at large,"

or to enjoy the grateful fragrance of a gentle Havannah beneath the refreshing shade of verdant arbour. But a holiday, at least to a humble provincial Doctor, is ever a dream of the future, seldom a reality of the present. So, though, if kind fate permitted me the luxury of a brief cessation in the routine of daily Professional toil, I would hasten to the country, and not, like your able and zealous correspondent, "R. D.," go in scientific research to Amiens "to see the cholera," yet trudging the close courts and alleys of Liverpool during this hot week of June, my thoughts were directed painfully and anxiously to a consideration of the sweltering state o' nights, of the many poor wretches in their filthy crowded rooms, and to the probable effects of such a condition as the exciter and promoter of epidemic cholera. I had watched with much interest the history of the emigrants on board the *England*, the *Virginia*, the *Helvetia*, the *Union*, and the *Peruvian*, and I fully indorsed the general opinion that, sooner or later, the danger of an outburst of the disease among the residents of our town was to be regarded as imminent, if not certain.

But on July 1, and daily to the 6th of the month, refreshing rains, amounting frequently in force to heavy showers, cooled the atmosphere and cleansed effectually the streets and drains. There was indeed less thunder and lightning, and less visible alteration of the electrical condition of the air, than usually accompanies a sudden decrease of temperature during the summer solstice : but still the change was pleasant and hopeful. No case of contagious cholera had been hitherto recorded. It is true that from May 28, when the *Helvetia* and her emigrants finally left our shores, no week's registry of deaths, with the exception of the two weeks ending the 2nd and 23rd of June, had been without a case of cholera ; yet careful inquiry had satisfied the Medical Officer of Health that they were of the bilious type, or so purely sporadic as neither to be due to contagion nor to have spread the virus in the families or neighbourhood of the deceased. Indeed, in each of the other three weeks ending on the 9th, the 16th, and the 30th of June, the number of cholera deaths never exceeded one. Had the hot days of June, by intensifying the conditions favourable to the development and propagation of the poison, at length produced the anticipated result, and caused the commencement of an epidemic ? This important question was too soon answered in the affirmative.

Although, according to the Medical officer's reports, we find that during the week ending June 30 there had been registered only one case of cholera, yet in the week terminating July 7 there were recorded four cases, of which one, a woman, at No. 2 Court, Bispham-street, was entitled "British cholera."

It has been the laudable custom of the local Registrars to convey to the authorities immediate information of any case which, in their opinion, demands special attention ; and hence steps are invariably taken, as far as possible, to hurry on the burial of the corpse ; to burn the bed, if of straw, and, if of more valuable material, to subject it and the bedding to the purification of dry heat ; and, finally, to fumigate the premises with chlorine gas. In the instance of the death at No. 2, Bispham-street, an insuperable difficulty occurred. The woman, Mrs. Boyle, died on Sunday, July 1, and the family not only refused to have the body buried by the relieving officer, but also elected to keep it in the same room in which some five or six persons must of necessity live and have their meals during the day. But this was not the total evil ; for the orgies of the wake, embracing the co-operation of scores of persons, were maintained day and night. The Court contains three straight-up-and-down houses, so fearfully confined and unfit for safe habitation that the grand jury had, under the provisions of a local act, ordered its demolition in July, 1865, and there only awaited some legal or other formalities to have the order carried into effect. These three houses during the wake were crowded with drunken men and women, while drunken women squatted on the flags before the door of the room where the coronach was performed. It was a big heathenish carousal in the presence of death. As might have been expected, the dread pestilence accepted the challenge to the contest. On the 6th a girl, aged 13, who had been a visitor at the house, died at No. 37, Sawney Pope-street, of cholera, and on the 10th "John Boyle," the husband of the woman, died of the same disease in No. 2 Court, Bispham-street, where, in the next house, there occurred on the same day the death of a child from choleraic diarrhœa.

Immediately after death the body of the man was removed ; yet such is the rascally stupidity of these people, that before nine o'clock the next morning, when an officer of the Health Committee went to disinfect the house and effects, the feather bed on which the body had laid was sold to a secondhand furniture-dealer, and before it could be traced by the officer had been unpicked in the establishment of a feather-cleaner.

Since the 3rd of July I have heard of 14 deaths in Bispham-street and its neighbourhood, and, though without positive proof, I have no doubt in my own mind that all the victims were participators in the unholy rites of Mrs. Boyle's funereal orgies.

By a curious coincidence, the family in which the next independent centre of infection appeared was also called Boyle, though neither relations nor acquaintances of the people in Bispham-street, which is at some distance from No. 5 Court, Raymond-street, their place of residence. Two of their children died on the 7th of July, and the father was removed, ill of the disease, to the Workhouse Hospital. In No. 1 Court of the same street a child also died of cholera.

The foundling wards of the Workhouse are large airy rooms in a separate and detached building of that institution. During the treatment of the patients from the "Bank Hall Depôt"—emigrants from the *Helvetia*—a child who had been in contact with them was removed to a room in this building. The child was well at the time, and never afterwards suffered from the disease; but a nurse and one of the foundlings were attacked with cholera a few days subsequent to the arrival of the emigrant child in the building. No other cases occurred in that department of the establishment at that time, nor, after the fullest investigation, could any absolute contact be traced between the new comer in one ward and the foundlings or their nurses in another.

On the 12th inst., fifty days from the period of the above occurrence, four foundlings and a nurse were attacked with cholera in the same ward in which the cases had happened in May. The nurse had not left the institution for many days, nor had she had any direct communication with persons outside the building; so, however we may reason about general causation, it seems difficult to understand the mode of the peculiar localisation of the disease in this instance. The foundlings are, as a class, puny and sickly infants struggling for hard life; and though, as far as I could observe, the attention paid to their wants and the whole arrangements of their keeping and residence are very excellent, yet we must not be astonished to find that the ravages of cholera among them will prove very great, since the ordinary rate of their mortality from atrophy, weakness, and the usual infantine diseases exceeds 50 per cent. Already ten of them have succumbed to the disease.

There have also occurred in the cholera wards of the Workhouse Hospital several deaths of persons from different parts of the town; but hitherto the most numerous cases are, when discovered, too far advanced in the stage of collapse to admit of removal from their homes.

It will always happen that at the commencement and during the continuance of an epidemic of cholera there will be many sudden deaths where no Medical man has seen the patients, but where the slightest professional experience would enable a Physician, from the external appearance of the corpse, the nature of the dejections, and the history of the symptoms, to determine at once whether the cause of death was cholera. Now, when we find, as during the week ending July 14, that in no less than three instances juries were empanelled to view bodies dead of cholera, it becomes a question whether such unnecessary detention of a corpse and consequent risk of spreading contagion does not add another to the many reasons why all coroners should be of the Medical Profession.

It affords me great satisfaction to state that the Health Committee of the Council, the Select Vestry of the parish, and the guardians of the out townships are working admirably in their several duties to meet the exigencies of this trying time. On Friday last, the 13th inst., deputies from these several bodies met Mr. William Rathbone, jun., a worthy son of a venerable father long zealous in good works; and, under the presidency of the Mayor, arranged for the adoption of a united system of skilful nurses. Mr. Rathbone, as chairman of the existing Nurses' Training Institution, undertakes to find the nurses, and to arrange them according to their fitness and experience, the parochial authorities covenanting to pay all the expenses. The Select Vestry has already mapped out the districts of the parish where cholera has appeared, and will at once institute a careful house-to-house visitation by Medical men. They are also erecting cholera sheds in open spaces near the affected localities, and opening Dispensaries for the gratuitous supply of medicine and Medical comforts. They retain the Bank-hall warehouses as a sanatorium. In fact, they are acting liberally, in a right spirit, and in perfect accordance with the requirements of the Diseases Prevention Act, which the Mayor on Friday, the 13th inst., requested the Government at once to enforce.

Liverpool, July 17, 1866.

DR. EDWARD SMITH'S REPORT ON THE METROPOLITAN WORKHOUSE INFIRMARIES.

We have received Dr. E. Smith's very elaborate and practical Report on the Metropolitan Workhouses, and we extract his "Conclusions" in full. It will be seen that Dr. E. Smith is in favour, on the whole, of making the best of things as they are. Still it will be seen that 15 out of 19 existing Workhouse Infirmaries either are to be or ought to be replaced by better ones.

1. *As to the Buildings.*

The sites of the Workhouses are in all cases as healthful as the surrounding localities; and, with the exception of those lying upon the level of the river, they are all that could be desired.

The drainage and water supply are almost universally good.

Of the older Workhouses, those at Clerkenwell and St. George-the-Martyr, and the main buildings (not the infirmaries) at St. Giles and Rotherhithe, should be taken down.

It has already been determined to remove the Islington, St. Martin's, and the Strand Workhouses. When material changes are to be made in the Workhouses at Poplar Lambeth, Bermondsey, Holborn, and St. Luke's, it may be advisable to reconstruct and perhaps to remove them.

Of the newer Workhouses, it is intended to build a new Infirmary at Greenwich, and material changes in the construction of the Hackney and St. Margaret's Workhouses will be necessary.

There are one or more wards in nineteen Workhouses which are unfit for the use of the sick.

The size and general arrangements of the wards are in general good, but the wards in the detached Infirmaries are in general smaller and less suitable than those in the body of the Workhouses.

The water-closet, lavatory, and bathing accommodation is good in many, but deficient in other Workhouses, and may be readily improved. The supply of hot water to the different parts of the Workhouse is also very frequently deficient, as is also that of cold water on Mondays.

From the construction of many Workhouses too little light is admitted into the corridors, and through the corridor walls into the wards, as also through the outer walls, all of which may be remedied.

The ventilation is all but universally defective, whether in the new or the old Workhouses, and demands immediate attention. It may be made good in the course of a few months.

The cubic and floor space required by the Poor-law Board is not allowed in some wards of all except four or five Workhouses. This is more particularly found in the Strand, Clerkenwell, and Greenwich Workhouses, and is there almost universal.

The Poor-law Board should by order fix the number of beds which should be placed in each ward.

The minimum floor space to be required for each bed is 6 feet by 9 feet, or 6 feet by 10 feet, or from 54 to 60 superficial feet, and the height of the room should be from 10 to 12 feet. The space between the beds should not be less than three feet. We have found, by experiment, that 500 cubic feet in a well-ventilated room is sufficient for health, and that no ward, having that capacity, need have more than 0·046 per cent. of carbonic acid in the air by day, and 0·050 to 0·075 per cent. by night. The essence of the question is the ventilation, which may and must be rendered good.

Hence, in fixing the number of beds to be placed in each room, each and all of the following regulations should be observed :—

1st. That not less than 500 cubic feet be allowed.

2nd. That not less than 3 feet between each bed be allowed.

3rd. That not less than from 54 to 60 superficial feet be allowed.

As the wards are usually from 10 to 12 feet in height, and some of them nearly 30 feet in width, the usual cubic space will exceed the minimum.

More space is required in the large majority of Workhouses. In about half of them there is plenty of land upon which to build. Some are about to be removed to larger sites, others must be pulled down, and a few remain, of which the guardians must determine whether they have sufficient land or not.

Re-arrangement of the different parts of Workhouses is necessary. As the number of able-bodied inmates is small, except in a few Workhouses, and as the children, fever, and small-pox cases, venereal cases, and noisy and dangerous lunatics, are practically not retained, the Workhouse is required almost exclusively for the aged and infirm (particularly for women), with the sick arising from them and from other sources. Hence, the whole of the main building should be given up to those two classes, whilst the able-bodied, lunatics, and the few cases of disease requiring separation, should be placed in other buildings.

The body of the Workhouse, rather than the infirmary building, should be enlarged, and as these institutions are really asylums, and are neither Workhouses nor Hospitals, it would be more correct to designate them "parochial asylums."

Cleanliness is almost universal, and is usually very remarkable. The beds and bedding are generally good.

A large proportion of the Workhouses are deficient in articles of furniture, which may be readily supplied.

It may be needful for the Legislature to confer larger borrowing powers upon the guardians.

2. *As to the Medical Care of the Aged and Infirm, and Sick.*

Paupers should be employed only as servants and in subordinate capacities. There are now paid non-pauper nurses in all the Workhouses, except three or four. Their number is upwards of 130, and it should be immediately doubled. This the guardians may readily effect.

The Medical attendance upon the sick is generally good, but a rearrangement of the mode in which the Medical officer performs his duties is necessary, with a view to the devotion of more time to them. The Medical officers should act more generally as sanitary officers, and their recommendations of every kind should be in writing. The time required to keep the books of the Medical officer should be lessened by placing on a separate list all those aged and infirm, and imbeciles, who may be permanently placed upon a special dietary, and the list of the Medical officer should in future contain only those who are really sick.

The guardians should provide all drugs and dispensers.

The salaries of the Medical officers should be almost universally increased, and, if possible, an approach to an uniform system of payment should be devised.

Their orders for Medical extras and appliances are universally allowed by the guardians, and they alone should be held responsible for their sufficiency.

3. *The Government and Supervision of the Workhouse.*

Some change is desirable in the constitution of the board of guardians, as by extending the period of service of the elected guardians.

The master, matron, and Medical officer should have a deeper sense of their responsibility to the Poor-Law Board, and of the two former, some have well earned, and should now receive a superannuation allowance.

All parishes and unions, whether with or without Local Acts, should be brought equally under the direction of the Poor-Law Board.

The present amount of inspection, whether by the visiting committee of guardians, or by the Poor-Law Board, is not sufficient, and the system is imperfect. More than one inspector of the Poor-Law Board should be appointed for the district, and, after the example of the Lunacy Commissioners, they should have special and different Professional qualifications. The chairman of the board of guardians should be a chief member of the visiting committee, and bear a large share of the responsibility of the office. Under efficient visitation and inspection, I do not doubt that many of the present evils would be removed.

General instructions in reference to the plan of construction, ventilation, size of rooms, etc., of workhouses, should be prepared and issued by the Poor-law Board.

An uniform dietary should be prepared by the Poor-law Board, and a special dietary be provided for the aged and infirm.

One word is yet necessary, in order that a just inference may be drawn from this inquiry.

Many expressions which have been used have necessarily a relative meaning, and do not convey the same idea to all persons. Thus, the expression "deficiency," in reference to furniture, and Medical and general superintendence, is indefinite, and will doubtless convey different meanings to different readers.

It is also necessary, to a just conclusion, to distinguish between those matters which are essential to the proper care of the inmates, as, for example, food, housing, and Medical attendance, which are usually good, and those which are incidental, as various articles of furniture which are often deficient; and it must not be denied that in institutions which, except to the sick, should have somewhat of a deterrent character, difference of opinion, within narrow limits, may be reasonably held as to the extent to which comforts and luxuries, not found in the houses of that class of persons, should be supplied.

Further, it is needful to bear in mind that the poor have been accustomed to old and low buildings, to deficient light and air, and to the absence of many articles which to a higher class would be regarded as necessary; and it is a fact which may not be disputed, that in general they do not like the new buildings, the large and lofty rooms, the bright light, the ventilation, the rigid cleanliness, and the order which are found in most workhouses, and that they are very indifferent to the question of number of towels, combs, brushes, and various appliances which we have recommended.

That defects have existed in an organisation which comprehends so many large institutions for the reception of the lowest, and, in many cases, the most depraved class of the community, and managed by unpaid persons, and on the avowed system of economy, is scarcely matter for wonder, and particularly when it is recollected that the system and many of the institutions are of ancient date, and require constant changes in order to keep pace with the rapidly advancing views of the age. Defects and abuses, more or less grave, exist in other institutions of an analogous nature, whether Hospitals or prisons, and even in organisations administered by paid agency, and under the immediate direction of the officers of the State, and they cannot be wanting in some of the 700 workhouses which constitute the largest civil organisation in the kingdom, and which deals with an exceptional class of persons.

But, admitting the existence of many defects, as we esteem them, no one can be familiar with the houses of the lowest class of the poor in town and country (as it was my duty to be when instituting inquiries into the dietary of the working classes in every county in England, under the direction of the Privy Council) with the poverty, misery, and immorality which too frequently prevail there, and can walk through these great institutions without appreciating the fact that the inmates are better fed, better clad, better housed, and better cared for than they were before their admission, and better than the great mass of the working classes who earn their own living and constitute the wealth of the country. Little is left now but the restriction to the building, the submission of their own will to that of others, and certain distinguishing marks, as that of clothing, to render the workhouse undesirable to those whose sense of self-respect and independence is not strong. On the whole, it may not be doubted whether any destitute poor are cared for as well as those of this country, and whether the Poor-law Administration, with all its defects, is not highly creditable to our nation; and, if we would arrive at a sound conclusion in reference to this inquiry, we must admit the many advantages of our workhouses, whilst we point out defects which demand a remedy.

An outbreak of cattle plague is reported at Winterbourne Herringstone, near Dorchester.

REVIEWS.

Bleeding and Change in Type of Diseases: being the Gulstonian Lectures for 1864. By W. O. Markham, M.D., F.R.C.P., Physician to St. Mary's Hospital. John Churchill and Sons.

Dr. Markham has republished in a separate form, and dedicated to Sir Thomas Watson, his Gulstonian lectures upon one of the most important topics of the day, indicated by the title of the book. Let us try and give our readers a sketch of this valuable and capitally written thesis. Dr. Markham, in noticing the revolution that has taken place in the treatment of inflammatory diseases, the chief characteristic of which is the regarding venesection as a remedial agent to be universally shunned, remarks "that this unnatural dread of the evil consequences of bleeding is not confined to men of Medicine. It has, through our teachings and practice, taken firm hold on the public mind, so that patients, under the bias of a new idea, have imbibed as great a horror of being bled as Doctors have of bleeding."—P. 3. Yet the *kind* of effect must be "precisely similar to what it ever has been . . . that the influence of the remedy must be ever the same in *quality*, and, if changed at all, changed only in respect of the *quantity* of blood that requires abstraction in the cure of disease."—P. 5. The author then proceeds in the second chapter to inquire into the causes that have led to the reversion of past practice and the adoption of our present *extreme* opinions. The explanation "of this present bloodless epoch of Medical practice" is said to be *a change in type* observable in regard to all diseases—a theory which has many supporters, but which Dr. Markham combats as emphatically erroneous; and, before entering upon any inquiry into the uses of letting blood, he proceeds to give in detail the arguments upon which his belief rests. "By change of type must be meant, I suppose, not any imaginative alteration in the essential nature of diseases themselves, but some change in the condition of the body which is the subject of diseases; . . . it has fallen alike upon all—the ruddy rustic; the corpulent alderman; the thin, sallow, anxious-faced man of business; and the pallid artisan—affected each of them, and more or less according to the varying merits of their constitutions."—P. 10. The evidence of this change is open to objection; it is imagined that the effects of blood-letting are different from what they were formerly, and this rests upon the supposed infallibility of the Professional judgment of the Physicians of the past. Dr. Markham, however, compares the practice of the past with that of the present, with the view of showing that advances in pathology, diagnosis, clinical observation, and therapeutics have given us a better insight into the nature of disease, and that we have altered our practice on that account alone; that venesection was not the *universally* successful remedy we suppose, and was not abandoned *because* Physicians "began to note that their patients' bodies would no longer suffer bleeding, as in former days." As to success, Andral's statistics of pneumonia may serve for illustration. He declared that bleeding was *the* remedy for pneumonia, yet more than half his patients died, and his practice but "little justified his eulogium of blood-letting." Cullen, Gregory, and others left no records like Andral whereby to test the efficacy or value of the practice they employed and inculcated. The cases of acute rheumatism and fevers are severally noticed as showing that the fact of the frequency of venesection did not show that the latter was either a proper or a successful remedy. "True," says the author, "we do read of wonderful benefits which have attended blood-letting in fevers; but these supposed benefits were obtained by comparing the results of the practice at different periods, by showing a less mortality in one particular epidemic of fever than in some other epidemic. The results really show nothing more than that in certain forms of fever blood-letting is less injurious than it is in others—for example, in relapsing or inflammatory, than in typhus fever."—P. 21.

Chapter III. is devoted to considerations derived from "personal experience," to the examination of the statements of those "change of type" men who declare they "have seen with their eyes the facts on which their belief is founded," but, asks the author, "where is the scientific man of Medicine who, at 60 years of age, sees diseases and treats them under the influence of the ideas which had possession of his mind at twenty-five? . . . Where is the philosophic and experienced Physician of modern days whose ideal of Medicine has not been revolutionised since the day when he first entered upon practice?"—P. 25. Men had changed their practice long before the change of type theory was started or invented. The one preceded the other a quarter of a century. The practice of blood-letting in some fevers was found to be wrong, especially in typhus, and men at once, by implication, argued the same of pneumonia and other inflammations. "The change of type theory, as applied to inflammations in general, was in reality based upon what was observed of the result of blood-letting employed in typhus fever;" and Dr. Markham pertinently asks, "Is the disuse of mercury a sign of change of type?" On the other hand, there are many facts that "show men bear loss of blood now as well as they did formerly," and that the evil effects of blood-letting have been much exaggerated.

The writer next proceeds to show, in the remaining four chapters, that asthenia is no new idea—no modern discovery—that the real effects of blood-letting are not recognised—the effect of direct and indirect abstraction of blood—the right uses of venesection, and many other interesting points.

The conclusion arrived at is as follows:—"That venesection has no directly beneficial influence over inflammations, that it is only of service during certain stages of those inflammations in which the action of the heart and lungs is impeded, and that its use lies in removing the obstructions which arise incidentally out of such inflammations."

The result we take to be this, according to the author—that no change in type of disease has occurred, that the supposed benefits of the free and almost universal practice of bleeding in bygone times are fallacious, and that a better knowledge of disease has led to the disuse of bleeding; but at present we have taken a false position in the almost absolute disuse of a valuable remedy.

The Preface of Dr. Markham's book ends with a letter from Sir Thomas Watson containing his opinions upon the question of change of type in disease. It is no less complimentary and gratifying to Dr. Markham than important to the Profession. Sir Thomas Watson says—"I am obliged to confess that the result of my later reading and inquiries and of careful reflection on the matter is that my previous belief in the soundness of the doctrine of a general and more abiding variation of type, in the sense now explained, has been shaken;" and, after entering into a digest of data, adds "that modern improvements in diagnosis have modified, on grounds of reason, our practice."

If the change of type theory be erroneous, and Dr. Markham's explanation of its acceptance hitherto be correct, then truly must there be "a reconsideration and readoption of venesection as an ordinary remedy in diseases." Let us advise, then, our readers to study these Gulstonian lectures with no little attention; they are fully worth it, and are charmingly written. To Dr. Markham we offer our thanks for giving us in print the benefit of his matured experience.

PROVINCIAL CORRESPONDENCE.

SCOTLAND.

(*From an Edinburgh Correspondent.*)

Edinburgh, July 7.

At this dull season of the year, when windows gleam with the light of past numbers of the *Scotsman*, instead of bright eyes and pretty faces, and every one (the Doctors as well as others) seems moving about as if on strike, it is not often that anything turns up worth corresponding about. But talking of strikes has put me in mind that last Wednesday the Mid-Lothian county Doctors had a union meeting, not for the purpose of striking exactly, but of making an endeavour to get more regularly and thoroughly paid. No one can accuse the Medical Profession, as a body, of taking as their principle the advice,

"Go, make money; put money in your purse."

But surely no one can complain of a hard-wrought, ill-paid man doing his best to avoid losing from £50 to £100 a year, as the Chairman said he did. Great complaints were made at the meeting that much loss—actual money out of pocket—was incurred from a set of wretches who go about from one Doctor to another, filching as much medicine, advice, and attendance from each as can be got out of him, and then performing the same little game on another without the slightest intention of paying any. In some instances, no doubt, the absence of remuneration to the Doctor depends upon absence of means in the patient; but this is by no means the rule—indeed, this shameful practice is not one whit more common among the poorer classes than among those perfectly able to pay. This I know to my cost, and Dr. Balfour, of Portobello, told the meeting in plain, honest language how he was often swindled by fashionable visitors to fashionable Portobello. Yes, swindled is the word. And often the neglect of payment for services rendered is not nearly so hard to bear as the monstrous ingratitude shown. I heard of a case lately where a *dis*-honourable, living at a fashionable summer resort, incurred a bill for medicine and attendance of something like £18, and not only left without paying, but now abuses the Practitioner whom he had diddled in no measured terms, branding him as careless and ungentlemanly, and, I have no doubt, doing the most worthy man a great deal of harm. Such cases are by no means uncommon—scarcely, I dare say, one Practitioner in fifty who could not narrate them in scores. Now, would it be doing any wrong to print a "Black-list" of such individuals, whatever good might or might not accrue to the Profession by so doing?

Why should not the lower classes in Scotland establish clubs for Medical attendance as they have in England? Why don't the Doctors insist on it?

But the greatest evil that Medical men have to endure is the non-remuneration for midwifery work, and this is much harder on country Practitioners than on their town brethren, for in towns such cases may be handed over to dispensaries. Now, this hardship can never be altogether got over; but it might be greatly remedied by the introduction of the practice, common in some parts of England, of insisting upon a retaining-fee when an engagement is made to attend a case. Among the lower orders this might be made a half, or even the whole, of the sum considered remunerative and equal to the patients' circumstances. At any rate, in whatever method reform is attempted, let it be pushed vigorously. There is no reason why many of the Scotch country Practitioners should not be receiving their £800 or £900 a year for the same work for which they at present get only £400 or £500. They arrange the matter of pay much better in England, where a man will often get thirty-five or forty shillings for the same work to the same class of patient for which a Scotch Practitioner will only get fifteen or twenty.

GENERAL CORRESPONDENCE.

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REGISTRATION OF VACCINATION.

[To the Editor of the Medical Times and Gazette.]

Sir,—In the *Medical Times and Gazette* of the 7th inst. you refer to this subject, and especially to the question whether the registration can be enforced.

The opinion that a private Practitioner—that is, one who is not under a contract with the Board of Guardians—is not bound to give the certificate of vaccination, is so widely spread among the members of the Profession that it may be doubted whether some of them have not taken the opinion of their ordinary legal advisers on the subject, and thus become fortified in their refusal to send it to the registrar.

In case of prosecution by the Board of Guardians, there cannot be a doubt that, upon application to the superior courts, urging the great importance of the question to the members of the Medical Profession, the trial would be removed to Westminster for the purpose of having the legal points argued before the judges. As far as I am aware this has not yet been done. Indeed, it is so well known that the statute in question (16 and 17 Vict., c. 100) has failed in its chief object—that of obtaining the vaccination of all unprotected persons—that it is not likely the Poor-law Commissioners would give their sanction (if wanted) to such costly proceedings against a Practitioner. Before allowing matters to go so far, it would be prudent on the part of the Practitioner threatened with legal prosecution to offer the certificate upon receiving payment for it. Whether he is entitled to hold it back in the event of payment being refused, or whether he is bound to give it first, and, having given it, then to sue at law for the fee claimed, is one of the points to be settled by competent authority. The certificate of successful vaccination is not one of the things required by the statute to be done "without fee or reward."

July 18. I am, &c. D. R.

WIGHT *v.* FIELD.

Letter from John C. Langmore, M.B.

[To the Editor of the Medical Times and Gazette.]

Sir,—I beg to enclose a copy of a letter which has been addressed to Mr. Octavius Field by some of his Medical friends, expressing their sympathy with him in regard to the proceedings in the recent trial of Wight *v.* Field. I hope that you will find space for it in your columns this week.

Had time permitted the number of signatures thereto would have been much greater.

I remain, &c.
John C. Langmore, M.B.

July 18.

Dear Sir,—We desire to offer to you the expression of our earnest sympathy in the annoyance which must have been occasioned to you by the proceedings in the recent case in which your name was made to appear in a law court under very unpleasant circumstances.

We, who have had opportunities of knowing your blameless life and honourable career, appreciate highly the excellent personal qualities which you have displayed both in your Professional and social relations, and we feel it a duty to say that we are fully assured that the imputations made in the course of the proceedings are really groundless, and that your conduct throughout was marked by kindness and rectitude.

We hold that they leave your character stainless, and we are happy to assure you of our undiminished friendship and esteem.

To Octavius A. Field, Esq.

Francis Sibson, M D., F.R S., Brook-street, W.
C. Handfield Jones, M.D., F.R.S., Green-street, W.
W. H. Broadbent, M.D., Upper Seymour-street, W.
Samuel A. Lane, Berkeley-street, W.
Haynes Walton, Brook-street, W.
James R. Lane, Berkeley-street, W.
Ernest Hart, Wimpole-street, W.
Geo. G. Gascoyen, Queen Anne-street, W.
Cundell Juler, M.D., James-street, W.
J. C. Langmore, M.B., Sussex-gardens, W.
William B. Owen, Cleveland-square, W.
John Gregory Forbes, Devonport-street, W.
Joseph Rushforth, Oxford-terrace, W.
Charles A. Aikin, Clifton-place, W.
Alfred Collinson, M.D., Oxford-terrace, W.
Charles Malton, Stanhope-place, W.
Thos. Harvey Hill, Stanhope-terrace, W.
William Smith, Star street, W.
Frederick Danford, Upper Dorset-street, W.
Charles Miles, Conduit-street West, W.
William Henry Gardner, Gloucester-terrace, W.
J. Brendon Curgenven, Craven-hill-gardens, W.
John Taylor, Queen's-road, W.
Frederick Cock, Westbourne-park-terrace, W.
Charles Royston, Alexander-terrace, W.
George Gaskoin, Westbourne-park, W.
R. Dawson Harling, M.D. Lond., Upper Seymour-st., W.
A. Billing, M.D., F.R.S., Park-lane, W.
Henry Bence Jones, M.D., F.R.S., Grosvenor-st., W.
Richard Quain, M D., Harley-street, W.
Thos. Watson, M.D., Bart., Henrietta-street, W.
Erasmus Wilson, F.R.S., Henrietta-street, W.
E. H. Sieveking, M.D., Manchester-square, W.
John Morgan, F.R.C.S., Sussex-place, W.
James Copland, M.D., F.R.S., Old Cavendish-st., W.
W. O. Markham, M.D., Harley-street, W.
Walter J. Bryant, Sussex-square, W.
John H. Bryant, Sussex-square, W.
Richard Tamplin, Old Burlington-street, W.

Letter from Dr. Sibson.

[To the Editor of the Medical Times and Gazette.]

Sir,—As the witnesses for the defence in the case of Wight *v.* Wight and Field were not called, although it was Mr. Field's expressed wish that they should appear, I feel desirous to state through your columns what I was prepared to say in Court in Mr. Field's favour. In October, 1861, I saw Mrs. Wight several times in consultation with Mr. Field when she was affected with insanity. Dr. Wight, the brother-in-law of Mrs. Wight, and the uncle of her husband, took part in some of our deliberations, and he it was who placed her in an asylum on the certificate of myself and Mr. Hill. During my attendance, Mr. Field treated his patient with the most perfect delicacy and propriety, and the conduct of Mrs. Wight towards him was marked by confidence and esteem, and that at a time when, owing to her disease, all restraints of deception were impossible. That lady's cousin, Mrs. Field, was in attendance upon her night and day during her illness, and I need scarcely suggest that if there had been any reason on Mr. Field's part to conceal from Mrs. Field the character of his intercourse with Mrs. Wight, he would not have placed his own wife unreservedly in contact with that lady. To those who, like myself and the whole Profession in his immediate neighbourhood, have acquired a knowledge of the high and gentlemanlike tone of Mr. Field, the evidence in his favour which I am able to afford is not needed, but I am happy to give it, through your channel, to others who have not had the opportunity of marking the honourable tenor of his whole life.

I am, &c. Francis Sibson, M.D.

40, Brook-street, Grosvenor-square, July 18, 1866.

ON NIGHT-BLINDNESS.

Letter from Dr. F. E. Junker.

[To the Editor of the Medical Times and Gazette.]

Sir,—Mr. Haynes Walton, in his interesting paper on night-blindness, leaves the explanation of some of the features of this complaint to other observers. Allow me to give here the epitome of my limited experience of this disease, which has come, in various climates, within the range of my observation.

I propose to distinguish between genuine night-blindness, which is caused mostly by cosmical influences, and symptomatic night-blindness, whether accompanying other diseases or the consequence of pathological processes.

The true form consists in the temporary, more or less complete, suspension of vision after sunset, during twilight and night, in artificial light, and even in dim daylight. It is caused in most instances, as in the case reported by Mr. Haynes Walton, by a more or less continuous hyperæsthesia and consequent over-fatigue of the retina, and is a phenomenon very analogous to a common occurrence within everybody's experience. When passing from the bright sunlight into the deep shade, or from a highly-illuminated room into a darker place, we are at first unable to see distinctly—sometimes even cannot see at all—for a longer or shorter time, according to the difference of intensity of light. The degree of light in the darker place is insufficient to react on our retina until it has recovered from the effect of over-fatigue by previous brightness. The same is the case if our eyes have been long fixed on a bright white surface—for example, a whitewashed wall, or a field covered with snow with the sun shining on it. Our vision will become dimmed after some time, and a dark mist will alternate with the dazzling object. If we return afterwards into a moderately-lighted room, or into the shade, we may be what is commonly called snow-blind for a longer or shorter time, according to circumstances.

This explanation, I believe, holds good for the night-blindness of sailors, soldiers, etc., who have been exposed to the glaring sunlight in the tropics, principally when reflected by the glittering sea or from white sandy plains or rocks unvariegated by verdure or the shade of vegetation.

I feel, therefore, inclined to regard night and snow blindness as analogous diseases, and as the effects of nearly identical causes.

In the winter of 1861 a part of the crew of a large transport ship, which conveyed troops under order to Canada, to Nova Scotia, and New Brunswick, after an unusually long, boisterous, and foggy voyage, had leave to go on shore on a bright fine day. They had a several hours' drive in sleighs; and after their return on board three men were brought to me affected with snow-blindness. They being perfectly sober, the suspicion that rum had something to do with their impaired vision fell to the ground. Their pupils were slightly dilated and rather sluggish. On examination with the ophthalmoscope, I could not discover anything abnormal except incipient hyperæmia of the retina. The macula lutea was quite normal. They complained of frontal headache. They were not absolutely blind; they were able to distinguish large objects as through a mist. This state lasted without alteration during the next two days, and then gradually improved. Two returned to work on the sixth and one on the seventh day.

Several cases of night-blindness came under my observation at sea and on shore in the tropical latitudes of America. The patients were mostly young men, either on their first voyage or recently arrived. Among them were exceptionally two or three acclimatised old residents. They were all white men. I never saw negroes affected with night-blindness, although they rather like affecting any disease which they happen to observe in a white man. They expose their bare heads to the fiercest sun without fear of injurious consequences, but they never venture into the moonlight without the protection of the broadest-brimmed hat within their reach. These children of the sun are afraid of the moon and of being struck with moon-blindness.

In some of the above cases night-blindness was the only complaint, without any other symptoms; in others there were sick headache, giddiness, and constipation, the usual consequences of exposure to the sun. Dilatation (in one case only spasmodic contraction) of the pupil, hyperæmia of the retina, and injection of the conjunctiva, constituted the alterations in the eye. The affection soon yielded to a simple symptomatic treatment and proper precautions against future exposure.

But there is another kind of genuine nyctalopia from quite different causes. In low marshy localities, where ague and other malaria-fevers are prevalent when cool nights succeed hot days, in the tropics as well as in more temperate climates, cases of night-blindness are met with either in its genuine form or with intermittent fever. I shall here speak only of the former. In such cases I found the retina slightly discoloured, and the vitreous humour somewhat cloudy-opaque. The patients are generally persons from the poorer classes, ill-fed and badly housed, living close to banks of rivers, near marshes and artificially irrigated fields. I have seen cases of this form of nyctalopia in the rice-fields of Lombardy, on the Chagres River in the isthmus of Panama, in Nicaragua, at Tampico in Mexico, and on the low banks of the Essequibo in Demerara. In the latter country I found European settlers and Chinese and Bengalee coolies among the sufferers; negroes appear to be exempt—at least I never heard of any case amongst them. I hear also from good authorities that such cases occur in the neighbourhood of the two Hungarian lakes, on the banks of the lower Danube and the Theiss, and in the Pontine marshes. I recollect having seen a few cases among the outdoor patients of the Ophthalmic Clinic, at Vienna, who came from a village on a small island of the Danube. In the treatment of this complaint we possess an almost specific remedy in camphor. Three five-grain doses of it daily seldom failed, except in old cases combined with ague, when quinine was resorted to.

Hitherto I have drawn from my own experience, but it wil not be out of place to mention here several other causes and forms of night-blindness described by different authors, most of them, however, referring to what I call the symptomatic forms of night-blindness

Teissier (Schmidt's *Jahrb.*, vol. v., p. 229) observed nyctalopia in a case of softening and atrophy of the optic nerve. But was it not rather a symptom of incipient general blindness, where there is of course greater torpidity of vision in deficient light?

Chauffard (*L'Institut*, 1837, No. 66) found in a soldier, who was suffering from night-blindness during the last three months preceding his death from enteritis, compression of the optic nerve by enlarged vessels, extending from the foramen opticum to the retina, hyperæmia of the ciliary ganglion, enlargement of the arteria centralis, and extravasated blood between retina and choroidea.

Jüngken, Pye, and Carron du Villards record night-blindness in "febris intermittens larvata" (the "dead ague" of the Lincolnshire fens). Talford, Bramfield, and Krebel in scurvy. Cane (*Dublin Journal*, 1820, No. 53) in masturbation; Piringer in helminthiasis; Wittke in ergotismus.

Krebel, Fuss, Meissner, and Lerche (Schmidt's *Jahrb.*, vol. xiv., p. 226), met with this disease at Kronstadt and Petersburg during Lent, when the poorer classes live exclusively on coarse vegetable food. Lerche observed during one Lent season 270 cases.

Larrey noticed it in cholera in different parts of France, and ascribes its cause to "stupeur" of the ciliary ganglion and nerves (*Chirurg. Clinique*, 1837, vol. iv.), and also met with it in an epidemic form among soldiers encamped on the left bank of the Rhine.

Night-blindness appeared, according to Casper (*Wochen-*

schrift, 1837, No. 4), epidemic in an orphan asylum. Hysteria and bilious attacks are also mentioned as causes of nyctalopia. In all these cases the principal disease will be the object of the treatment.

I shall conclude with a few words on moon-blindness. It is a popular belief that sleeping in the moonlight, principally in the open air, produces this peculiar affection. I never met with a reliable authority for its real existence. May it not rather be the startling effect of light on some persons suddenly aroused from a deep sleep? They awake stupefied, incapable of seeing and of speaking coherently. A common bedroom candle has the same effect on them. If called up in a dark room, no such effect is observed. There are persons who cannot sleep with a night-light, and awake when the moonbeams fall on their bed.

The belief that sleeping in moonlight in the open air produces, besides moon-blindness, also rheumatism, has more foundation. I feel rather inclined to consider the dew which falls more profusely in clear moon-nights than when the sky is overcast, and saturates the clothes of the sleeper (who, perhaps lightly clad, escaped from the indoor sultriness of a warm summer night into the open air, and exposed himself to one of the causes of rheumatism), as the real cause.

36, Mount-street, W. I am, &c. F. E. Junker.

NAVAL MEDICAL SERVICE.

[To the Editor of the Medical Times and Gazette.]

Sir,—A cursory glance at the last official Navy List shows that in vessels entitled to one Assistant-Surgeon each there are four without any; that in vessels entitled to two Assistant-Surgeons there are eight vessels with only one each; and that in other vessels there are eleven Surgeons borne in lieu of Assistants. We are further informed that one Surgeon and five Assistant-Surgeons, on the active list, died last quarter, and that four Assistant-Surgeons resigned. And to compensate for this great deficiency the list does not show a single fresh entry.

It remains to be seen if the new Board of Admiralty are equal to the occasion, and prepared to introduce measures of reform calculated to meet the difficulty.

From the composition of the Board we may fairly assume that they will not be slow to adopt the recommendations of the Committee over which Sir Alexander Milne presided. But in my humble opinion they must do more, and offer greater inducements in the future. At the outset of his career the Medical officer is already sufficiently well provided for, and asks for no increase of pay. As he advances in years and length of service the case is very different; it is then he feels the disproportionately small pay of his rank as compared with other classes of officers, and it is at this period that the service should hold out inducements.

The measures of reform which can alone satisfy those in the service, and which would be most calculated to encourage fresh entries, are:—

1. An enlargement of the Inspectorial grade by the appointment of Deputy Inspectors-General to all our Hospitals at home and abroad, and to flagships on foreign stations.
2. Half-pay time, when compulsory, to count towards retirement; and
3. That all Staff Surgeons, after twenty-five years' service, who may not be fortunate enough to obtain promotion, should have the substantive rank and minimum half-pay of a Deputy Inspector-General on retirement.

My experience tells me that nothing less will give satisfaction to those now in the service; and my knowledge of the schools assures me that a measure of reform as complete as that I now suggest is absolutely necessary to encourage others to join.

The student of to-day is better informed on naval and military matters than was the student of twenty years ago.

I am, &c.

London, July 16. A Surgeon R.N.

GRIFFIN TESTIMONIAL FUND.

Letter from Dr. Fowler.

[To the Editor of the Medical Times and Gazette.]

Sir,—I beg now to submit my balance-sheet in connexion with the above.

The fund was started "for the object of—firstly, defraying the outstanding expenses pertaining to Mr. Griffin's Poor-law Medical Reform Fund; and subsequently enabling our whole body to present him with such a testimonial as might be determined upon."

The first part of the object has been provided for by debiting the fund with £15 5s. 6d. In a letter addressed, June 29, 1864, to the subscribers of the Poor-law Medical Reform Association, it appears that this balance was then due to Mr. Griffin.

The second part was consummated on the 5th inst., at the Freemasons' Tavern. I have only to add that in addition to the above £15 5s. 6d. there was a further balance in hand of £48 8s., which I have also forwarded by cheque to Weymouth. An engraving of the epergne will, I trust, be in the *Illustrated London News* of Saturday, the 28th inst.

I hope you will now allow me a short space to state that I feel the time has come for me to resign the post, which for the last seven years and a half I have held, as Secretary to the Metropolitan Poor-law Medical Officers. Public and private avocations alone compel me to this.

The fulfilment of the undertaking of presenting a testimonial to Mr. Griffin I have long intended should be the termination of my active clerical labours. It is therefore but right to those brother Medical officers who for some years have looked upon me as their representative, I should give an account of my past stewardship.

For many years the Medical officers of the three City unions had been in the habit of holding monthly meetings to compare their experiences and determine upon a common course of conduct in matters parochial, sanitary, and sanative, affecting their several appointments.

Dr. Lobb, late of the East London Union, was for many years the Honorary Secretary. Circumstances necessitated the dissolution of the Association, when very shortly afterwards the then President of the Poor-law Board (Hon. Sotheron Estcourt), in honourable fulfilment of his promise, promulgated his "Heads of a scheme for a suggested new arrangement of Medical relief."

On January 3, 1859, by the united wishes of a preliminary committee, subsequently ratified by the unanimous vote of a general meeting of Metropolitan Poor-law Medical officers, I assumed, and have ever since retained, my representative position. The resolutions submitted by the committee to this meeting were unanimously adopted.

After four subsequent committee meetings the course of action eventuated in a numerous deputation, which was introduced to the Poor-law President by Earl (then Lord John) Russell, accompanied by many other members of Parliament. The deputation clearly showed the President that, through the alterations suggested, not only would our independence of action have been very vitally threatened, but our Professional honour and honesty would have been sorely tempted by the intended rivalry and competition. The President was convinced of the inacceptibility of, and withdrew, his scheme.

Two other committee meetings were held that year.

In 1860 five committee meetings were held to watch the progress of Mr. Pigott's Bill, which, by reason of the opposition of the Guardians, he was compelled to withdraw.

In 1861 ten committee and sub-committee meetings were held to devise a course of action in reference to the Select Committee moved for by Mr. Villiers to inquire into the administration of the Poor-law.

At a general meeting held May 10, 1861, the statement (vide *Medical Times and Gazette*, May 18, 1861) of the committee was adopted as the embodiment of the collective opinions of the Metropolitan Poor-law Medical Officers, and Mr. Villiers was respectfully solicited "that certain members of the latter body be called before the said (Parliamentary) committee, in order that they be examined on the several points contained in such statement." Of the six names forwarded the Select Committee called upon two only—Dr. Rogers and myself—to give evidence during the last half-hour of the last day the committee sat. Our evidence appears in the Fifth Report on Poor Relief (England), 1861, and in the Appendix to the same appears also a memorandum delivered in by myself, and which, though incorrectly and imperfectly transcribed, goes more into detail than did my evidence in chief, by reason of the very short time allowed me to speak.

In 1862 I was again examined by the Select Committee.

Of this examination it now only becomes me to say that at the very first of our two last committee meetings in 1862, I stated, that as I could no longer conscientiously advocate the per-case system of payment, to which I was of opinion the committee had pledged itself in the statement delivered in to the Parliamentary Committee, I tendered my resignation. I added, that "as my strongly expressed convictions may tend to fetter your future actions, and may conduce to the damage of the good cause, I feel that I ought no longer to hold office, and am not fit to be your representative."

Nevertheless, the following resolution was carried unanimously :—"That the thanks of this committee be given to Dr. Fowler for his energetic exertions in behalf of the cause of the Metropolitan Poor-law Medical Officers, and that he be requested to continue the duties of the office of Honorary Secretary which he has so ably fulfilled."

I must now, however, again most firmly tender my resignation. The "good cause" will most assuredly suffer if it remains longer in my hands. I have no time to devote to the active duties of its metropolitan secretaryship. I hope ever to take a lively interest in the question, and shall be at all times delighted to aid in any way that my now little leisure will admit of.

It would be presumptuous to assume that the committee of the metropolitan men must necessarily collapse by my resignation. Should an occasion arise, I know that they who have so ably worked with me during the last seven years and a half, would not hesitate to follow a well-trusted leader.

It is right that it should be known that during the whole period of its existence the expenses incidental to the proceedings of the committee have been entirely met by contributions from the metropolitan men alone, without in any one instance trenching upon the funds of Mr. Griffin's Reform Association.

Now, in conclusion, let me first, as Treasurer and Hon. Sec. to the Griffin Testimonial Fund, most cordially thank the Committee, and especially the excellent Chairman, Henry Blenkarne, Esq., City of London, for the time they have given me during half a dozen successive meetings ; and especially let me express my most grateful obligations to the above 400 subscribers, who have so liberally enabled me to successfully prosecute what I two years ago undertook.

Secondly, as Hon. Sec. to the Metropolitan Poor-law Medical Officers, permit me to say that for the attention shown to my suggestions, for the invariable kindness always and universally displayed towards me, I sincerely and most cordially thank them all, collectively and individually, and, hoping ever to remain in their very good remembrances, I subscribe myself ever theirs truly obliged,

Robert Fowler.

145, Bishopsgate-street Without, July 16.

Robert Fowler, Treasurer, in Account with the Griffin Testimonial Fund.

Dr.

1864—June 24 to July 10, 1865 :—

	£	s.	d.
Per 393 subscriptions forwarded to Treasurer	202	9	3
Per 22 subscriptions forwarded to *Lancet* office	13	11	6
To interest on £100 deposit at London and County Bank	6	8	9
	£222	9	6

Cr.

	£	s.	d.
Mappin, Webb, and Co. . . .	117	3	0
London Stethoscopic and Photographic Company	10	7	6
Postage	18	9	0
Stationery and printing	7	1	6
Advertisements	4	7	0
Carriage, porterage, and cab hire . .	0	7	0
Freemasons' Tavern Company . .	1	1	0
Balance due to Mr. Griffin, June 29, 1864, from the Poor-law Medical Reform Association	15	5	6
Balance	48	8	0
	£222	9	6

The Army and Navy Medical Services.—We trust the following announcement, which appeared in the *Army and Navy Gazette*, is true :—"We believe we can safely announce that at the Council held at Windsor yesterday week Her Majesty the Queen signed the order confirming the suggestions made by Sir Alexander Milne's committee for improving the pay and position of the Medical officers of the two services."

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, June 12, 1866.

Dr. P. Black, Vice-President, in the chair.

A paper, by Mr. George Lewis Cooper, was read,

ON ATROPHY OR DEGENERATION OF THE MUSCLES OF THE UPPER AND LOWER EXTREMITIES FROM DISEASE OF THE SPINAL CORD.

J. J. aged 41 years, married, but his wife had no family ; was much exposed to the weather in his daily occupation, at the same time had been a man of intemperate habits, and the subject of a long chronic cough. He was admitted under the care of the Author at the Bloomsbury Dispensary on February 14, and died on the 26th. He suffered from complete paralysis of the upper and lower extremities, with atrophy of the muscles of these parts. The symptoms were slow, but progressive. They commenced in the hands and feet, and extended to the arms and legs, and ended in total paralysis. His cough was severe, with purulent expectoration, to the time of his death, which took place on February 26. The post-mortem showed much distension of the coverings of the cord from fluid, with congestion of the pia mater in the cervical region, and considerable softening in the substance of the white columns. At the commencement of the lower third in the dorsal region the central grey substance contained a large dilated vessel on each side, surrounded by extravasated blood-globules ; and the extremities of the posterior cornua were highly vascular, as also in certain parts of the grey substance there were patches of extravasated blood.

Dr. Pavy exhibited a patient from Guy's Hospital, the subject of Vitiligoidea Plana et Tuberosa. He remarked that this disease had been first described by Drs. Addison and Gull in the *Guy's Hospital Reports* for 1851. In their communication they stated that the affection they were describing occurred either as tubercles, varying from the size of a pin's head to that of a large pea, isolated or confluent (vitiligoidea tuberosa) ; or, secondly, as yellowish patches of irregular outline, slightly elevated and with but little hardness (vitiligoidea plana). Either of these forms, they further stated, might occur separately, or the two might be combined in the same individual. The case before the Fellows of the Society was an exceedingly well-marked one, and one in which the combination of the two forms occurred. The patient, a female, aged 39, three years ago became the subject of jaundice, which lasted for ten months. She was then free from it for about two months. It afterwards reappeared, and had continued up to the present time. About a year and a half ago she experienced a sensation of great itching and stinging in her skin, and after this the eruption that now existed began to appear, and gradually reached its present state. It was not so perceptible by night, but she was pretty deeply jaundiced of an olive colour by day ; and in association with the jaundice it was to be remarked that a large and tender swelling, evidently connected with the liver, was to be felt in the right hypochondriac region. Completely encircling each eye, and extending for a space of from half to three-quarters of an inch in breadth, was a patch of an opaque yellowish colour, and slightly elevated above the surrounding skin. Upon the ears there were a number of tubercles, looking certainly to the eye like sebaceous tumours. Similar tubercles also existed upon the backs of the hands and arms, and also on the back and nates. Upon the palms of the hands and palmar aspect of the fingers there was a patchy and diffused cream-coloured deposit in the skin. This disease, Dr. Pavy observed, had been recently considered by some as a disease of a sebaceous character. It was so regarded in Hebra's work on skin diseases, which is being translated by Dr. Fagge for the Sydenham Society. In Neligan's work, published in 1866, it had been spoken of as a form of acne, and called "stearrhœa flavescens." It was a point of interest, Dr. Pavy considered, to determine the precise nature of the affection, and he had had a tubercle removed from the back of the little finger for microscopic examination. The deposit pervaded the true skin, and occurred in little nodular masses beneath. These were exceedingly tough, and consisted of fibrous tissue. On being squeezed between the forceps an opalescent juice exuded, which was found to contain a large number of fat-granules. The cuticle was not involved in the affection. Independently of the result of minute examination, against its being a sebaceous disease was the fact that it occurred, and in a marked manner, on the palmar aspect of the hands where no sebaceous glands existed. Dr. Pavy also exhibited another patient from Guy's Hospital suffering likewise from a peculiar form of skin disease. The subject of it was a feeble, sickly-looking woman, 25 years of age. She belonged to a family in which there was a history of both scrofula and carcinoma. Upon the fingers and hands were some scarlike-looking spots of a bluish-white colour, which had been gradually appearing since March last. There were also spots of a somewhat similar character on the outside of the anus. They came without any previous sore or ulceration. They might be said also to look as though the skin had been seared by the application of a hot iron. Dr. Pavy was open to the suggestions of the Fellows present, but he had regarded the case himself as an early stage of the disease which had been described by Dr. Addison in the thirty-seventh volume of the Medico-Chirurgical *Transactions* under the name of "true keloid." This now went by the name of "keloid of Addison," in contradistinction to the keloid which had been described by Alibert, and which was altogether a different disease, consisting as it did of raised tumours with claw-like prolongations instead of cicatrix-looking spots.

OBITUARY.

DR. THOMAS FRASER ROSS.

Dr. Thomas Fraser Ross died on board the *Helvetia* of cholera. Few men who knew the Edinburgh School of Medicine within the last eight or nine years can have read the report of his death without the most sincere regret. Dr. Ross was a member of a well-known family of Tain, in Ross-shire, N.B. After taking his diploma in Edinburgh, he resided for some time in Liverpool, and subsequently practised in Leith. He next came to London with the view of settling in Greenwich, but, while some arrangements were pending, determined upon a voyage as Surgeon to some vessel. He therefore took the appointment of Surgeon on board the *Helvetia* at Liverpool, and on the morning of May 11 was attacked with cholera. Dr. Coppinger, who attended him with the greatest devotion, writes that he suffered but little pain, and that his principal suffering was from continual vomiting. The next morning his state grew more alarming, but, with his usual consideration for others, he desired the nurse not to awaken the worn-out Doctor, as he could do him no good. He fell asleep, and passed from sleep to death apparently without pain. Although they had known each other such a short time, his senior officer, Dr. Coppinger, says he feels as if he had lost an old friend, while a missionary who was on board adds, that on the second night before his death "he was with the pilot till twelve o'clock bathing the temples of the sick men, who were trembling with fear, with all the tenderness of a brother." He was a most loveable man, a first-rate Practitioner, and died at his post a good and faithful servant.

MR. JOHN SCOTT.

Mr. John Scott, M.R.C.S., L.S.A., and Medical officer of the borough of Hanley, died on July 2, 1866, aged 54. Few members of the Profession have been better qualified by talents and acquirements for an eminent position, and still fewer have been so much kept in comparative obscurity by modesty, love of retirement, unselfishness, and the want of self-appreciation. Passionately fond of reading and study from his earliest years, he threw himself with ardour into his Profession, as a pupil devoured the older Medical literature which he found in abundance in the house of his able and kind preceptor, Mr. Wilkinson of Sunderland, then far advanced in years, and ever afterwards kept pace with the progress of Professional knowledge.

While a pupil with the late Mr. Embleton, to whom he was transferred on the death of his venerable friend Mr. Wilkinson, the first visitation of cholera took place, having, as is well known, broken out first in Sunderland, and with his usual devotedness to the acquisition of knowledge, he visited the first and every succeeding case of this disease which occurred in the town, generally along with the late Dr. Clanny, whose work on this subject is known, and who attached much importance to the labours of his youthful coadjutor.

Subsequently he pursued his studies very successfully at the Westminster Hospital Medical School, at the same time attending the lectures of Faraday and other eminent Professors of various branches of study. In the class examinations he was always particularly successful, and many of his prizes, valuable Medical works, are still in his library.

The usual course of study having been satisfactorily completed, he commenced practice in Sunderland, his native town, but after a few years was laid aside by severe illness, the consequence of his devotion during a hard winter to a patient whose life he was instrumental in saving at the risk of his own—an instance of self-sacrifice too little appreciated, but of which the Profession furnishes many heroic examples. On his partial recovery he removed to Hanley in the Staffordshire Potteries, chiefly for the society of a brother who resided there, and to whom he was tenderly attached, and there he continued to practise till the end of his life.

Of his general character it is needless to speak here, except to say that he was a thoroughly conscientious and religious man. An advocate for the education of the masses, he strenuously supported, and took an active part in the management of, the Potteries Mechanics' Institution and other societies of a similar kind, and occasionally delivered lectures on subjects of public interest. Strongly impressed with the necessity for sanitary improvements, he urged on all occasions active measures in connexion with the Health of Towns and other Acts for promoting the public health, and was largely instrumental in the introduction of the Factories Act into the district.

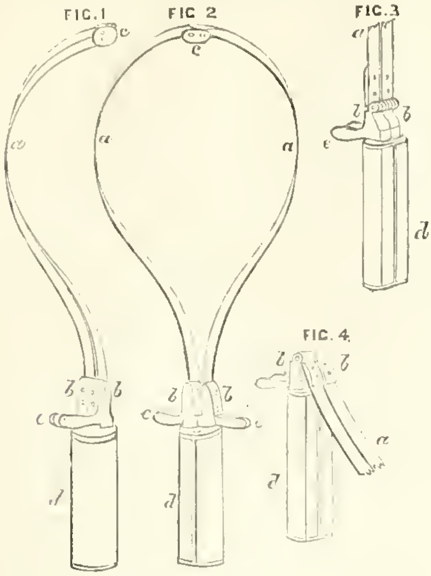
In his practice he was remarkable for the very great care he took in the investigation of symptoms; hence his diagnosis was exceedingly accurate. His treatment was in a great degree expectant; and he avoided both of the extremes which during his day prevailed, the antiphlogistic and the over-stimulating. He was a man whose proper position was that of a consulting Physician. His constitution could not withstand the fatigues of general practice, and he ultimately fell a victim to a combination of maladies originating in exposure to a most inclement climate.

He was held in the highest respect by his Professional brethren. He adhered most rigidly to Professional etiquette, and never attempted to increase his practice by those underhand and dishonourable methods so often adopted. His memory was wonderful, and his store of knowledge immense. It was hardly possible to speak to him on any subject with which he had not already some acquaintance. It may be mentioned, as a proof of the curiously-varied nature of his learning, that a few days before his death, when conversing with the writer, he stated incidentally, in order to illustrate the effect of opium on his brain, that he had once, under its influence, delivered a lecture on the "Ballad Literature of Spain during the Middle Ages"—a subject of which it may be safely affirmed that not fifty men in England know anything at all.

NEW INVENTIONS.

THE STEEL FILLET OF G. R. SHERATON, L.R.C.P.E., M.R.C.S.

This instrument is intended to supersede the forceps, vectis, etc., in cases of difficult parturition where the use of these instruments is indicated. It is constructed by combining a rotatory action with the fillet principle. It consists of two blades (*a*, Figs. 1, 2, 3, 4) of highly tempered and flexible steel, curved in a somewhat sigmoid form, fitted and fixed into the rotatory bars (*b b*) of the handle (*d*) at one extremity, whilst at the other they are united by being riveted into a linked joint (*c*), which allows each blade to rotate in opposite directions to the extent of 90°. The rotatory bars are also formed and fitted with stops to limit their motion to 90°. The rotatory bars rotate upon the handle (*d*), to which they are fixed by nuts being screwed upon their ends to retain them in their position. The handle (*d*) is flattened at the back part, to enable the operator to determine with accuracy its relative position to the fœtal head and maternal passages. The rotatory action is obtained by pressing upon the transverse bars or "lugs" (*e*), by which the blades are formed into a loop (Fig. 2) of elliptical form, having a short or transverse diameter of $4\frac{1}{4}$ inches and a long diameter of $5\frac{1}{2}$ or 6 inches. Tractile power is obtained by placing the fingers across the transverse bars. Its application may be effected by the blades being parallel (Fig. 1) or a little apart, forming a sort of fenestrum, and is to be introduced in the same manner as one blade of the forceps or the vectis, using the same precautions and preliminary measures as with those instruments. It may be applied over the occiput or chin, as desired; then the blades are to be made to rotate by pressing upon the transverse bars, when it is converted into a loop embracing the head. Its application is facilitated by the form of the linked joint, which renders the instrument, as it were, probe-pointed, whilst its being slightly moveable renders it less liable to catch folds of the maternal passages, etc. The flexibility of the blades allows it to adapt itself to the axis of the pelvis and to the form of the head. The thinness of the blades, from the small amount of space which they occupy, is also calculated to facilitate its application. The fingers are to be placed across the transverse bars, and tractile force applied in the direction of the axis of the pelvis. The amount of compression upon the head is always in proportion to the amount of force required in extraction, and from the manner in which that compression is applied it is not liable to cause injury to the child.



The chief advantages which this instrument seems to possess over the forceps are—

1. Its application is easier. *a*. The narrowness of its blades. *b*. The thinness of its blades. *c*. Its flexibility.

2. That one blade is of easier application than two.

3. It is less liable to injure the maternal passages or the fœtal head.

4. It occupies less space than the forceps.

5. It can be used without the knowledge of the mother.

6. From the facility with which it can be applied, the duration of the operation is shortened.

It may be made with a folding joint to render the instrument more portable, as Figs. 3 and 4.

MEDICAL NEWS.

◆

Royal College of Physicians of London.—At a general meeting of the Fellows held on Wednesday, July 18, the following gentlemen, having undergone the necessary Examination, and satisfied the College of their proficiency in the Science and Practice of Medicine, Surgery, and Midwifery, were duly admitted to practise Physic as Licentiates of the College:—

John Gill, Guy's Hospital; Francis Bateman, Canterbury; George Jesse Barnabas Stevens, 9, Trigon-road, Clapham road; George Arthur Kenyon, 30, Soho-square; Alexander James Low, 137, St. John-street-road; Henry Clothier, 2, Wilmington-square; George Christopher Taylor, St. Bartholomew's Hospital; Gifford Ransford, St. George's Hospital; Henry James Horton, Wrentham; James Keith Jeanneret Grosjean, 11, Sheffield-gardens, Kensington; Frederick Lewis Leonard, Royal Navy.

At the same meeting it was reported by the Examiners that the following had passed the Primary Examination for the Licence of the College:—

Frank Henry Laking and James Frederick Pavey McConnell, of St. George's Hospital; William James Rennett, Charles John Sells, William Bevan Lewis, Benjamin Walker, George Rootes, and George Stokell, of Guy's Hospital; Edward Withers Minter, John Lloyd, and David Havard, of University College; George Amsden, King's College; James Marc Taylor, Wednesbury.

Royal College of Surgeons of England.—The following gentlemen passed their Primary Examinations in Anatomy and Physiology at a meeting of the Court of Examiners on the 17th inst., and when eligible will be admitted to the Pass Examination:—

Messrs. Alfred Cuff, F. R. Rouse, H. C. Gill, Tempest Anderson, and A. P. Hurlstone, Students of University College; Charles Lewis, J. D. Mason, A. R. S Perkins, and Thomas Brockwell, of Guy's Hospital; Lawrence Clapham, E. S. Angove, and C. B. D. Duncombe, of St. Bartholomew's Hospital; R A S. Prosser and James Bradley, of Birmingham; M. F. Reilly and Thomas Wilson, of Du lin; G. C. Rigby and William Drinkwater, of King's College; W. J. Donor, of Philadelphia; F R Heycock, of Edinburgh; James Ridley, of Newcastle; G. H. Jackson, of the London Hospital; and Augustus Wells, of Hull.

The following gentlemen passed on the 18th inst., viz.:—

Messrs. T W. Evans, Lewis Edwardes, M. O. Coleman, R J Shepherd, W. F. Flowers, and A. S. Atkyns, Students of Guy's Hospital; Henry Cass, J. P. Bartlett, W. R. Gowers, and C. C. Whitefoord, of University College; Valentine Folwell, F. G Guy, and S. L. Trevor, of King's College; L. M. Griffiths and C. B. Bernard, of Bristol; Joseph Moore and F. A. Fisher, of St. Bartholomew's Hospital; G. F. Jones, of the London Hospital; A H. Newth, of St. Thomas's Hospital; D. W. Ferguson, of the Westminster Hospital: Frederick Woolhouse, of Sheffield; and G. Purdey Field, of St. Mary's Hospital.

It appears that out of the 72 candidates who offered themselves for this examination, 27 failed to acquit themselves to the satisfaction of the Court, and were consequently referred to their studies for three months; and one candidate had an additional three months, having been discovered copying from a gentleman under examination. The last Pass, or Surgical and Pathological, Examination for the present session will take place on Saturday next.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received Certificates to Practise, on Thursday, July 12, 1866:—

Owen Roberts Thomas, Liverpool; Arthur Walter Read, Arden Lodge, Coventry; John Henry Simpson, 34, Fore-street, E.C.

The following gentlemen also on the same day passed their First Examination:—

William Kipling, University College; John Lloyd, University College; David Havard, University College; Thos. Richardson Loy, University College; Edward Withers Minter, University College.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Hill, P. E, M.R.C.S E., has been appointed Assistant House-Surgeon to the Kent and Canterbury Hospital.

Hunter, G. Y., F R.C.S., has been appointed Consulting Surgeon to the Royal Sea-Bathing Infirmary, Margate.

Ley, R., M.R.C.S.E., has been appointed House-Surgeon to the London Hospital.

Llewellyn, R., M.R C.S.E., has been appointed House-Surgeon to the London Hospital.

Pitman, H. A, M.D., has been appointed Consulting Physician to St. George's Hospital.

Rundle, H., M.R C S.E., has been appointed House-Surgeon to the Hants County Hospital.

Thornton, W H., M R.C.S., has been appointed Visiting Surgeon to the Royal Sea-Bathing Infirmary, Margate.

BIRTHS.

Lamb.—On July 8, at Jarratt-street, Hull, the wife of G. Lamb, L.R.C.P. Lond., of a daughter.

Walters.—On July 4, at Reigate, the wife of John Walters, M.B., of a son.

Waters.—On July 5, at 1, Southampton-street, Bloomsbury-square, the wife of John Waters, M.R C.S., of a daughter.

MARRIAGES.

Dodgson—Hughes.—On July 17, at the parish church, Greenwich, H. Dodgson, M.D., of Cockermouth, to Frances, eldest daughter of the late Edward Hughes, Esq, of the Royal Naval School, Greenwich.

Fowler—Cullen.—On July 14, at St. Pancras Church, George Fowler, L.R.C.P., of Kennington-park, to Jane, youngest daughter of the late John Cullen, Esq., of Dublin.

Lloyd—Simpson.—On June 6, at Christ Church, Nellore, India, E. Eyre Lloyd, H.M. Madras Army, to Henrietta Elizabeth, eldest daughter of Moncrieff Simpson, Esq., of Nellore.

DEATHS.

Barker, D., F.R.S.E., at Southport, on July 2.

Davis, W., M.R.C.S.E., of St. George's, Wellington, Salop, on June 27.

Martin, Henry Clinton, Staff Surgeon, at Adelaide, South Australia, on May 14.

Oke, W. S., M.D., at 9, Portland-terrace, Southampton, on July 14, in the 82nd year of his age.

Perston, D., M.D., 13th Light Dragoons, at 1, The Grange, Michael's-grove, Brompton, on July 14, aged 78.

Stiven, W. S., M.D., at Pitlochrie, Perthshire, on July 13, aged 79.

Strong, Oswald Henry Baber, on July 11, at 64, North End, Croydon, only son of Henry Strong, M.D., aged 3 years.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Northleach Union.—Mr. J. D. Eames has resigned the Second District: area 25,570; population 3154; salary £52 per annum.

Toxteth-park Township.—The First District is vacant; salary £250 per annum.

APPOINTMENTS.

Bicester Union.—Frederick W. Parsons, M.R.C.S.E, L.S.A., to the Islip District.

Bury Union.—William Nuttall, M.R.C.S.E., L.S.A., to the Heap District.

Chorley Union.—John Hilton, M.R.C.S.E., L.S.A., to the Croston District.

Liverpool Parish.—Gustavus R. Rae, M.R.C.S.I., and John W. McCloy, M.D., M.C.I., to the Workhouse.

Collegiate Professorships.—At the last meeting of the Council of the Royal College of Surgeons, Mr. Henry Hancock, senior, Surgeon to the Charing-cross Hospital, was unanimously re-elected Professor of Human Anatomy and Physiology, and will give another course of lectures in continuation of his former course on the Anatomy and Surgery of the Foot. At the same meeting of the Council Mr. Thomas Henry Huxley, F.R.S., of the Royal School of Mines, was also re-elected Hunterian Professor of Comparative Anatomy and Physiology.

The Forfarshire Medical Association.—The eighth annual meeting of this Association was held in Sunnyside Asylum, Montrose, on Thursday, July 5, 1866. The minutes of last general annual meeting and subsequent meetings of the Council were read and approved of, as was also the treasurer's accounts. It was agreed to hold the next annual meeting in Brechin. The following office-bearers were appointed:—*President*: John Mackie, sen., Esq., Brechin. *Vice-Presidents*: John Todd, Esq., Friockheim; W. L. Gibson, M.D., Dundee. *Secretary*: J. R. Begg, Esq., Dundee. *Treasurer*: George C. Pirie, M.D., Dundee. *Council*: Drs. Nimmo, Arrott, Crockatt, Miller, Rorie, and Dewar. *Local Secretaries*: S. Lawrence, M.D., Montrose; J. A. Dewar, M.D., Arbroath; J. Guthrie, M.D., Brechin; G. P. Alexander, Esq., Forfar. Dr. Lawrence, Montrose, read a paper on "Medical Ethics," and Dr. Steele, President of the Association, read one entitled "Personal Reminiscences of the Cholera Epidemic of 1832." The members afterwards dined together at the Star Hotel.

Cholera.—The Registrar-General's Return for the last week takes a form with which we have been but too familiar in times which are not pleasant to think about. The particulars of seventeen deaths from cholera in London, all of them of short duration, and none exceeding two days, are published *in extenso*, just as such cases were dealt with in 1853-4. The Registrars of Bethnal-green, St. George-in-the-East, Stepney, Mile-end, Poplar, and Bermondsey, all return deaths from "Asiatic cholera," the most virulent case being fatal in nine hours. At Bromley, in the sub-district of Bow, three deaths from "Asiatic cholera," of twelve, fourteen, and sixteen hours' duration, were registered. At St. James's, Bermondsey, a mariner, aged 29 years, died on July 8 of "Asiatic cholera" (eleven hours). The Medical attendant states that the man arrived from Rotterdam, where cholera has prevailed, on the 7th inst., and was in a vessel that imported fruit. At Limehouse the son and wife of a dock labourer, aged respectively 9 and 46 years, died from "Asiatic cholera" (nine and fourteen hours), and a girl aged 6 years was carried off in thirteen hours. The total deaths in London for the week were 247 in excess of the corrected estimate for the season, and diarrhœal disorders, favoured by the intense heat of the weather, have increased very greatly. The total deaths recorded as from cholera were thirty-two, about half of which were cases of death by choleraic diarrhœa or ordinary summer cholera. Dr. Trench returns nineteen cases of cholera and fifty-three of diarrhœa from Liverpool during the week. No time should be lost in taking vigorous measures of house-to-house visitation, so that all impurities may be removed as far as possible; and the disease, wherever it is suspected, should be dealt with in its earliest stages when it is most under the control of Medical skill. Delay is not only dangerous, but fatal.

It is said that from ten to sixteen cases of death from bowel disorder have occurred at Southampton.

Cholera Bulletins.—The following are the latest accounts we find in the French Medical journals concerning the progress of the cholera on the Continent. As a general statement, it may be observed that almost everywhere in France the epidemic is either of slight intensity or on the decrease. In many localities mere ordinary sporadic cholera has been exaggerated into a supposed visitation of the epidemic form. At the seat of its most formidable outbreak—Amiens—the cases have decreased from 45 cases per diem on the 5th to 14 per diem on the 12th. From the 6th to the 12th of July there occurred 15 deaths at Dunkirk. At the small town of Armentières, in the department of the Somme, there has been a very severe outbreak, which is now checked. In some of the arrondissements of Lille, and at the railway junction, Hazebrouck, as well as other places along the course of the Lys, numerous cases of cholera have been met with. At Rouen three or four cases are met with daily, and several deaths are reported from Bordeaux. In the two Brussels Hospitals 192 cases have been admitted between June 19 and July 4, 91 of which have proved fatal, not counting the dead bodies which are brought into the Hospitals daily. At present the outbreak does not seem to have extended into civil practice. At Antwerp the disease broke out some time since on board the *Agnes*, and still prevails in the town. The returns only come down to June 16, by which time there had occurred 180 cases, with 81 deaths. The epidemic still rages with violence in Holland; for, from an official account furnished by Dr. Duilboulin, it appears that the cases increased from 305 with 159 deaths in the week April 29 to May 5 to 2500 cases with 1477 deaths from June 24 to June 30, the total numbers for the nine weeks being 8831 cases with 5235 deaths. Limburg is the only province which at present remains free from the disease. Some of the large towns still suffer very severely. Thus, in the week July 1 to July 7, there occurred 42 new cases at the Hague, 26 at Rotterdam, 30 at Utrecht, and 47 at Groningen.

Testimonial to Mr. Canton.—At a meeting of the past and present students of Charing-cross Hospital Medical School, held on Thursday last, to the number of 100, Mr. E. Sandwell in the chair, a valuable microscope and apparatus by Ross was presented to Mr. Edwin Canton, F.R.C.S., Surgeon to the Hospital, on his retirement from the Chair of Anatomy, after having been a bencher for upwards of twenty years. The meeting was throughout of the most satisfactory character.

Metropolitan Poor-law Medical Officers' Association.—The first general meeting of this Association was held on Monday last, in the Council-room of the Royal Medical Benevolent College in Soho-square, and was largely attended by members—Workhouse and District Medical Officers in about equal proportions, and representing nearly every part of the metropolis. Dr. Rogers, the President *pro tem.*, occupied the chair. Dr. Dudfield, hon. sec. *pro tem.*, having read the minutes of the preliminary meeting and the names of the members who had joined, and stated the steps that had been taken in organising the Association, Dr. Rogers addressed the meeting at considerable length, setting forth the objects of the Association as contained in the printed rules. He dwelt more particularly upon the necessity of making a great effort to better the condition of the sick poor and to raise the status of the Poor-law Medical Officers. Considerations of pecuniary remuneration, though important, should be sunk in comparison to the former objects. (Hear, hear.) They were engaged in the noblest work man could be engaged in. They were men of education and devoted to their work. (Hear, hear.) What, therefore, they should ask for was increased means of doing their duty to the sick poor. The amount of their salary, which was admitted by Mr. Farnall, the Poor-law inspector, to be quite inadequate, they would leave to the appreciation and justice of the public. The revelations which had been made respecting the treatment of the sick poor in workhouses had excited a strong public feeling upon this subject. The Poor-law Medical Officers were not responsible for that treatment. On the contrary, they did what they could to obtain more liberal treatment of the sick poor. (Hear, hear.) He thought that one of their objects should be to get the medicines for the poor at the expense of the State. He was glad to find that this recommendation had the support of Mr. Farnall. The objects of the Association were:—1. To obtain for the sick poor chargeable to the State, the advantages, in respect of nursing, dietaries, supply of medicines, Medical and Surgical appliances, cubic and floor space, ventilation, light and general treatment, enjoyed by the sick poor in Hospitals and kindred institutions supported by voluntary contributions. 2. To obtain life appointments for all Poor-law Medical Officers, and entire, instead of partial, payment of salaries from the Consolidated Fund; and thus to secure, at once, due recognition of their position as State servants and greater freedom and independence of action. 3. To provide a basis for consultation and united action in all cases of difficulty arising out of the nature and in the discharge of their duties. 4. To obtain an authoritative decision upon all disputed questions relating to duties and extra Medical fees. 5. To obtain from the local authorities the provision of all medicines and appliances prescribed for the sick poor, and the employment and payment by the same of qualified dispensers. 6. To address representations to the Poor-law Board by memorial and deputation, and, if need be, to petition the Legislature in such cases and circumstances as may appear to render such action necessary; and, generally, to provide a channel through which all defects in the Poor-law Medical service may be brought to light and discussed with a view to their removal or amelioration. These objects having been severally discussed at considerable length were agreed to, as well as a number of rules for the government of the Association; and a council of twelve members was then appointed. Besides the ordinary members there will be a second class of members—honorary in character, and consisting of "eminent Physicians and Surgeons, particularly those connected with public institutions." Portions of the report of Mr. H. B. Farnall, C.B., the Metropolitan Poor-law Inspector, relating to the duties, etc., of the Workhouse Medical Officers, having been read, together with his recommendations for the amelioration of their position, it was unanimously resolved—"That this meeting, representing the Poor-law Medical Officers of the Metropolitan district, cannot separate without recording their deep sense of gratification, inspired by his generous appreciation of their position and services." And a copy of this resolution was ordered to be sent to the Metropolitan Inspector. A vote of thanks to the Council of the Royal Medical Benevolent College for the use of their room terminated the proceedings, which had been marked throughout by a strong feeling of earnestness, moderation, and unanimity. The Council subsequently held a meeting to appoint officers for the ensuing year. The Council is constituted as follows:—*President:* Joseph Rogers, M.D. *Vice-Presidents:* Charles Andrews, M.D.; Charles Maynard Frost, Esq. *Treasurer:* Francis Godrich, Esq. *Honorary Secretary:* T. Orme Dudfield, M.D. *Other Members of the Council:* Robert Bruce, Esq.; James Clark, Esq.; Thomas Cotton, M.D.; Eugene Goddard, Esq.; Thomas Kirwan King, M.D.; George Edward Nicholas, M.D.; John Vinall, Esq.; with power to add to their number. We understand that the next meeting of the Council will be held on Tuesday next, when, no doubt, the best mode of realising the excellent and somewhat ambitious objects of the Association will come under discussion.

Fees in Coroners' Courts.—Dr. Lankester and Dr. Sansom.—At the meeting of the magistrates of Middlesex for the transaction of the business of the county on July 12, the report of the Committee of Accounts and General Purposes was presented, and among other subjects it said, the attention of the court having been called on the last county day to the alleged non-payment of fees to persons giving evidence before the coroner's court, it was referred to the Committee to inquire into the subject and to report thereon. They accordingly assembled at a meeting specially convened for the purpose of proceeding with the inquiry on the 11th ult., but a letter from Dr. Lankester being received by the Chairman of the Committee, in which Dr. Lankester requested permission to address the bench of magistrates on the whole question, the Committee at once postponed taking any steps in the matter, and informed Dr. Lankester that they entertained no doubt the Court would very readily afford him the opportunity he desired of addressing the Bench on the subject when it met on the 12th inst. Dr. Lankester accordingly attended the court, and said that he had observed in the *Times* observations which purported to have been made by the Chairman of the Committee of Accounts and General Purposes at the last county day, in which it was alleged that he (Dr. Lankester) was not in the habit of paying Medical men who were examined at inquests the fees that were due to them, and that one gentleman was compelled to proceed against him in the county court. Now, he usually paid those fees at the time of holding the inquests, and he held in his hand 76 certificates from Medical men in the district referred to, in which they stated that they received their fees at the time they gave their evidence, or even before they did so. Now, Dr. Sansom's was an exceptional case, and had arisen entirely on account of a quarrel between himself and Dr. Sansom. Under the present law, however, there was nothing which required him to pay the Medical witnesses their fees, as he did not receive £1 6s. 8d. which was given to former coroners for each inquest, but merely £1.

Museum of the College of Surgeons.—The annual report of the conservator of the above collection has just been made to the Council, and from this document it appears that the stores which have been accumulating in the basement of the building for many years past are now gradually yielding up their treasures to enrich the Museum. From this source several particularly valuable additions have come to light. One, specially deserving of mention, is a skeleton of that rare and probably extinct bird, the great auk (*Alca impennis*), of which only three other skeletons are known to exist in Europe, and none so perfect as the one in question. Some of the bones of this valuable Hunterian specimen were already catalogued in the collection, but without any reference to the remainder being in the possession of the College. The examination of the boxes in the store-room during the present year brought to light all the others required to complete the skeleton, with a few unimportant exceptions. It is the egg of this bird which realises such extraordinary prices. No less than 90*l.* was obtained for only three at a recent sale by auction at Stevens' Rooms. A fine skeleton of the walrus, presented by General Sabine, President of the Royal Society, is articulated and mounted upon the plan now generally adopted by Mr. James Flower, the articulator, and to which attention is particularly directed, as the head, various regions of the vertebral column, and the limbs are all made independent of each other, thereby giving much greater facility for examination. An interesting discovery was made in the latter part of last year, in the island of Mauritius, relating to the dodo (*Didus ineptus*), once an inhabitant of that island, but extinct for nearly two centuries. The head and foot were the only parts previously known, and these presented such anomalous characters that much speculation existed among naturalists as to the structure of the other portions of the skeleton. For many years numerous searches have been carried on in various parts of the island to endeavour to find further remains of this once frequent inhabitant, but hitherto in vain. The curiosity felt upon the subject was at last gratified by the discovery, during the draining of a marsh, of many bones of numerous individuals undoubtedly of this species. As a portion of these were sent to this country and offered for sale, the Council of the College have been enabled to secure, at a moderate cost, some of the most characteristic bones. The opportunity was also taken of obtaining, at the sale of the collection formed in South Africa by the late Gordon Cumming, a few skulls of important and rare animals from that country, including a remarkably fine head, with the horns, of the white rhinoceros (*R. simus*). The collection of physiological specimens by Dr. Bell Pettigrew have already been noticed in the *Medical Times and Gazette.* The helminthological collection by Dr. Cobbold is especially deserving of notice; the excellence of the manner in which the specimens are displayed can scarcely be surpassed, and their utility to the student has been greatly enhanced by the publication of a catalogue containing the most approved scientific name of every specimen, with its habitat and origin when known. It may not be generally known that the Museum is now open until five o'clock during the summer months.

Mr. W. Lucas Sargant, who is the great critic of statisticians, in a letter to the *Manchester Guardian*, takes exception to some of Dr. Morgan's statements in his pamphlet on "Deterioration of Race." "Dr. Morgan," says Mr. Sargant, "infers that the fecundity in Manchester is less than half that of Hertford. He asks us to believe that vice and disease produce such enervation as to issue in this diminution of child-bearing. I am happy to be able to show that that notion is fabulous. Nothing seems more convincing. Here are in Manchester two children to a marriage, and in Herts five to a marriage; then the fecundity of marriage is in Manchester less than half what it is in Herts. Convincing as this seems, it is really fallacious. The error consists in the confusion of marriages with married couples. It is obvious, when once suggested, that a place may have many marriages celebrated in it of couples who come in to be married and go out again to live. I happen to have gone through this calculation before, and to have discovered the ambiguity of the result. (*London Statistical Journal*, March, 1865, p. 121, column 12.) I find that the births in ten years to 100 marriages were in Manchester, 201; in Salford, 928; in Oldham, 585; in Bristol, only 175. It then occurred to me that probably the Salford people came into Manchester to be married, and went back to Salford to live; and that thus the marriages were registered in Manchester, the births in Salford. The question then arose, How many couples of breeding age there were in Manchester, and how many in Salford, and what proportion the births bore to these? I owed this notion to my friend Mr. J. T. Danson, of Liverpool. I found results much less abnormal. Taking, by the census, each 100 married women of 20 to 45 years old, it turned out that the ten years' births were, in all England, 299; in Manchester, 300; in Salford, 305; in Birmingham, 313; in Oldham, 305; in York, 306. In Liverpool the number was only 252; but I assigned reasons for believing that the register of births there was not to be trusted. It appears, therefore, by this reasonable mode of calculation, that the fecundity of Manchester is equal to that of the whole kingdom, town and country together; but that it is rather below that of some of the great towns. In this result there is nothing remarkable; and it is different indeed from the one obtained by Dr. Morgan. Manchester has vice and disease in unfortunate abundance, but these scarcely affect the fecundity of married people."

A NEW JAW.—Some of our readers may know that in the heart of the Walloon country, in Belgium, on the banks of the Lesse, near Dinant, there exist several bone caves which have been explored by Dr. Dupont, who has been provided with funds by the Belgian Government. In one of these caves, in an undisturbed bed containing remains of elephant, rhinoceros, and hyæna, a somewhat remarkable jaw has been discovered. Some of the *savants* who have seen it consider it to have belonged to a large species of anthropoid ape, more closely resembling man than any species hitherto discovered; others that it belonged to a man of more pithecoid affinities than the Australian. An official delegate from the Anthropological Society of London, Mr. C. Carter Blake, has been working amongst these caves for the last fortnight, and it is to be hoped that his report will clear up any confusion which may have arisen.

THE following are the last week's Cattle Plague Returns.

Census Divisions.	1. Attacked.			Back cases reported in the week ended July 7, 1866.	2. Result of reported Cases from the Commencement of the disease.				
	Week ended June 23.	Week ended June 30.	Week ended July 7.		Attacked.	Killed.	Died.	Recovered.	Unaccounted for.
Metropolitan Dist.	5	..	5	2	7908	3427	3713	318	450
South Eastern Co. .	4	1	1	1	4880	1705	2539	465	171
South Midland Co.	60	28	58	3	20701	8705	10068	1541	387
Eastern Counties .	10	8	12	1	11426	5398	4843	789	396
South Western Co.	..	..	..	..	1758	658	822	207	71
West Midland Co. .	43	41	67	9	14791	6273	6093	1518	907
North Midland Co.	39	39	27	2	18924	10887	6269	1220	548
North Western Co.	205	127	123	19	71493	24459	35026	8406	3602
Yorkshire . .	15	7	14	..	34547	7897	18353	5936	2361
Northern Counties.	2	3	..	..	8636	4931	2613	974	118
Monmouthshire & Wales . . .	7	3	5	..	8294	1149	5791	1057	297
Scotland . .	15	3	1	..	46858	6261	28087	10 07	1803
Totals .	405	260	313	37	250216	81750	124217	33138	11111

The Return shows that 313 attacks were reported to have occurred during the week ended July 7, being an increase of 53 on the previous week.

Correcting the total by adding an estimated average of attacks commencing during the week, but which may be subsequently included under the heading "Back Cases," the number for the week will be 352.

Note.—2 Inspectors for the county of Cumberland, who reported 3 cases last week, have not reported in time for this return.

THE AUSTRIAN WOUNDED.—The *Times* military correspondent, writing from the head-quarters of the Prussians at Münchengrätz on June 28, says:—"Nor are the Austrian Hospital arrangements such as they ought to be; twenty-six wounded men were found here when the Prussians marched in, lying in a cottage on a floor covered with blood, untended, with their wounds undressed, and saying that they had had no nourishment for forty-eight hours; no Surgeon had remained with them, nor was their condition reported to the Prussian commander; fortunately they were discovered accidentally by a Prussian staff officer. Hospital necessaries are scarce, but Prussian Medical men were sent to attend to them, and application was made to the magistracy of Münchengrätz to supply linen with which to dress their wounds. They are reported to have refused to assist in alleviating the sufferings of their fellow-countrymen, who were shot down in defending the very passage to their own town, till Count Stöhlberg, a Prussian officer of Cuirassiers, roused by their barbarity, drew his sword on the Burgomaster, and threatened him with death unless the wants of the wounded were attended to, when the necessary materials came forth."

NOTES, QUERIES, AND REPLIES.

◆

He that questioneth much shall learn much.—*Bacon.*

Lupus.—"Await Nature's result."

Dr. Pirrie.—The paper has been received, and shall appear as soon as space can be got

A Novice.—There is no universal rule. You had better write to the Physician-Accoucheur of the Hospital, the practice of which you desire to attend.

Hospital for Diseases of the Heart.—We are informed by Dr. Eldridge Spratt that a circular bearing his signature, which we characterised in our number for July 7 as snuffling and canting, was not written by him nor by his authority, and that he never saw the letter until it appeared in our columns.

The Army and Navy Medical Departments.—We are ignorant of the grounds which the *Army and Navy Gazette* may have for its assurance that her Majesty has affixed her signature to a new Warrant for the Army and Navy Medical Services. We remain extremely sceptical. The statement is so well timed and likely to induce young men to come forward as candidates for the next examination at Chelsea that its appearance at the present time is very suspicious. We can only reiterate what we have already said—viz. we can advise no Medical man to enter her Majesty's public services as these services exist at the present time. Promises and hopes founded upon them effect nothing. If the authorities could get men by promises, the Medical Departments of both services would be easily enough recruited.

B. W.—Dr. Francis Bernard's library was sold by auction for £16,000. The King and Queen's College of Physicians, Dublin, was incorporated in 1691.

Dr. Williams.—The first is the *Tænia mediocanellata*, and No. 2 the *Bothryocephalus latus.* You will see specimens, with full descriptions by Dr. Cobbold, in the helminthological collection of the College of Surgeons.

A Naval Surgeon.—No award of the *Gilbert Blane* medal has been made lately. It is left to the Director-General of the Medical Department of the Royal Navy and to the Presidents of the Royal College of Physicians and Surgeons, London. No list of the medallists has been published in the College Calendar.

Associate King's College.—When Peter the Great was in London in 1698, he visited the metropolitan Hospitals.

J. McS., M.D.—The late Mr. Toynbee was formerly attached to the museum of the College of Surgeons, and was one of the competitors with Messrs. Stone and Spilsburg for the appointment of Assistant-Librarian in that Institution, under Dr. Willis.

Epidemiological.—There have lately been one or two cases of cholera at Southampton, where it is supposed to have been imported by the *Poonah*, W. I. mail steamer. Dr. Wiblin is the quarantine officer, and from whom you would no doubt obtain the desired information.

A Metropolitan Fellow.—Mr. De Morgan stated as much in his letter on the subject to which you draw attention. The following are the forms, which you can obtain on application to the Secretary in July next:—The first is a notice and declaration of Mr. —— that he is a candidate for a seat in the Council, and that he does not practise as an Apothecary, which is signed by the candidate. The second is a certificate of *six* Fellows that Mr. —— is a fit and proper person to be a member of the Council, and his nomination as a candidate for a seat therein. The third and last is a certificate of *three* Fellows that Mr. —— is in the *bonâ fide* practice of a Surgeon, and does not practise as an Apothecary.

The Suspected Retention of Chloroform in some Individuals whilst Labouring under Disease.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Permit me to thank Dr. Sansom for his very gentlemanly reply to my letter, in your last week's journal, relative to the suspected retention of chloroform in the system. I must beg, however, to inform him that my observations were not limited to a single case, but to several cases, and extending over a period of years. Dr. Sansom states that chloroform does not pass out of the body through the kidneys, nor have I proved that it does myself; but I have found that it acts on the kidneys in some patients and not in others. The fact of chloroform removing a large quantity of bile from the blood through the kidneys is a sufficient proof that it sometimes acts as a diuretic; but in addition to this, I have been obliged to suspend the exhibition of spirit of chloroform in some cases, owing to its action on the kidneys, though I have not tested urine, in health or disease, for its presence.

The affinity which chloroform has for bile, out of the body, has been shown by M. Cuniset, who recommends it to be used for the separation of bile from urine. The affinity will show the possibility of chloroform being retained in the system by bile (when it is not eliminated), but I do not say that such is the case

The action of a remedy in health, on man and animals, differs entirely from that in disease, as also in the various constitutions which we have to treat.

Experiments on animals have done much, in my opinion, to retard the advancement of therapeutics, but the tolerance or intolerance of our remedial agents in disease is now being more correctly understood from physiological, pathological, and chemical investigations.

If my observations on the retention of chloroform had been conclusive, I should not have put the question to the Profession; but being wholly unable to account for the unmistakable odour of chloroform on several occasions, I attributed it entirely to retention and exhalation from some unknown cause, and I may add that the phenomenon occurred in every case a few days prior to death, but no *post-mortem* examinations were permitted.

The quantity of spirit of chloroform, as observed by Dr. Sansom, was small, but I may have been a little under than over the quantity taken by the patient, as no notes were made at the time. Moreover, the spirit of chloroform was ordered under the name of chloric ether, which contains a larger quantity of chloroform than the spirit of chloroform of the British Pharmacopœia.

If chloroform possessed the property of accumulating in the system under ordinary circumstances, when taken into the stomach, there would be no difficulty in making chemical investigations for its presence, but when cases only present themselves to one's notice at long intervals of time and unexpectedly, there is a great difficulty in analysing the atmosphere of a bed-room for the detection of the vapour of chloroform.

I am, &c. Henry Osborn, M.R.C.P. Lond.

Southampton, July 17.

COMMUNICATIONS have been received from—

Dr. Markham; J. Lewis, Esq; Dr. E. Ludlow; Dr. Fowler; Lupus; Dr. Osborn; A Novice; D. R.; A Surgeon, R.N: Apothecaries' Hall; Dr J. W. Cousins; Royal College of Physicians; Dr. Longmore; Mr. E. Bellamy; Mr. F. C. Skey; Dr. B. W. Richardson; Mr. J. Chatto; Dr. Hussey; Dr. Tilbury Fox.

BOOKS RECEIVED—

Ellis. Illustrations of Dissections (Plates 19, 20, 21)—Smith, On the Treatment of Pneumonia—Nineteenth Report of St Mark's Hospital, Dublin—The Glasgow Medical Journal (July)—Statistical Tables of Patients treated in Guy's Hospital during 1865—Meredyth, On the Duality of Venereal Ulcers - Parkes' Practical Hygiene—Sequin, On Idiocy—Thirty-sixth Annual Report of the Belfast Hospital for the Insane—Hussey, On Accidents to Volunteers—James, On Sore-Throat—Maunder's Treasury of Biography.

NEWSPAPERS RECEIVED—

The Brighton Examiner—The Brighton Herald.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 14, 1866.

BIRTHS.

Births of Boys, 987; Girls, 976; Total, 1963.
Average of 10 corresponding weeks, 1856-65, 1771 0.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	829	711	1540
Average of the ten years 1856-65	615·2	560·6	1175·8
Average corrected to increased population..	..	..	1293
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	6	5	3	3	6	6	18	2
North ..	618,210	11	10	14	2	15	13	37	4
Central	378,058	6	9	5	—	5	3	28	3
East ..	571,158	14	24	15	1	10	9	37	20
South ..	773,175	7	12	7	8	16	7	30	3
Total ..	2,803,989	44	60	44	14	52	38	150	32

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·038 in.
Mean temperature	68·2
Highest point of thermometer	87·2
Lowest point of thermometer	48 7
Mean dew-point temperature	60·5
General direction of wind	Variable.
Whole amount of rain in the week	0·00

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 14, 1866, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending July 14.	Deaths.		Temperature of Air (Fahr.)			Rain Fall.	
				Corrected Average Weekly Number.*	Registered during the week ending July 14.	Highest during the Week.	Lowest during the Week.	Weekly Mean of the Mean Daily Values.	In Inches.	In Tons per Acre.
London (Metropolis)	3067536	39 3	1963	1400	1540	87 2	48·7	68·2	0·00	0
Bristol (City) . .	163680	34·9	115	73	‡184	85·5	52 5	63·6	0·05	5
Birmingham (Boro')	335798	42·9	254	163	123	85·0	52·1	66·6	0 05	5
Liverpool (Borough)	484337	94 8	379	281	382	82·6	60·1	67·4	0·07	7
Manchester (City) .	358855	80·0	219	203	‡218	88 0	53·0	65·2	0·10	10
Salford (Borough) .	112904	21 8	58	57	50	84 4	52·2	64·1	0·08	8
Sheffield (Borough) .	218257	9·6	139	115	107	83 1	51·0	64 3	0·05	5
Leeds (Borough) .	228187	10·6	132	116	144	88·5	52·0	66·3	0 04	4
Hull (Borough) .	105233	29·5	79	49	45	..	..	..	..	..
Nwcastl-on-Tyne, do.	122277	22 9	83	65	56	78·0	50·0	65 7	0 41	41
Edinburgh (City) .	175128	39·0	141	84	85	82·7	52 0	65·4	0·20	20
Glasgow (City). .	432265	85·4	284	252	196	81 2	54·1	63·4	0·41	41
Dublin (City and some suburbs) .	318437	32·7	146	†156	93	80 7	49·0	63·7	0·04	4
Total of 13 large Towns . . .	6122894	34·4	3992	3014	3123	88·5	48·7	65·3	0·13	13
					Week ending June 30.	Week ending June 30.				
Vienna (City) . .	(1863) 560000	..	..	..	327	..	..	§ 70·9	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 30·038 in. The mean daily reading was above 30 in. on four days of the week. The barometrical reading decreased from 30·17 in. on Wednesday to 29·92 in. on Friday.

The general direction of the wind was variable.

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* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 56·3°.

APPOINTMENTS FOR THE WEEK.

July 21. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p.m.

23. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

24. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

25. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

26. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

27. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

COMMISSIONERS OF INLAND REVENUE.

CHLORODYNE.

The Original and Only Genuine.

DISCOVERED ONLY BY DR. J. COLLIS BROWNE, M.R.C.S.,

Late Army Medical Staff.

J. T. DAVENPORT

Begs to inform the Profession and Trade that he has received a letter from the Commissioners of Inland Revenue, to the effect that Chlorodyne cannot be sold either for Dispensing, Export, or otherwise, without bearing the Government Stamp. In consequence of this information, J. T. Davenport has found it necessary to alter the mode of sale.

Chlorodyne will now be sold only in bottles, 1s. 1½d., 2s. 9d., 4s. 6d., and 11s., with the usual discount. The 2s. 9d., 4s. 6d., and 11s. sizes contain respectively 1, 2, and 6 ounces fluid. The only genuine Chlorodyne has the words "Dr. J. Collis Browne's Chlorodyne" on the Government Stamp.

N.B.—Vice-Chancellor Wood stated publicly in Court that Dr. J. Collis Browne was undoubtedly the Inventor of Chlorodyne, and that the story of the Defendant Freeman being the Inventor was as pure a fiction as the falsehood deposed to with reference to the use of his Medicine in the Hospitals. Again, "I believe the whole of his (the Defendant's) statement to be deliberately untrue." These are the words of the Vice-Chancellor, and not the statements referred to by the Defendant in his advertisement. They are published to caution the Profession against imposition.

N.B.—It is necessary further to caution the Trade against the use of spurious Chlorodyne. See report in "Shropshire News," January 4, 1866, of a sad fatal result from its use. Chemists are reminded of the legal responsibility attached to the substitution of a Medicine different to that prescribed, heavy pecuniary damages having been obtained on several occasions for such an offence. No Chemist can possibly justify the substitution of a spurious compound, particularly of a Medicine like Chlorodyne, prescribed by orthodox Medical Practitioners throughout the land in extreme cases. See "Medical Times and Gazette," January 13th, 1866.

SOLE MANUFACTURER,

J. T. DAVENPORT, PHARMACEUTIST,

33, Great Russell-street, Bloomsbury.

ORIGINAL LECTURES.

NOTES OF LECTURES ON INSANITY.

DELIVERED AT
St. George's Hospital,
By GEORGE FIELDING BLANDFORD, M.B. Oxon.

Lecture II.—Pathology.

What is the pathology of insanity? In this question lies the whole difficulty of the subject we are discussing. Our inability to cure arises out of our ignorance of the relation of mind, and brain, and body—of diseased mind and diseased brain. One man comes and tells us that we can no more demonstrate diseased mind than we can see the soul in the pineal gland; another says that he never opens the cranium of an insane person without finding lesions indicative of insanity. Nevertheless it is true that within our skulls is that contained which in life is brain and mind, sound or unsound, which after death is brain, and nothing more. But we cannot see it till its working is over. We know something about this working and the manner of it, but we cannot watch it as we do the bees in the glass hive. When we open the head, we see nothing but the worn-out machine. And thus it is plain, that, although we must with all due diligence gather up the scraps of information which examination of the dissected brain will furnish, yet our inductive observation must be directed to the brain working in life, rather than to the structure after death. All the great discoveries in nerve physiology have been made by observation of, and experiment upon, living animals. How could Sir Charles Bell and all his followers down to M. Brown-Séquard have learnt those facts which are now become the very A B C of nerve physiology by looking at dead nerve structures? Vivisection has lent them its aid. By vivisection and this alone the rough outline, so to speak, of animal nerve physiology has been drawn with ever-increasing accuracy. But we cannot vivisect man. Disease alone provides us with experimental observation of man's mind in life; and with this, and with our examination of the dissected brain after death, we must rest content.

By comparative anatomy and physiology, by experiment on animals, and by accident and disease in man, we have arrived, through a process of exhaustive division, at this truth—that the grey cerebral matter is the seat of mind, that this is what we mean by nerve centres. What, then, can we find out by the microscope or by micro-chemistry about this grey matter, and about the white matter, which is of hardly less importance, without which the grey could do nothing? You will have heard in your anatomical lectures that the *grey* matter consists of cells and fibres, the *white* of fibres only. The cells of the grey matter in man vary in size from the $\frac{1}{12000}$th to the $\frac{1}{300}$th of an inch, and are rounded, pyriform, or irregular in shape, differing from those of other mammals, as the ox, sheep, or cat. They are embedded in a granular substance or stroma with blood-vessels and connective tissue, and the whole mass is disposed in no less, it is said, than eight layers. From each cell and to each cell proceed the fibres, for the idea of apolar cells is abolished. And the fibres not only join cell to cell, but they likewise form the whole of the white or medullary substance, and, acting as commissures, carry communications between distant nerve centres or other parts. Like the cells the fibres vary in size, ranging from the millionth to the $\frac{1}{1500}$th of an inch. The life of all these masses is derived, I need not tell you, from the blood. On the quantity and quality of this an immense deal, perhaps we ought to say all, of the force and energy of the brain depends. As a corollary some have said that upon the quantity of blood insanity depends, that congestion is the condition of insanity.

The *chemist* tells us that the brain is a highly complex organic structure; that, looking at its molecular constitution, we may expect it to be characterised by constant change in the arrangement of its atoms, by rapid recomposition and decomposition. And you all know that this is so—that the brain decomposes quicker, perhaps, than any part of the body. Its chemical composition consists of water 77, solids 23 per cent. Of these last about 9 per cent. are albuminous, 10 per cent. fatty, the rest being extractive and salts. Now, albumen, which exists so largely in the brain, has for its formula $10\,(C^{40}H^{31}N^{5}O^{12}) + S^{2}P$, each atom being made up of 883 ultimate molecules. If you read Professor Graham's papers on what he calls the *colloid* or dynamical condition of matter, as opposed to the *crystalloid* or statical condition, you will understand the high degree of molecular mobility which the brain must possess. The electrical condition of these molecules is a subject of much interest. I shall not, however, discuss it now, for as yet the whole study must be considered in its infancy.

When you seek for changes in the brain of insane patients, recollect that insanity is a disorder which, even though it persist, does not of necessity destroy life. With the exception of those attacked by general paralysis, insane patients may live the threescore and ten years allotted to man. They die comparatively seldom at the very outset of their malady; consequently, when we examine the brain of such, we see traces of a disorder which has existed, perhaps, for years. If, on the other hand, death has occurred speedily, we may find apparently nothing beyond that which is seen in many who have not died insane—indications that there has been violent vascular action, but nothing more. Now, too much attention must not be bestowed upon the former phenomena, nor too little upon the latter. We know that alterations in the blood supply of a part are followed by alteration and degeneration of the structure, but the question to be determined is, on what do the alteration of the blood supply and consequent degeneration depend? The word "structure" at once brings to our minds another word, one which is a perpetual bugbear to pathologists—this is "function." It is an old dispute, not yet settled, whether structure precedes function, or function structure.

Modern science has so improved the microscope, and modern methods of using it have revealed so much that was before unseen, that all are now trying to find altered *structure*, and many, finding it, are content therewith, and scarcely inquire into the *origin* of the alteration. They accept the conclusion. If there be disordered function, this, say they, comes from the diseased structure. Doubtless it often does; in numberless cases death itself comes from the morbid structure. Tubercle interferes with the function of the lungs, cancer with that of œsophagus or rectum, but we want the reason, the *cause*, of cancer growing where perhaps for fifty years it never grew. In another class of cases alteration of function, excess or defect of activity, comes first, alteration of structure follows. Take those cases where disorganisation of the spinal centres has lately been demonstrated, cases of tetanus, scrivener's palsy, etc. In the latter, scrivener's palsy, excess of functional activity must have been the cause, disorganisation the consequence. If there had been no continual strain on the part, there would have been no lesion. The functional activity of a blacksmith's arm increases its structure. In tetanus, the broken-down cell structures are the result of the convulsive disorder. If this stops, and the patient perfectly recovers, this disorganisation cannot have taken place; and this instance is, I think, analogous to disorder of the brain with insanity.

Now, what I have said concerning *structure* and *function* may be reconciled with the diagram of nerve physiology which I drew at my first lecture. If you recollect what I said about stimuli and the centres which are stimulated, you will understand, *first*, that where the stimulation of a centre is excessive, disorder, or even disorganisation, of that centre may take place, with corresponding resulting action, either temporary or permanent; *secondly*, that change may from other causes take place in the centre itself, either from its inherent and inherited tendency to change, or from faulty nutrition, or injury, or other accidental circumstance, and so disordered action may result, permanent or otherwise, according to the persistence of the change. In one of these two ways, insanity is, I believe, in every instance, brought about. I shall say a few words upon each of them.

I. *Abnormal Stimulation.*—Excessive stimulation will produce exhaustion of nerve centres, and if prolonged will cause alteration of structure, disorganisation, and death. This fact is familiar to us, and is evidenced in many ways. Excess of light will bring about blindness, temporary or permanent, according to the intensity and duration. Excessive noise will cause deafness. The battery of the torpedo is exhausted by continual stimulation; so is that of the electric eels, which are captured by this means, as all have read in Humboldt's account. And in the highest brain centres, in the mind of man, we may also trace the evil effects of over-stimulation. It may be accompanied by either pleasure or pain, the latter more frequently, as may be expected, producing disorder.

But often sudden prosperity has caused insanity, as well as the painful stimulus of grief, losses, anxiety, or overwork. Stimulation, as I have said, arouses in the centre feeling, and excessive and abnormal feeling will be roused by excessive stimulation, whether it be by long-continued grief, or political or religious excitement, or by some sudden intelligence or spectacle causing extreme horror or fear. And the highest nerve centres may be morbidly stimulated not only from without, but also from within. All those organic internal stimuli, which the old writers called "sympathies," produce a mysterious effect upon the cerebral no less than the spinal centres. Visceral sympathies, feelings of bodily pleasure and pain, may all produce the effect of over-stimulation. The extent to which this can be tolerated is a question of strength. Either it must cease, or the centre, being accustomed to it or being tired out, must heed it no longer, or disorder and disorganisation must follow. The pathological changes which take place may be surmised—we cannot see them. First, the circulation in the part is quickened, and the heat of course increased, and then sleep is prevented. Excessive waste—waste of heat, waste of tissue and of nerve force—ensues, and exhaustion follows, and death if there be no cessation. The vitality and the mutual relations of the nerve cells are affected, and the mental phenomena and resulting actions are transformed.

Insomnia, or morbid wakefulness, has so much in common with insanity that it must of necessity be studied in connexion with this subject. Practically, we have to be upon our guard and to fear the approach of insanity, when we hear that a man's sleep is gone from him, and when the attack has commenced, the procuring sleep is often the most important point in the treatment. Theoretically, the physiological and pathological condition of insomnia is closely allied to that of insanity. Sleep is prevented by an accelerated rate of cerebral circulation. The vaso-motor system is stimulated by mental or bodily causes, and before sleep can come these stimuli must be removed or counteracted. The abnormal stimulation I have just spoken of will produce loss of sleep in the first instance as it produces insanity secondarily, and hyperæmia is the condition of both. The remedies, too, which benefit the one will be of no less service in the other. Change of scene, food, exercise, the removal of pain, worry, and discomfort, are valuable alike to the bad sleeper and the insane patient.

II. *Defective State of Centres.*—The second cause of insanity, as I said, may be defect in the state of the nerve centres themselves. They may be too sensitive to ordinary stimulation, or they may be incapable of being stimulated by it. A draught of air or the slightest noise produces convulsions in tetanus; the mere sound of water causes them in hydrophobia. In dementia the worst news causes no grief, nor breaks the calm of the fatuous tranquillity. In melancholia each common event of life appears about to ruin and destroy the sufferer. This excess and defect, this hyperæsthesia and anæsthesia, may arise in various ways. *First*, it may come to us by inheritance; one man by his nature is nervous, sensitive, making mountains out of molehills, anxious overmuch. Another is stolid and indifferent, and takes little notice of what goes on around him. The sensitive man inherits a frail nervous organisation, highly susceptible even of ordinary stimuli. Some trifling event or ailment causes this to topple over, and his friends wonder what can have driven him mad. *Secondly*, disorder and disease of centres may arise from different circumstances, affecting the individual himself. His blood may be impoverished by bodily disease, or it may be altered by the introduction of alcohol or other toxic substances, or disease of the vessels may interfere with the supply, or blows on the head, or exposure to the sun, or the like, may impair the brain tissue. If any of these causes is removeable, recovery may take place. But if before its removal organic structural change is set up, then all hope of restoring functional health is vain. Here the microscope will reveal altered structure, but you must not expect to find it always without the microscope. And even with it the search may be a long one, for it will be of no use to examine the grey matter here and there at random.

Doubtless it will be said that this doctrine of over-stimulation is nothing but Broussais' idea of "irritation" reproduced. I can only say that I did not derive it from Broussais, having only a general and vague knowledge of his teaching. So far as he taught "physiological" theories in opposition to "metaphysical," I trust I may resemble him. What I have stated as my own opinion is based entirely on my own observation of mental disorder, its incubation, progress, and disappearance, and of the means by which we are able to dispel it.

I will here notice only very briefly the principal appearances which we find in the heads of the insane when we open them after death. Many of them are the results of processes which must of necessity have been of long standing, and these of course are the best marked and most visible. In recent cases the morbid anatomy is harder to investigate: beyond a general state of congestion and traces of violent vascular action, there is little to notice by the unassisted eye.

Bones of the Cranium.—Some think that the shape of the head is altered in chronic insanity, and that, when atrophy of the brain has taken place, the cranial bones shrink. This may be so, but it depends on a definite cause. The cranial bones, like the other tissues, degenerate. The brain is atrophied or turned to fat, the dura mater degenerates to bone, the bones themselves, instead of being vascular, harden into a lower and denser tissue. The diploë disappears, and is either replaced by solid bone, in which case the skull becomes very thick, heavy and eburnated, or it leaves the whole thin and diaphanous, there having been in this case little vascular action to increase the bony deposit. The whole points to degeneration of tissue.

The *dura mater* is generally more or less adherent to the bone in all old cases. In more recent cases it will probably show signs of increased vascularity. It often is stained with blood or pigment.

The *arachnoid* is thickened and opaque, also a sign of degeneration of tissue. Between it and the dura mater, we occasionally meet with exudations or false membranes, about which there has been much dispute, some looking upon them as cysts full of extravasated blood, others as exudations of a colloid or albuminous character. They are not uncommon.

The *pia mater* may be thickened and easily separable. In recent cases it is almost always engorged. In general paralysis it is often adherent to the cortical structure, which it brings away with it when removed.

The *brain substance* may be hyperæmic or anæmic, hypertrophied or atrophied, softened or indurated. That it should present appearances of hyperæmia, past or recent, we should expect from what I have before said. These will consist of discolorations of different shades, red or brown, and of enlarged and bleeding vessels, when it is cut into. In an anæmic brain we shall find just the opposite, a pale substance, and absence of blood in the vessels both of the brain and membranes. Hypertrophy of the brain substance is a very doubtful matter. I believe it to be a degeneration no less than atrophy. It seems to be an increase of the lower elements, the stroma or connective tissue, at the expense of the higher, *i.e.*, the nerve cells, just as I have noticed degeneration in the cranial bones. Atrophy we find in the insane, as in the aged sane. The convolutions shrink, the sulci open, and the thickness of the grey substance is notably diminished. Along with this we may find more or less hardening (induration) of the substance, from degenerative metamorphosis of the proper brain tissue. On the other hand, we may have *softening*, as in brain disease without insanity, *white* softening or *red* softening, mere œdema of the brain with effused serum, or extravasated blood infiltrating and reddening the part.

Such are some of the appearances which we see on roughly examining the head in the dead-house. But this is not all. We can no more determine the pathological condition of brain by this kind of examination than a toxicologist can speak of the presence of a poison without the aid of chemical tests. The microscope will tell us something more.

We conclude, *a priori*, deductively, that the nerve cells and the blood-vessels which supply them must of necessity be affected in cases of insanity, and our microscopic observations teach us that this is the fact. The *nerve cells* undergo degenerative change, and appear in every stage of decay. Sometimes they have lost their transparency; their contents are altered into fat and pigment granules. Their outline is broken down, and they cease to be cells, appearing as dark collections of granules. These differ according to the form and duration of the attack. Much, however, still remains to be learnt on this head. More attention has hitherto been paid to the *cerebral blood-vessels.* Microscropical examination has shown a thickening of the walls of the capillary vessels going on to contraction and obliteration, with atheromatous or osseous degeneration. This may be due to deposit within or without the vessel. Excess and hypertrophy of the connective tissue of the brain account, according to some, for this deposit on the vessels, and also for the obliteration by pressure of the nerve cells. These changes have been observed in various forms of insanity, and even in other diseases of the brain. The study of them by means of the microscope is still in its infancy, beset with the difficulties I have already alluded to; yet every year will bring new results if we do but observe in the right way. The relation between insanity and the other organs of the body I shall speak of hereafter.

ORIGINAL COMMUNICATIONS.

REMARKS ON THE PATHOLOGY OF CHOLERA(a).

By G. H. BARLOW, M.D.,
Physician to Guy's Hospital.

When this formidable malady first made its appearance in this country, there were indeed varieties of opinions as to its treatment, and remedies without number, as different as they were numerous, were advocated, each as certainly successful, yet each of which, when tried, was found to be as certainly useless.

Nearly all Medical Practitioners, however, acted upon the assumption that to restrain the diarrhœa was a principal indication if not *the* principal one. The great controversy in which any fundamental principle was involved being the question as to the origin of the disease, whether it was what some would call strictly epidemic—*i.e.* brought to the population by atmospheric or telluric influences; or whether it was purely contagious—*i.e.* produced only by contact or communication with some one affected with the disease. It might not be uninteresting, were there time and opportunity for the inquiry, to trace the connexion between the discussions respecting cholera, both on the former and on the present occasions, with Medical questions which were then uppermost in the minds of Professional men, and in some degree of the public also. Thus, in 1849, and for some years before and after, the question of contagion, as regarded not only cholera, but many other diseases, especially fevers, was agitated with much earnestness; and men were found to range themselves on the side of the contagionists or non-contagionists with all the zeal and, in many instances, with not a little of the acrimony of political or theological partisanship. The reason of this, perhaps, was obvious. There were many philanthropists who, forcibly impressed with the amount of disease which seemed to originate, and was undoubtedly propagated, in localities where all sanitary precautions, as regards drainage, ventilation, and cleanliness, were utterly neglected, paid little heed to the delicate investigation of the evidence by which the contagiousness of many forms of disease was to be established, and perhaps entertained an honest prejudice (if the expression may be allowed) against a doctrine which seemed to detract from the importance of their favourite schemes for improving the dwellings of the masses of the people. There were others again who could not resist the evidence of contagion afforded by several, though perhaps isolated, cases of cholera, and who, thinking they had thus found a *vera causa* for the propagation of the disease, regarded as unphilosophic any attempt to look for another. These questions have now nearly received the practical answer that the disease is communicable, but that its extension is controlled by endemic as well as epidemic influences, by the surrounding circumstances and manner of life, as also by the constitution of each individual. Yet it is remarkable that no one then questioned the importance of the diarrhœa in the production of some of the most formidable symptoms, and the Board of Health published directions for checking it in cases where Medical assistance could not readily be procured. All these precautions we are now told to regard as not only useless but almost mischievous, since we are assured, upon authority entitled to the greatest consideration, that the diarrhœa is a mere accident in the course of the disease, and that when it occurs it is to be regarded as salutary rather than injurious, since it is no way efficient in inducing the most formidable symptoms of the disease, but should rather be regarded as a conservative effort on the part of Nature to eliminate the morbific matter from the system —a theory which is attractive from its plausibility, and which has been supported by an amount of ingenious though, as I humbly think, fallacious reasoning, that entitles it to calm and unprejudiced investigation.

As, however, I wish to give to this communication as little of a controversial character as possible, I shall adopt a process of investigation independent of that followed in the work to which I allude, and shall inquire—1. What is the office performed by water in the animal economy? 2. What are the effects to be apprehended from its defect or rapid withdrawal? 3. How far are these *à priori* anticipations verified in other diseases than cholera? or, to put the proposition in a more comprehensible form, what symptoms do we observe when the admission of water into the circulation is interfered with, or when it is too rapidly eliminated from the system, or when the right performance of its functions is interfered with by disease in any organ? 4. How far do these symptoms coincide with the prominent ones observed in the more advanced stages of cholera? And here I would observe that in the diarrhœa of cholera we have to do with the withdrawal of serosity—that is, of water with a small amount of salts—from the system; and that, therefore, I reject, as leading to error, all analogies drawn from the abstraction of blood or even serous fluids, though I may hereafter advert to the effects of such discharges as affording by contrast a remarkable confutation of the views in support of which they have been adduced. What, then, is the office of water in the animal economy? The water which is received into the stomach is, with such soluble matters contained in it as are not decomposed in the primæ viæ, taken up by the capillary branches of the veins which converge to form the venæ portæ, carried onwards with the blood through the trunk of that vein; here a portion of it is separated in order to furnish a solvent for the solid contents of the bile. Passing onwards through the pulmonic and systemic circulation, the redundant water of the blood carries with it those inorganic soluble matters which it contained at first, and receives, or rather acts as a solvent to, those effete products of the interaction of the blood and the tissues which are to be expelled from the system, or at least from the nourishing fluid. Holding these substances in solution, it is carried on with the current of the blood to the other great excretory organs, the skin and the kidneys, whence it passes out of the system, carrying with it the substances which each of those organs is designed to eliminate, but which it cannot remove unless brought to it in solution.

Before proceeding to reply to my second query, I may remark that the entrance of water into the circulation may be opposed as it were *in limine* by obstructions high up in the alimentary canal; again, its passage may be intercepted in the portal system, as by disease of the liver, or even further on in the heart and lungs; all which obstructions may be so great as to prevent there being such a supply of redundant water in the blood as is requisite for the solution of the excretory matter, and from this cause there may arise inquination of the blood by these substances.

When the ingestion of fluid is obstructed at the commencement of the small intestine, we should apprehend, *à priori*, general diminution of the volume of the circulation, with changes in the physical character of the blood arising from the defect of water in proportion to the other ingredients; and as the effect of this, derangement of the circulation, gradual failure of the motor powers of the heart from the withdrawal of its natural stimulus, consequent congestion of the lungs, lividity, suppressed secretion, and urgent thirst. When the obstruction is further on in the course of the circulation—as in disease of the liver, whether primary or arising from obstructed circulation in the chest—we should anticipate, as regards the circulation, effects much of the same kind as in the former instance, though of a less intense character; since we cannot conceive of any obstruction taking place in the portal or pulmonic circulation, such as would intercept the current of the fluid so perfectly as occurs sometimes in obstruction in the small intestine. There would also be this difference, that the obstruction would be either in or beyond the circulation through the liver; and, therefore, we should anticipate escape of fluid from the circulation tergal to the obstruction and the effects of a deficiency of fluid beyond. We should, in fact, expect no deficiency in the biliary secretion, but rather a tendency to diarrhœa or dropsy, the congestion, lividity, and diminished secretion from the kidneys being the same as in the former instance. It is needless to occupy time by speaking of obstructions further on in the system than the mitral valve since beyond it the fluid may be considered to have fairly found its way into the circulation; and although such obstructions do occur, they are propagated backwards, and ultimately resolve themselves into obstructions at or tergal to the mitral valve. I therefore pass on to the main outlet by which the fluid makes its exit from the system, and through which it ought to carry the soluble excretory matter, the urea, the urates, etc. Now, if this organ be diseased so as to obstruct the exit of the fluid, we should expect the effects of retained fluid, such as dropsy, together with those of toxæmia—*e.g.* head affection, spasm; but if it were so affected that it allowed the passage of the fluid, but not the elimination of the excretory matters, we should expect the uræmic symptoms only.

(a) Read to the Hunterian Society.

I now proceed to the third query, How far are these *à priori* anticipations verified by what we actually meet with in disease? Most of us have seen several—few can have been long engaged in practice, or have spent any time in the wards of our Hospitals, without witnessing some—of those cases in which there is obstruction in the duodenum, or high in the jejunum. The appearance of the subject of this serious lesion cannot but strike any one who has an eye for what I would call the physiognomy of disease. I am somewhat anticipating, but I do not hesitate to aver that to the eye he presents the most exact resemblance to a cholera patient—not a mere approach to it. And what have we to account for this condition? All the ingesta taken into the stomach are instantly rejected, there can no fluid pass into the small intestines or be absorbed thence by the mesenteric veins, the drain from the blood by the excretions cannot be repaired, and the fluidity of the blood is not maintained. The impaired fluidity of the blood prevents the access of that fluid to the air in the lungs, and one important moving power of the pulmonic circulation is suspended—I would rather say that *the* motor power of the capillary circulation of that system is so—and what is the consequence? The blood is arrested in the pulmonic arteries, there are pulmonic congestion and its consequences, lividity, a short cough, dyspnœa, a husky voice; but more than this, the fluidity of the blood being nearly destroyed, the interaction between the blood and the tissues in the systemic circulation languishes, organic functions, or, at all events, the eremakausis, upon which animal heat depends, are arrested, and therefore the temperature rapidly sinks; when we come to examine this patient more closely we shall find that, though able to speak, to move himself, to sit up in bed, and even to walk, he is pulseless: he is organically dead, or nearly so; he has the cold and shrunken extremities of cholera, and its cold tongue and breath. If we inquire further we shall find that the secretion of urine is not merely diminished, it is absolutely suppressed. I do not imagine that any one in this Society will accuse me of adducing a fictitious case, though perhaps some may imagine that I have grouped together the more remarkable symptoms found in several cases of this kind in order to produce a typical case. I beg to say that all the symptoms which I have here described presented themselves in a boy who was my patient in the Clinical ward twenty-one years ago, and who passed no urine for five days before his death, and that I have met with several such since. In this case, I may add, there was found upon inspection occlusion of a portion of the duodenum by adhesion and a band of false membrane. The lungs and right heart were in a state of congestion; there were in fact, besides the abdominal lesion, the anatomical conditions of a subject dying from asphyxia. When there is intestinal obstruction from disease further on or in the course of the small intestines, we generally find more or less depression of the moving power of the circulation; greater or less diminution of the secretion of urine; more or less, in fact, of the symptoms described in connexion with duodenal obstructions, according as we have the disease higher or lower in the intestine, or, at all events, according to the earlier or later or more or less urgent vomiting—according, in short, as we have a greater or less obstacle to the admission of fluid into the system. When there is obstruction beyond the ileo-cæcal valve, the condition of the patient is altogether different. There may be obstinate constipation for days together without vomiting, and therefore with an abundant secretion of urine.

If now we take a glance at the course of the fluid from the intestinal canal to the right auricle, we often meet with cases of chronic disease of the liver—as, for instance, cirrhosis or fibroid degeneration—in which the portal circulation is materially interfered with. In these cases the urine is for the most part scanty; but there are generally none of the effects of retained secretions, since the general nutrition of the body is feeble and the waste of tissues slow; but what is remarkable is, that in such cases we have rarely, if ever, a tendency to diarrhœa though we often induce it as a means of relief; but, on the other hand, the redundant fluid obstructed in the portal circulation is relieved by the escape of serum (not serosity) into the serous membrane of the abdomen and afterwards into the areolar tissue of the lower extremities, giving rise to ascites and anasarca.

Cases again sometimes present themselves, and though rare they are highly interesting and instructive, in which the ascending cava is obstructed as high sometimes as its entrance into the right auricle by the development of a new growth from its lining membrane, so that the orifice of the vena porta hepatica is nearly closed and the circulation through the liver greatly obstructed. Here then we have the greater portion of circulating fluid intercepted just before it reaches the pulmonic system, and there is an approach to the conditions of cholera as assigned to it by Dr. Johnson. What, under these circumstances, do we find to be the effects upon other parts of the system? There is, as in the instances of intestinal obstruction, a great diminution in the quantity of the urine; there is thirst, a feeble pulse, some coldness of the extremities, and other signs of a languid circulation. This obstruction, however, rarely finds a vent, at least spontaneously, in the form of diarrhœa; but there are ascites, hæmatemesis, and sometimes intestinal hæmorrhage.

We find, then, that in those cases in which there is obstruction to the passage of the fluid from the portal system into the general circulation, there are some of the symptoms which we have ascribed to defect of fluid in the system or a drain of fluid from it—feeble action of the heart and arteries, thirst and scanty urine—some, in fact, though in a less degree, of the symptoms of cholera. These are superadded to the other symptoms due to the mode in which the obstruction is produced, or, in other words, to the manner in which the deficiency of the fluid in the system is brought about.

We now pass on to obstructions in the pulmonic system, and we arrive at a condition of things almost identical with the hypothetical "stoppage of blood from the right to the left side of the heart," which has been assumed as the cause of the collapse of cholera; and, indeed, upon the theory which I have advanced of the necessity for a free transit of fluid through the system, there ought to be some of the symptoms of cholera—those, in fact, which are due to diminished flow onwards into the arterial system (whether that diminution arise from abstraction or impediment), though, according to the theory that affirms this stoppage as the potential cause of the phenomena of the disease, we ought to have cholera itself. What, then, do we really meet with? With lividity from the imperfect arterialisation of the blood we have often coldness of the extremities, and now and then cramps. From the diminished arterial circulation we have scanty urine, very small and sometimes almost imperceptible pulse, and after a time gorged liver and ascites. We have, in fact, those symptoms of cholera which may be explained by the conditions which these cases have in common with cholera, namely, the diminished arterial circulation and scanty urine. But we have also other symptoms—a great impulse of the heart, due to the gorged right ventricle and enlarged liver and ascites—symptoms to be explained by conditions which are present in these cases but are absent in cholera; while, on the other hand, we have not the symptoms of true cholera, watery vomiting and purging.

Cases of this sort present themselves under various forms. Thus acute and extensive bronchitis may be set up and rapidly develope itself, and we have obstruction to the capillary circulation in the lungs between, as it were, the pulmonic arteries and veins. Some of these cases are rapidly fatal, and we have before death urgent dyspnœa, lividity, clammy extremities, very small and rapid pulse, scanty urine, but not diarrhœa, still less cholera. After death, besides the condition of the bronchial membrane characteristic of bronchitis, we have the right side of the heart and pulmonic arteries gorged, and a comparatively empty condition of the pulmonic veins and left heart. Similar instances may be found in cases of acute phthisis, fatal in a few days, which sometimes present themselves.

When, again, there is disease of the mitral valve, whether obstructive or regurgitant, we have a similar state of things as regards the right heart and pulmonic arteries, but there is in addition engorgement of the pulmonic veins and left auricle, the left ventricle being comparatively empty in cases of obstruction, though moderately full where there is regurgitation. Here we have dyspnœa, thirst, very cold extremities a feeble (often intermittent and sometimes imperceptible) pulse, and scanty urine, but we have not cholera. These cases do no doubt present many symptoms in common with cholera—those in fact which are due to diminished supply of fluid to the arterial system, not as in cholera from its abstraction, but from obstruction to its access. Affections of the aortic valves do not produce in their earlier stages any serious obstruction to the pulmonic circulation or impediment to the ingress of fluid into the system; and later their effects become almost identical with those of affections of the mitral valve.

(To be continued.)

ON THE NATURE OF VITAL FORCE.

By LIONEL S. BEALE, M.B., F.R.S.

Dr. Moxon says that my reply does not touch the question considered in his paper, the question being this—"Is there ground for believing that vital force is a correlative of the physical forces?" He says that *all* (!) that Dr. Beale urges is a "total difference" between the operations of vital force and the operations of chemical force. I think, however, that those who have glanced at the papers I have published in the *Medical Times and Gazette* during the last year will find many arguments which tend to prove that, whatever vital force may be, it is not a correlative of chemical or any other form whatever of physical force.

I have endeavoured to show that certain phenomena occur in everything that "lives," or are invariably associated with the *living state*, and that such phenomena cannot be proved to result from the working of any form or mode of force yet known, nor are they manifested by any form of non-living matter. It seems to me that unless it can be shown, in at least one single instance, that *force* really causes matter in relation with it to *grow*, *move*, *divide*, and *form*, we have no right to attribute such phenomena to force. Every kind of matter which *grows*, *moves*, *divides*, and *forms*, can be proved to come from matter which did the same before it. Now, since machines and laboratories, which it need scarcely be said are not derived from pre-existing machines and laboratories, but in which force is conditioned and chemical relations are altered, neither *grow* of themselves, *move* of themselves, *divide* or *form* of themselves, it is surely most unreasonable to assert that mere force-conditioning machines or laboratories are like living things.

In these days things are oddly named—some people persuade themselves that they see some likeness between a little transparent moving stuff which seems to rearrange itself of itself, and a room devoted to chemical operations, and so they call this soft transparent matter a *laboratory*. Some might naturally inquire, what is a laboratory without a chemist? and ask how the chemist is to be discovered in the transparent moving stuff. When a laboratory is discovered in which the proper chemicals transport themselves into the fit and proper retorts and crucibles, and these place themselves over the fires, &c., then may the laboratory be fairly compared with the living matter in which special chemical changes go on, not only without any chemist to direct them, but also without any apparatus whatever. If, as the new philosophers say, *force* is the chemist which works in the cell, would not force be found a cheap and efficient substitute for the chemist in the laboratory?

With reference to the correlation of the physical forces, I suppose every one now accepts the view that the forces which are correlated are mere forms or modes of primary energy or motion. Heat being conditioned in a certain way becomes motion, and motion may be converted into heat. Light may be made to assume the form of heat, motion, electricity, &c., and other different forms of force may be made to take the form of heat or motion, but no form of life has yet been caused to take any form or mode of physical force known. It seems necessary to draw Dr. Moxon's attention most particularly to the fact that *life has never been converted into heat, nor heat* or other form of force into life. What right, therefore, has any one to assume that life is correlated force? Of course a man is free to assert this, just as he is free to assert many other things, but such an assertion is not supported by facts. How do the forces of living matter differ from the forces of dead matter? This is one of those questions which we shall be told will be answered before long, although it cannot be positively answered yet. It will be said that although people may now hold the opinion that dead matter is made up of matter and force in the same proportions as living matter, the rapid advance of science will prove that such a view is untenable! When facts and arguments fail, prophetic assertions will readily convince those longing to be convinced, and the number of people who want to be convinced that life is force appears to be upon the increase. Still, what we call *life* seems to be a something which for a time controls and directs physical forces, while it effects the rearrangement of the elements of matter in a remarkable manner. The idea of one form of force *controlling* and *directing* another form of the same primary force seems absurd, seeing that no form of force yet known has been proved to be capable of directing or controlling anything. The loose but positive statements advanced in order to make us accept the dictum that *life* is *force* might be urged with almost as much show of reason to prove that life was matter.

But, after all, Dr. Moxon does not himself concur in the view that the vital and physical forces *are* correlated. He believes that "it is possible to show that the mode of proof which is acceptable in the case of simple sequences is not acceptable in the case of sequences combined with arbitrary co-existences; that is, the law of universal causation of all simply successional phenomena wherein successions may be combined with collocations due to attractions, elections, or preferences, which are rather *voluntary* than chemical, although remote in their nature from human conscious volition." Now, I regret that I must absolutely decline to enter into any discussion concerning the law of "universal causation," and other matters referred to in this long sentence, at any rate until Dr. Moxon has settled preliminary and far more simple matters. I ask, why does a simple living thing grow, and move, and give rise to other things like itself? Dr. Moxon seems to hint at the existence of different kinds of volition, voluntary attractions, elections, and preferences differing from chemical attractions, etc., but, nevertheless, remote from conscious volition (!). I lose myself, however, in a maze of words—collocations, elections, voluntary and chemical preferences, etc., which ought not to be used unless they are first accurately defined. Am I to be the fly to entangle myself in the networks of *voluntary* and *chemical* attractions, when I know that wary spiders are ever on the watch to pounce upon any one caught in the web they have so cleverly spun? Let us investigate the real structure of the web instead of blindly flying into its meshes with the certainty of being caught and wrecked. As Dr. Moxon has failed to understand me, I may be permitted to try to state my difficulties more clearly in another short communication.

NOTES ON A CASE OF SUDDEN DEATH FOLLOWING LABOUR.

By C. F. NURSEY, M.D.

Some months since I was engaged to attend Mrs. W. H., residing in the Searva, Sirhowy, South Wales, in her ninth confinement. She was 38 years of age, and suffered from albuminuria and anasarca. She was a short, thick-set woman, and had been attacked with severe convulsions during her seventh labour. I prescribed a diaphoretic for her, and occasional doses of the compound jalap powder, by which treatment she appeared considerably benefited. The abdomen was of enormous size, so much so that she was confined to her bed almost entirely.

In this condition she remained till the day of her confinement, February 13, when I was sent for at 2.30 p.m., labour having set in four hours previous to my arrival. I found her in bed, and only very slight pains existing. The os was fully dilated, and the head presented in the first position. The membranes protruding I ruptured them, and gave exit to an immense quantity of liquor amnii. Her pains now gradually increased, and the head entered and passed slowly through the pelvic cavity. A fine female child was born at 4 p.m., and the patient expressed herself as feeling considerably relieved and thankful that so far all was safe. I examined the abdomen and found it still very large. In the course of ten minutes she had a pain, when I followed the cord with my finger to the os, expecting to find another set of membranes; but to my surprise a portion of placenta presented at the orifice. I introduced my hand into the uterus, and was satisfied that nothing remained but an enormous afterbirth. With some little trouble I got beyond the mass, and, aided by uterine contraction, external pressure, and my hand in utero, I succeeded in removing an immense hypertrophied placenta weighing 5 pounds, and measuring 11 by 8 inches, and 2¾ inches in thickness. The veins upon its fœtal surface were enormously distended with blood; the cord was of ordinary size and length. The uterus did not thoroughly contract, and the vagina having filled with clots I swept them away. Afterpains soon commenced, and perfect uterine contraction ensued; she had only a moderate loss of blood, and not enough to constitute flooding. I bound her firmly and gave her opium. She complained of nothing, and said that she felt comfortable. Her pulse was 94. I ordered her perfect rest, cold drinks, etc., and left her at 5 p.m. At 6 p.m. I was summoned, as she was worse. I found her dying. She was wildly tossing her arms, exceedingly restless, quite pulseless, with cold extremities, and deathly pallor. I removed a few clots from the vagina, and no hæmorrhage ensued. The uterus had somewhat relaxed, but on squeezing and keeping up pressure contraction again followed. I poured down all the brandy I could, but she never rallied; deep heaving expiration and a convulsive attack shortly supervened, which carried her off at 7 o'clock, just three hours subsequently to the child's birth. When I saw her at 6.15 she was conscious, but soon became comatose. She appeared bloodless at the time of death, and her breath had a saccharine odour.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

THE LONDON HOSPITAL.

CASES OF CHOLERA.

We are sorry to say that the number of cases of cholera at this Hospital is very great. 150 cases of cholera and choleraic diarrhœa have been admitted, and up to July 26, 63 patients have died. 74 remain in the wards. Of the 13 recoveries, four only, Dr. James Jackson tells us, were cases of genuine cholera. (See table below.) A good many children, from nine months to five years, have been brought in, and most of them have died. There are now in the Hospital a man, his wife, and two children. Many of the patients—viz. eleven to-day (Wednesday)—say on coming in that they have left relatives at home dead or dying, or are of the family of patients already in the Hospital. One woman was brought in pregnant. She was delivered next morning of a dead child at the full time, and died five hours after. Two other women died pregnant, at six months.

The following table was supplied to us by Mr. Cappe on Thursday morning, July 26:—

Cases admitted into the Cholera Wards of the London Hospital.

	Cholera. Males.	Cholera. Females.	Diarrhœa. Males.	Diarrhœa. Females.	Cases of Diarrhœa treated as Out-patients.
July 10, 1st day .	—	1	—	—	No account kept.
,, 11, 2nd ,, .	—	—	—	—	
,, 12, 3rd ,, .	—	—	1	1	
,, 13, 4th ,, .	1	—	—	—	
,, 14, 5th ,, .	—	—	—	1	
,, 15, 6th ,, .	1	—	—	—	
,, 16, 7th ,, .	1	—	—	—	
,, 17, 8th ,, .	1	1	—	—	
,, 18, 9th ,, .	5	1	2	—	144
,, 19, 10th ,, .	4	1	2	—	269
,, 20, 11th ,, .	8	6	1	—	291
,, 21, 12th ,, .	9	3	—	1	306
,, 22, 13th ,, .	17	6	1	6	385
,, 23, 14th ,, .		7	5	3	554
,, 24, 15th ,, .	11	6	2	2	458
,, 25, 16th ,, .		6	—	5	446
,, 26, 10 a.m. .	11	10	—	—	123
	69	48	14	19	
	117		33		2976

Ages.	Cholera. Males.	Cholera. Females.	Diarrhœa. Males.	Diarrhœa. Females.
1 to 10 . . .	16	11	—	2
11 ,, 20 . . .	12	4	4	3
21 ,, 30 . . .	14	11	6	5
31 ,, 40 . . .	15	6	1	6
41 ,, 50 . . .	6	9	2	1
51 ,, 60 . . .	5	4	—	2
Upwards . . .	1	2	1	—
	69	48	14	19
	117		33	

Recoveries, 13; deaths, 63; remain in the wards, 74 : 150.
Two brought in dead not included in this return.

Every exertion has been made on the part of the authorities to meet the emergency. A great many nurses, both male and female, have been added to those already on duty; but there is a difficulty in getting nurses, although most liberal terms have been offered. There is a placard affixed to the gates "Nurses wanted." Two large wards have been set apart. The Alexandra wing was just ready for opening, and would have been opened on the 27th by the Duke of Cambridge but for this outbreak. Thus there is a great deal of room at the disposal of the staff for cases of cholera. The Resident Medical Officer, Dr. James Jackson, and the Assistant Medical Officer, Mr. Frederick Mackenzie, would have been much overworked had it not been for the help they have received by the appointment of Mr. Bathurst Dove, Mr. George Mackenzie, and Mr. MacCarthy, as additional Medical officers. These gentlemen are doing their work with great zeal, steadiness, and cheerfulness. It is impossible now to report cases from this Hospital in any detail. Notes of them are taken as far as practicable by Mr. Frederick Mackenzie on a form which one of the Physicians drew up, and which was printed at the expense of the Hospital. Mr. Frederick Mackenzie and Dr. James Jackson will, we hope, give an account of the epidemic when the urgent calls on their time are less.

The nurses are enjoined never to begin duty with an empty stomach; and during the night, and especially at early dawn—a period at which the attack is likely to begin—hot and strong coffee is to be had by all; and during the day strong mutton broth is recommended to the attendants.

As a matter of precaution, the excreta, previously mixed with carbolic acid, are quickly removed from the wards and are buried, and a careful system of washing the linen, by adding chloride of lime to the water, and then rinsing the whole in pure cold water, is adopted. Carbolic acid is sprinkled in the wards.

We are sorry to have to report that the nurse, whose case we mentioned last week (p. 60), a young active woman, who had been very assiduous in tending the early cases of cholera, died July 23. We are glad, however, to state that there are reasons for believing that the woman did not take the cholera from any of her patients. She did not live in the Hospital, and slept in a very unhealthy district in which many other cases of cholera have occurred. Still the case of the children, one of whom died so quickly after diarrhœa (Case 10, p. 60), cannot be thus explained.

At our last visit to the Hospital we learned that another nurse had been attacked with severe diarrhœa on Monday night, but she was certainly much better when we last saw her on Wednesday evening. We then accompanied Mr. Frederick Mackenzie round the cholera wards of the Hospital—George and Harrison. These wards contain more than eighty beds, and are now nearly full.

It was the intention of the Hospital authorities to set apart another large ward, but it has since been decided not to do so. There is a limit to the number of nurses that can be obtained, and it is not right to take in more patients than can be well attended to. Besides, the local boards are obliged by the orders issued by the Privy Council to find Hospital accommodation for cases of cholera. On Wednesday afternoon, therefore, the House-Governor sent to the various Workhouses in the neighbourhood to inform them that the Hospital accommodation had almost reached its limits. The House-Governor tells us that, so far as he can judge, this epidemic is worse than previous ones. Of course this statement can have only a limited meaning. It is likely that patients are sent to the Hospital in larger number than in former epidemics. There is, however, he says, much more public excitement, and when we left on Wednesday night there was a large crowd about the Hospital gates. In previous epidemics there were, we are informed, no such demonstrations, and the ordinary working of the Hospital was not very perceptibly interfered with. There is little doubt that this epidemic has been more *rapid* than previous ones, and in this fact there is a certain kind of satisfaction. It is to be hoped that the worst is getting over, and that the cases in the next week or two will be fewer and slighter. Still, we cannot be confident of this. According to our latest reports (Thursday afternoon), cases were coming as fast as ever, and unfortunately, from the deaths of patients previously admitted, there was plenty of room for them.

We now give further particulars of some of the cases we reported last week. It will be seen that some of those patients who were believed to have recovered have since died.

The patient John R. (*Case* 3, p. 59), we are sorry to say, died July 22, a week after admission.

On Thursday (the word Monday was a misprint for Thursday in our final note of his case last week), he was considered to be convalescent. He was very drowsy, and was delirious at night, and talked loudly in his sleep.

At the autopsy made by Dr. Hughlings Jackson, both sides of the heart were found to contain blood, both recent and old decolorised clots. Both lungs were bulky, much congested, containing much frothy fluid, and in the lower lobes were several patches which easily broke down under the finger. The gall bladder was full of a very thin and light-coloured, greenish fluid. The colon and rectum had in them greenish-coloured fæcal matter. The small intestines contained a quantity of brownish mucus. The bladder was full of urine.

Case 4.—This patient is in an unsatisfactory condition. He is frequently sick; his breathing is hurried; he is drowsy, and cannot leave his bed.

Case 5.—This patient, who was reported on Thursday to be doing well, died July 20.

Case 6.—This patient also died. Her husband and son have since died in the Hospital.

Case 9.—This patient died July 22. His son died in the Hospital July 25.

Under the heading, *Case* 10, we mentioned that two children had been attacked, and that one had died. On Wednesday last the other one was believed to be going on well.

Case 11.—This patient also is dead.

The ophthalmoscope has been used by two of the staff in cases of choleraic collapse, but the results they have obtained are not sufficiently definite for publication. The retinal veins are very dark; in none of the cases are the arteries very much diminished.

As to the treatment adopted, we have very little to say that can be considered as established. We have, however, thought it right to report what is being done by the Physicians for the patients, and we thank them for giving us facilities for these reports. They are fully alive to the great difficulty there is in treating cases, especially cases which occur early in an epidemic.

Notes on the Treatment of Cases of Cholera in the Hospital.

The following is a report of the method adopted by Dr. Fraser, who has had a very large experience in former epidemics in the treatment of cholera:—

Dr. Fraser said that when the first case of cholera admitted into the London Hospital (reported in this journal the week before last) was mentioned, the inquiry that was forced upon him was, What are, if any, the new views as to the means of attempting to relieve the symptoms and obviate the tendency to death in this disease, more than were known during former epidemics? He admitted that no fresh practical means had been made known, and he said he entered upon his mission with feelings of deep depression, for his experience had shown him that no one drug or external appliance can be put down as the one thing to be given or to be done. He was sustained, however, by the knowledge that cases *have been*, as it were, snatched from the grip of death by various means, and held, therefore, that we are not to sit with folded hands, but to be up and doing all that science and common sense would dictate. Dr. Fraser, thus thrown back upon old resources, referred to certain papers published in the *London Medical Gazette*(a) in 1848, where he had stated that five-grain doses of the sesquicarbonate of ammonia every hour were useful, and that the liquor ammoniæ itself internally acted as a most useful stimulant. "Copious enemata of the chloride of sodium seemed in many cases to rouse the patient." At that time he abjured, and further experience has made him continue to abjure, the use of opium, except in cases of what he calls spasmodic cholera. He wrote, "I believe that when the patient is in a state of collapse opium is decidedly injurious." In the former epidemic calomel in scruple doses was tried to a large extent, and with benefit in many cases. Transfusion of the following injection was practised in a few cases, and in one instance recovery was attributed to it:—℞ Sodii chloridi ℥iij., sodæ carbonatis ℥ij., aquæ lb. vj.; two or three pints injected at a temperature of 112° Fahr. Dry frictions, and every other possible means of reproducing external warmth, were used.

The foregoing, on the ground of having nothing new, have been the means up to this day more or less practised by Dr. Fraser at the London Hospital since this epidemic began, but with no greater success than formerly; if anything, scruple doses of calomel seem to have allayed vomiting more than anything else.

The employment of warm brandy and water in many cases of partial collapse was of great benefit. Iced water, and ice in the mouth, are most agreeable to the patients. Saline injections and the injection of sheep's blood into the veins have been tried in former epidemics at the Hospital. Enemata of warm brandy and water have seemed in two cases to be useful. The experience as yet will not warrant any general conclusions.

The following is the plan Dr. Andrew Clark pursues:—If on the admission of the patient there is incomplete collapse, and the stools are in any degree feculent, castor oil, with or without a few drops of laudanum, is administered at once. Generally, however, by the time the patient has reached the Hospital, the stools have become abundant and watery, the temperature of the body has fallen, the pulse is feeble, and the limbs and face are getting blue. Astringents are then begun at once, and the patient gets either the "lead pill" or Dr. Clark's astringent mixture, in doses and at intervals modified by the circumstances of individual cases. Each lead pill contains two grains of acetate of lead, two grains of camphor, an eighth of a grain of opium, and about a twelfth of a drop of creosote. The astringent mixture consists of aromatic sulphuric acid, sulphuric and chloric ethers, tincture of camphor and opium, spirits of peppermint, and decoction of logwood. The patient is put into a warm bath for half an hour or longer, and the bath is repeated after a few hours if there be need either for increase of temperature or absorption of fluid. Warm water, with or without salines, is also injected into the bowels. The patient is allowed milk or beef-tea thickened with any farinaceous food, and is directed to drink small quantities of iced water at short intervals. Turpentine is applied to the abdomen. Frictions are used for cramps. The bath is not employed when there is complete collapse. In earlier cases it gives great and prolonged relief. If vomiting is incessant and exhausting, it is treated with teaspoonfuls of neat or nearly neat brandy. When diarrhœa has ceased for twelve hours or more, a dose of castor oil and laudanum is given, sometimes preceded by a little grey and Dover's powders.

During collapse the sulphuric acid mixture is given without opium; hot bags are placed round the body, and ice or iced water given as freely as it can be borne; warm water is injected into the bowels.

During reaction, when the tongue is furred and eroded, the patient takes a chlorate of potash drink. Lung congestions and dyspnœa are treated by very small bleedings.

It ought to be observed that Dr. Clark's plan is merely tentative. He, however, lays great stress on the free ingestion of fluid, the use of the warm bath, warm water enemata, and astringents in the early stage of the disease.

At the suggestion of Dr. Markham, Dr. Hughlings Jackson begged Mr. Little to inject defibrinated and oxygenated blood in some cases of collapse of cholera. (See report of Dr. Fraser's remarks.) Sheep's blood was procured, the fibrin was removed by whipping; the blood was strained, and then kept to a temperature of 110° F. by placing the vessel containing it in hot water. About six ounces of this hot fluid was injected into the veins of two patients, but it relieved them only for a short time, and appeared to bring on dyspnœa. These patients, however, were extremely ill when the operation was done, and Dr. James Jackson tells us the plan can scarcely be said to have been fairly tried. It is difficult to fix on the right sort of case. It is not fair to try it on a patient who is recovering, and to inject a patient who is nearly *in articulo mortis* is scarcely likely to lead to any result.

Dr. Herbert Davies has adopted a saline treatment. The following is the prescription for the draught:—℞ Sodii chloridi gr. xx., sodæ bicarb. gr. xv., potassæ chloratis gr. x., aquæ ℥ij., as frequently as they will take it. The patient has, besides, as much water as he can drink.

(a) 6th January, 3rd March, and 24th March, 1849.

One Physician whom we met at this Hospital said that if he had to treat a case of cholera he should inject quinine subcutaneously. The subcutaneous injection of atropine has also been suggested.

The use of warm baths finds great favour. Every patient who is not in extreme collapse is placed in a hot bath, at a temperature of about 100° to 105° F. As a rule, Mr. Frederick Mackenzie tells us, the patients like the bath, and frequently beg for its repetition.

The Resident Officers tell us that they are continually receiving accounts of "infallible" remedies from zealous Medical men who visit the cholera wards. We may mention a few of these—Camphor and chloroform; aromatic confection with camphor; nitrous acid; liquor potassæ with taraxacum. One gentleman brought a bottle of mixture which he wished to be tried; he was referred by the Resident Officers to the Physicians.

THE MIDDLESEX HOSPITAL.

CASE OF CHOLERA.

(Under the care of Dr. GREENHOW.)

We report brief particulars of the first case of cholera admitted into this Hospital, and give particulars of the progress of the patient up to Wednesday at 9 p.m. Although so far the patient has been doing well, he cannot be considered safe. We shall give particulars of his further progress next week, and then we hope to be able to add some general remarks on the treatment of cases of diarrhœa and cholera by Dr. Greenhow, the Physician under whose care the present patient was admitted.

We are sorry to have to add that a second patient was admitted under Dr. Stewart's care at half-past one o'clock on Wednesday. This patient had been ill several days from diarrhœa, and did not seem at the time of his admission to be very seriously ill. He died, we regret to say, the same evening.

At a meeting of the Medical staff on Wednesday it was decided, with the sanction of the weekly Board, to set aside two wards, each containing twenty beds, for the reception of cases of cholera. They were cleared at once.

A middle-aged man was admitted on Wednesday morning at five o'clock. He had formerly been a soldier, and his health had been good. He was quite well on Tuesday, and on that day his bowels were once moved, but the motion was not loose. At supper-time he could not eat, and in the evening his bowels were again moved, but the motion was a consistent one. At half-past one o'clock of the morning of Wednesday he was seized with purging, of a very copious, loose kind; he had vomiting, and cramps in his legs. On admission he was said to have been cold. When Dr. Greenhow saw him, at 6.15 a.m., the surface was cool, slightly moist; countenance dusky; pulse 96, thready, scarcely perceptible; respiration tranquil. Had only been purged once and vomited twice since admission. Had passed no urine; complained of intense thirst; was free from cramps, and was lying quietly in bed. The evacuation was a scanty one—not exceeding four ounces—of the consistence of thin gruel, and tinged of a pinkish hue with blood.

At 9.15 a.m. he was improving.

9.30 p.m.—Surface warm, much less dusky; pulse 102, distinct but thready. Has been twice sick since 1 p.m.; on both occasions the liquid vomited resembled weak beef tea. Was purged during visit for the first time since 9 a.m. Evacuation was small and resembled thin gruel, but was of a pink colour. No return of cramps.

GUY'S HOSPITAL.

CASE OF CHOLERA—DEATH—AUTOPSY.

(Under the care of Dr. MOXON.)

Last week we gave particulars of two cases of cholera, which were admitted into Guy's Hospital under the care of Dr. Rees, not Dr. Pavy, as we then stated. Another case has since been admitted, and has proved fatal. The following are brief particulars of the case. The autopsy was conducted by Dr. Moxon, Pathologist to the Hospital:—

George B., aged 20, admitted Friday, July 20. This man had been employed irregularly as a labourer on barges at Blackfriars. On Thursday (19th) he had two pieces of bread-and-butter and some tea in the morning, and no more food all day. At seven in the evening he was seized with purging, and this occurred every five or ten minutes. He was admitted into Guy's at eight next morning in a state of collapse. He had rice-water stools; no vomiting. After admission he was purged twice only. His pupils were dilated; features shrunken; tongue cold, moist, pale, not shrunken; breath cold; no pulse at wrist. When asked if he had any pain, he replied, "Only a heavy feel." He tossed about very restlessly in his bed. He passed no urine. He died 3 p m.

Autopsy Twenty-three Hours after Death.—Stark stiffness; dusky lividity, deepened in dependent parts. The mucous membrane of the trachea was dusky, but was otherwise healthy. The left lung weighed 12½ ounces, the right 15 ounces, after they had been cut and the blood drained. Thickish very dark blood ran out, but no serum. The bulk of the lungs was moderate—perhaps below average. The blood was principally lodged in large vessels. [In the right lung was a mass the size of a cherry, having an appearance exactly like that of the yellow fibrinous masses found in the spleen and kidneys in heart disease, like those bordered by a narrow dark zone.] The right ventricle contained a considerable gelatinous pale clot; the auricle much less. The left ventricle contained a good large clot; the left auricle much less. The abdominal parieties were sunken in. The peritoneum was viscid and gummy, so that neighbouring coils of intestine, when separated, had viscid threads between them. Small intestines somewhat injected, generally pale; scarce any air in them; they were dough-like, and lay heaped on the spine. The stomach was distended with ricewater-like liquid. The patient had been very thirsty, had drunk much, and did not vomit. The only change notable in the small intestines was much enlargement of the solitary glands of the ileum. Peyer's patches raised. The mucous membrane was thin and anæmic. Liver rather pale (portal fields pale reddish, hepatic pale purple). The organ looked healthy. Kidneys looked as if containing some fat; bright red injection on a pale greasy ground; the organ not enlarged. No urine in bladder, but about a drachm of creamy-looking fluid.

GERMAN HOSPITAL, DALSTON.

TWO CASES OF CHOLERA—CALOMEL TREATMENT—FAVOURABLE PROGRESS.

(Under the care of Dr. HERMANN WEBER.)

The two following seem to be well-marked cases of cholera, and the results are very encouraging, so far as our report goes. We shall give further particulars next week. Two other cases have been admitted since these reports, one from St. George's-in-the-East and one from Whitechapel. The treatment Dr. Weber relied on was at first that by calomel in small doses frequently repeated, *i.e.* so far as drugs are concerned.

1. F. M., male, aged 46, who had cholera at Augsburg in 1854, and is now suffering from pulmonary tuberculosis, was seized with diarrhœa on July 18 in the morning; vomiting occurred already a few hours later. Admitted into the German Hospital on July 19, at 3 p.m., with cold and livid extremities, cold tongue, perfect aphonia, absence of radial pulse, and complete collapse. The vomited matter and the motions were quite colourless (rice-water) and alkaline; painful cramps in arms and legs, and great thirst; impulse of heart 85, very weak; temperature in axilla 95° F. Treatment: Horizontal posture; hot mustard poultices to stomach; hot bottles to feet and legs; lumps of ice and iced water, according to patient's desire; two tablespoonfuls of iced milk every two hours; half-grain of calomel every half-hour.

On July 20, at 9 a.m., the collapse was much diminished; the extremities were tolerably warm; temperature in axilla 97·7° F. The sickness and diarrhœa diminished, the motions being already tinged with bile. Half-grain calomel only every hour, and after a few hours every two hours.

21st.—Further improvement; sickness diminished; motions well mixed with bile. In the evening about two drachms of urine, after an absence of sixty hours, clear and free from albumen. Cramps have disappeared; principal complaint of severe temporal headache and pain in the chest. Omit calomel. Give 15 minims of chloric ether every four hours.

23rd.—Sickness ceased; moderate diarrhœa continues; motions thin and yellow; at 3 p.m, severe rigor during half an hour, the temperature in axilla being 98° F. ℞ Tinct. catechu, spir. ammon. arom., æther. sulphur., āā ʒss.; camphoræ gr. ij.; aquæ menthæ pip. ad ℥j. 3tiis horis.

24th.—9 a.m.: Diarrhœa diminished, no return of rigor; pulse 86, temp. 97°.

25th, 7 p.m.—No return of vomiting and diarrhœa; very thirsty; tongue dry; slight sordes of teeth; urine abundant, pale, neutral, slightly albuminous, turning light pink by nitric acid; inclined to be drowsy; pulse 96; temperature in axilla 97° Fahr.; surface warm.

Case 2.—T. M., 21, a journeyman baker, residing at Plummer's-row, Whitechapel; had slight diarrhœa on July 22, in the morning; vomiting and cramps in the calves supervened on the same evening; was admitted into the German Hospital on July 23, with rice-water motions (alkaline), lividity of skin, cold extremities, and cold tongue; but the pulse at wrist was perceptible, being 94, the temperature in axilla 97·2° F. Treatment: Horizontal position; ice and iced water, with iced milk; a pill containing $\frac{1}{2}$ grain of calomel, $\frac{1}{12}$ grain of opium, 1 grain of camphor, every half-hour.

24th.—9 a.m.: Diarrhœa diminished; motions, however, still rice-water; no more vomiting since midnight; cramps diminished; hands, feet, and tongue warm; temperature in axilla 98° F.; pulse 88; urine scanty, slightly acid, highly albuminous, free from blood—general aspect favourable. The above pill only once an hour.

25th, 7 p.m.—Had several fluid and colourless motions during the night and early morning, but the last motion (3 p.m.) was rather feculent and pale yellow; no return of vomiting; cyanotic appearance almost entirely gone; urine more abundant, alkaline, with phosphatic sediment, free from albumen, turning light brown by boiling with nitric acid; pulse 80; temperature 97·8° Fahr.

ST. PANCRAS AND NORTHERN DISPENSARY.

CASE OF CHOLERA WITH COLLAPSE—TREATMENT BY CASTOR-OIL—RECOVERY.

The following case is supplied to us by Mr. Shaw, House-Surgeon to the Dispensary:—

J. F., of West-street, Somers-town, aged 45 years, after eating on Wednesday, July 18, some lettuce, which at the time she noticed to have a peculiar taste, was seized the same evening with diarrhœa and vomiting, which continued during the following day, and on Friday, July 20, were accompanied with cramps in the legs and feet. When first seen, on Friday, at 4 p.m., she was noticed to be in a condition which the friends said had already existed for several hours. It was as follows:—Duskiness of the face and blueness of the lips and parts about the mouth and nose; eyes shrunken, with a dark areola round them; blue nails and shrivelled state of the skin of the fingers; surface of the body very cold, and covered with a clammy sweat; breath cold; weakness and altered timbre of the voice; oppressed breathing very marked; great thirst and much restlessness; very copious rice-water stools, extremely fœtid, and accompanied with vomiting of a brown watery fluid; no urine passed during twelve hours. Severe cramps felt chiefly in the feet and legs, and to a less degree in the stomach and bowels; pulse 84. Ordered to have hot applications to the surface of the body and extremities, and the following mixture:—℞ Olei ricini ʒvj., mist. acaciæ ad ℥iij.; half to be taken every two hours. Warm tea was given to drink, but all alcoholic stimulants were prohibited. 10 p.m.—Been sick after each dose of the medicine, the vomit being brown and very fluid; bowels opened three times, the evacuations very fœtid, and not a trace of bile in them; no urine passed; difficulty of respiration very great. Ordered—Olei ricini fl.ʒiv., mist. acaciæ fl.℥ij.; half to be taken every two hours. Owing to the great thirst, iced water was given to drink. 12 p.m.—Had retained the first dose of the last mixture, but vomited the second; bowels opened once since 10 p.m., no bile in the evacuation; great depression; pulse 84. Ordered to have beef-tea and the following mixture: ℞ Olei ricini fl.ʒiij., mist. acaciæ fl.℥iij.; one-third to be taken every two hours.

July 21, 6 a.m.—Skin much warmer; blueness of face gone; no cramps; and respiration much easier; bowels opened twice since midnight; there was some yellow bile in the last motion; vomited green bile once since last night; pulse 90; no cold sweating; passed some urine; ordered to have more beef-tea, and to continue the iced water. 4 p.m.—Going on very comfortably; bowels opened once since 6 a.m.; much biliary colouring in the evacuation; no vomiting; skin warmer; no cramps; complains of great "weakness;" voice much stronger. Ordered—Quiniæ sulph. gr. ij., acid. sulph. dil. ♏vj., aquæ fl. ℥j. To be taken every four hours.

The evacuations after this date were of a much more natural colour, and the patient, though much exhausted, continued to progress favourably; the voice finally recovered its natural force and quality.

CHARING CROSS HOSPITAL.

FATAL CASE OF CHOLERA.

(Under the care of Dr. SALTER.)

One patient, of whose case we give the following particulars, was the only one admitted up to Wednesday afternoon. However, the authorities of the Hospital have decided to set apart two wards for the reception of cases. The following brief statement was given us by Mr. Airey, House-Surgeon to the Hospital, who admitted and treated the patient:—

A man, 25 years of age, was brought from West-street, St. Martin's-lane, on Sunday night, at 8 p.m. He died five hours afterwards. The man had been ill with diarrhœa since the previous Tuesday. Next day he took some mixture, and was under Medical care. When brought in he was livid, cold, pulseless, and the Medical man who sent him to the Hospital said the symptoms of cholera had shown themselves on Thursday. He died five hours after admission.

ST. BARTHOLOMEW'S HOSPITAL.

CASES OF CHOLERA.

At St. Bartholomew's Hospital there have been ten cases of cholera, and two deaths. One of the fatal cases we reported last week. The other patient was a woman, who was brought in in a state of collapse about four o'clock on Tuesday afternoon, and died about one on Wednesday morning. Each patient, on admission, had a warm bath and five grains of calomel, with a grain of opium. In some cases a grain of calomel was given every one or two hours, according to circumstances.

Mary W., aged 45. This woman had had diarrhœa for several days. At 6 a.m. on July 24, she was attacked with cramps, and was brought to the Hospital at 4 p.m. in a state of collapse. Whilst under observation she passed no urine, and did not vomit. She continued to have cramps, and passed several motions. Dr. Andrew made the post-mortem examination eleven hours after death. Both sides of the heart contained clots of dark blood and decolorised clots. The lungs weighed—left, 13 oz.; right, 13½. They were emphysematous, and contained a fair amount of blood. The mucous membrane of the intestines, of the duodenum and upper portion of jejunum, of an opaque, slaty-white colour; not œdematous, but with numerous small abrasions, producing a shreddy appearance. The solitary glands were more visible than usual. Peyer's patches not equally affected. Bladder contained no urine. Gall-bladder full of orange-green bile.

Cholera Bulletins.—Cholera has reappeared at Paris with more severity than the authorities seem disposed to admit; for whether it is that the population of the capital is constituted with a more sensitive fibre, certain it is that a publicity which is freely accorded as regards provincial towns is prohibited there, on the ground of the danger of causing a panic. The only figures we have had access to indicate that from the 17th to the 18th of July 79 cases were treated in civil practice and 37 in the Hospitals—a total of 116. At Amiens the deaths, which had been reduced to 16 or even 7 per diem, have again risen to 30 or 40. Those for the week ending July 12 at Dunkirk amounted to 15, and 3 or 4 are still daily occurring at Rouen, together with about 6 per week at Rochefort. At Stettin, in Prussia, 1713 cases of cholera, with 1013 deaths, occurred between June 29 and July 5, and in various parts of Holland 569 deaths took place from July 1 to July 6.

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Medical Times and Gazette.

SATURDAY, JULY 28.

REMEDIES FOR DIARRHŒA.

We proceed, as we promised, to give a comparative view of the remedies for bowel disorder. In so doing we go on the positive, not on the negative plan. That is to say, if Practitioners of experience report that any given class of remedies proves efficacious in their hands, we accept the fact; and if other Practitioners report good results from an opposite class, or apparently opposite class, of remedies, we accept that fact also. And we take liberty to use the solution of this seeming paradox which common sense and experience furnish us with. That is to say, we assume what we know to be true, that the cases in which opposite remedies are respectively used belong to opposite classes of cases, or else that divers remedies may attain the same end in the same class of cases by opposite routes.

The remedies which we propose to consider—shortly and in the space of one essay—were enumerated in a late article, and we give them again, in alphabetical order.

Acids,
Alkalis and absorbents,
Antiseptics,
Astringents,
Calomel,
Meat,
Opiates,
Purgatives,
Stimulants.

The questions we have in view are these:—Supposing a man has to treat a crowd of patients affected with diarrhœa, what is the best general, shall we say routine, remedy? What, if used indiscriminately, will do good in the greatest number, and harm in the least number of cases? And, on the other hand, supposing time and circumstances allow of a discriminate and individual application of remedies, what are the cases for which each remedy is best adapted?

We must also say, that we are discussing remedies for diarrhœa, and possibly for cholerine (this one word *cholerine* is better than *choleraic diarrhœa*), not for cholera, *i. e.*, the stage of collapse; further, that the absolute repose and warmth of bed is a means of safety which it is difficult to over-estimate; and besides, as our Correspondent said, in his account of a visit to Amiens, it seems possible that a patient who is *cured* of diarrhœa shall yet die of cholera.

1. The acids are the more worthy of trial by those who have never tried them, inasmuch as they seem at first to run counter to all our English opinions and traditions. Yet lemon-juice and salt is the old and popular remedy in Italy and the East for diarrhœa. Traces also of treatment by acids are found in the writings of some practical Physicians of the last century. But, so far as we know, the person who first brought them into vogue in England was an obscure Practitioner named Coleby, in Bermondsey, who gained a reputation and a fortune by his use of dilute nitric acid in large doses in the premonitory diarrhœa during the cholera epidemic of 1832. Since that time, the sulphuric acid has come into vogue, and its use has been advocated by many Practitioners, as Mr. Boddington and Mr. Tucker, and it has now become so popular that it cannot be considered as the specialty of any one. Any acid appears to answer — sulphuric, nitric, phosphoric, hydrochloric, tartaric, or citric. Mr. Tucker pointed out, in 1854, the value of *cider*, with its malic, acetic, and tannic acids; but the sulphuric seems really the best and the most convenient. The right way of using an acid for diarrhœa is not to give it in any measured dose, but to cause it to be mixed with water, sweetened and flavoured with ginger—say half a drachm of dilute sulphuric acid, two drachms of syrup, and half a tumbler of cold water. The patient may dilute it and sweeten it to the precise point he likes, and may be told to drink it freely in as great a quantity as he likes; but few care for more than three drachms in the twenty-four hours. The effect of the remedy seems direct and positive. It stops diarrhœa, quells pain, puts an end to the generation of flatulence, and leaves the patient well. Most positively there is nothing purgative in its action. It is suited for atonic diarrhœa, with clean tongue, in every stage. Where diarrhœa has been going on, leaving the belly puffy with griping pains and flatulence, the acid acts like a charm. Again, in the cases of diarrhœa which affect over-fed people—with foul tongue, yellow eye, and loaded liver (as we assume)—the acid is a good remedy by itself, but better if employed as an adjunct to a dose of calomel. Moreover, as a prophylactic, as Dr. MacCormac has shown, it is of very great value. The minute that a man says he can't eat through the heat, and lives upon beer, he should be advised to take some mineral acid in bitter infusion. It will not be taken for granted that there are no cases in which it fails. In some it fails, apparently without reason; and in cases where there is a red, irritable tongue, it should not be tried. But there is one almost certain indication—that if the patient likes it, it is almost sure to cure him; if he dislikes it, it will almost surely do him no good. The acids, moreover, are adapted for all ages and conditions, from the infant at the breast with chronic, or atonic, or serous diarrhœa, to the veteran in his second childhood. The Elixir of Vitriol, or aromatic sulphuric acid, is nicer, and well adapted for private practice; but the common pure acid is quite good enough for most cases.

2. There are the alkalis and alkaline earths, as chalk, to which, we suppose, bismuth must be added. There is no doubt that these remedies have a certain force, though not much in severe cases. They deodorise, or neutralise, or alter the quality of the intestinal contents and the intestinal mucous membrane, and (if employed alone) are suitable for infants and persons with red tongues and irritable, possibly ulcerated, bowels. The dose of chalk or bismuth should be very much larger than is commonly given, say 30 grains every hour—quite enough to produce a decided chemical change in the contents of the alimentary canal, and to be detected in the fæces.

3. Antiseptics—*e.g.*, creosote, in doses of one drop in pills, is good in many an atonic diarrhœa. Its *modus operandi* seems clear.

4. Astringents. Under this head we have the vegetable astringents, as gallic acid, catechu, tormentil, etc., adapted for atonic diarrhœa with clean tongue. But it must be observed that these remedies are seldom given without opium, and that they do not appear superior to sulphuric acid—certainly not so good for popular use. Of mineral astringents, the acetate of lead, in two or three large doses, is in most vogue, especially with Indian Practitioners.

5. Calomel is the English remedy *par excellence* for all cases attended with foul loaded tongue, yellow eye, thirst, headache, etc. We believe that it really has the power of checking pale serous stools, and of producing thick, offensive, coloured ones, and in the right cases is without doubt the most powerful and certain remedy we have. In the opposite class it is equally mischievous.

6. Raw meat pounded into a pulp is a remedy which we first saw used by Professor Trousseau, at the Hôpital des Enfants Malades, in Paris, nearly twenty years ago. It is especially adapted for young infants, who take it greedily; it appears to be digested without effort, and, by giving healthy material to the blood, cuts off those causes of diarrhœa which consist in an impoverished state of blood. Its specialty is as a remedy for infants and children with whom nothing else agrees or is digested. But it is also the food *par excellence* for any case whatever at any age in which food can be taken. Raw mutton is the thing—deprived of skin and fat, and pounded in a pestle and mortar till it is a mere paste. This may be given with or without a very little sugar to infants, in the dose of a teaspoonful at a time; adults may take a larger quantity diffused through cold beef-tea. We have established the fact to our own satisfaction that meat *raw* differs from meat cooked in being more digestible, although meat cooked, if pounded to a powder and used to thicken broth, is a most useful food for adults, so soon as food is permissible.

7. *Opium.*—That this blessed and priceless antidote to human woe should be useful in diarrhœa, is no more than might have been expected from its power of allaying irritation and pain and local afflux of blood. And the largest experience shows that with an ill-fed, ill-conditioned, below-par population small doses of opium act like a charm in a large percentage of cases of atonic diarrhœa with a clean tongue. Its action and use in such cases are consistent with the whole science and practice of Medicine and Surgery. Let us suppose that the *bowels are loaded*, and that there are diarrhœa, pain, and spasm. The bowels are clearly unequal to the task of efficiently and vigorously discharging their contents; and in giving opium the Practitioner does what the Surgeon does when a patient with irritated bladder cannot pass his urine, and what the accoucheur does when a woman is plagued with inefficient uterine action. Opium rests a weary colon, and allows it time to gather strength to discharge its duties with vigour. There are two classical works on Surgery—Vincent's "Surgical Observations," and Hilton's "Lectures on the Principle of Rest;" both concur in advising the use of measures to allay fretfulness of the whole body and of parts, and to give time. Anyone who denies the value of opium in atonic painful diarrhœa, must be put out of the category of arguable persons. Equally ought that man to be sent to Coventry who affirms that it is a universal remedy. Opium used indiscriminately in cases in which acids or calomel or purgatives ought to be used—that is, in cases where the tongue is coated and foul and there are evidences of loaded liver or *embarras gastrique*—may make the patient ill for weeks. We believe that we have seen fatal results follow the summary suppression, by opium, of a salutary diarrhœa, in over-fed, gormandising, red-faced, tight-bellied personages, especially women.

8. *Purgatives.*—When diarrhœa occurs to persons who have previously suffered from constipation, in whom there are evidences of loaded bowels—fœtid, lumpy, quasi-dysenteric stools—the belly showing by palpation and percussion signs of accumulation in the colon, and the mouth and tongue nauseous, then the Practitioner need seldom refuse to venture on a dose of rhubarb and polychrest salt or castor oil, preceded or not by a dose of calomel. When the motions are inodorous, and the belly is empty, the use of purgatives is simply cruel.

9. Stimulants, such as ether, essence of camphor, the essential oils, as peppermint, cayenne pepper, and more especially the almost too familiar prescription of a hot and strong glass of brandy-and-water, are of well-known efficacy in almost all cases of diarrhœa, except those attended with marked *embarras gastrique.*

If we may sum up our own impressions of *single* remedies, we give the first place to the acids, as being more serviceable and less noxious than any other in the greatest number of cases; but for cases attended with well-marked symptoms of pain they are inferior to opium, in those with *embarras gastrique* to calomel, and in those with fæcal accumulation to calomel, or rhubarb with polychrest salt. Still they are the best single or universal remedy.

Whilst the science of therapeutics demands the employment of remedies singly, the necessities of practice compel combination, in order to secure different or even opposite effects, and so to hasten the patient's cure. The acids may be used as auxiliaries to any other remedy if the patient relish them. Opium may be combined with stimulants in atonic painful diarrhœa, and the popularity of the compound called chlorodyne shows it to be a useful model for imitation now, just as itself is an imitation of the ancient cordials and theriacas. Opium, in fact, which soothes pain, may be combined with eliminative remedies, so as to add the *tuto* and *jucunde* to the *cito*. Of such combinations the time-honoured one of calomel two grains, opium half-grain, is one which scarcely needs our praise. For a severe case it probably is the best thing that can be prescribed. It may also be combined with acids, or with alkalis, absorbents, astringents, and stimulants, as in the well-known compound chalk powder with opium.

The other day, happening to talk with a lady of rank on the cholera, we were asked, "Do you belong to the brandy faction, or the calomel faction?" We hope that our foregoing remarks have shown that there need be no factions at all, and that each remedy is good in its place, and that that place is pretty well known to practical men who are not committed to any faction.

GOOD NEWS FOR OUR ARMY AND NAVY BRETHREN.

The Profession will hail with infinite satisfaction the news that the pay and prospects of our brethren in the public services are to be improved, and their position placed upon a satisfactory footing. We owe this to a Conservative Ministry, which has always proved far more just and *liberal* to our Profession than a Liberal Government. We have nothing to do with politics; still, we cannot help remarking that we were but little indebted to the late Russell administration. No sooner did the Conservatives come into power than they effected some very important changes. General Peel and Sir John Pakington have laid us under a fresh debt of gratitude. They have invariably taken a warm interest in the Medical branches of the public services, and they merit the hearty thanks of our Profession by their late expression of friendship. From what recently took place in the House of Commons we may congratulate the Medical officers of both services. If the intentions of the present Government be carried out—and we have no reason whatever to doubt it—then we can heartily urge the claims of our public services upon the attention of the best-informed students of all our Medical schools. Let them come forward and compete for the honour of serving in her Majesty's army and navy.

FEMALE MEDICAL SOCIETY.

We have received a letter from Dr. James Edmunds, Honorary Secretary of the above Society, complaining of the remarks made by us in an article which appeared in our number of June 30.

We are at a loss to understand why Dr. Edmunds should consider this as a personal attack. Our sole wish was to fix the attention of the Profession on the statistical fallacy which, as we believe, was involved in the report which the newspapers gave of the proceedings of the meeting at the Hanover-square Rooms, and we did not suggest any wilful misrepresentation of the statistics upon which the inferences in the report are based.

Dr. Edmunds' name does not appear in the remarks we thought fit to make, and we cannot see why he should have considered them as reflecting upon him personally. Our only object is truth, and we shall never hesitate to comment upon any public proceedings which affect the interests of the Profession. Our columns are open to Dr. Edmunds for any reasonable comments upon the points raised in our article.

THE WEEK.

THE PROGRESS OF THE CHOLERA.

The Registrar-General's Return informs us that during the week ending Saturday, July 21, no less than 346 fatal cases of cholera have been recorded. Of these—

> "308 occurred in the East districts of the metropolis. In the sub-district of Bow, the total number of deaths was 77, of these 39 were referred to cholera. In the sub-district of Poplar 93 deaths were registered, and the deaths from cholera were 52. In the sub-district of Limehouse the deaths were 54; of these 43 were from cholera. In the Green sub-district, Bethnal-green, 59 deaths occurred; 30 of these from cholera. In the sub-district of Mile-end Old Town Eastern 57 deaths were recorded, 33 from cholera. Eleven deaths from cholera were registered in the West districts, 6 in the North, and 20 in the South. Only 1 death from the epidemic occurred in the Central districts."

We report this week particulars from seven Hospitals—viz., the London, St. Bartholomew's, Guy's, Charing-cross, the Middlesex, the German Hospital, Dalston, and a case treated by the House-Surgeon of the St. Pancras and Northern Dispensary. Up to Thursday no case had been admitted into King's, and on inquiry yesterday we were informed that none had been at University College. Several suspicious cases have been seen at St. Mary's, and we believe one instance of cholera. The epidemic is most extensive, almost confined to the East-end of London. The admissions into the London Hospital have been numerous, as will be seen by the Hospital Reports.

Other cases of undoubted cholera have come under our knowledge. On Monday last a death occurred in Mecklenburg-square. A case occurred on Wednesday in Ossulton-street. On Monday a lad died in Cumberland-street, Pimlico, who was employed, and ordinarily lived, at a tin factory at Poplar. Two cases were received into the Whitechapel Workhouse, and followed by three amongst the inmates. A person died at Hammersmith on the 24th; and the mother of a boy who died at Fulham last week went to spend the day at Kingston, and there died. Two more patients have been admitted into the *Dreadnought*, and at Gravesend another case has occurred. Diarrhœa is very prevalent all over London.

The Vestries and District Boards are everywhere galvanised into activity by the order in Council putting into execution the Diseases Prevention Act. It should be borne in mind that the Act in ordinary operation—the Nuisances Removal Act—provides only for the slow removal of great nuisances, and is utterly powerless in the face of an epidemic; whereas the Diseases Prevention Act, when put in force, confers powers which are most valuable and effective.

ANOTHER CASE OF CÆSAREAN SECTION PERFORMED SUCCESSFULLY UNDER DR. RICHARDSON'S METHOD OF LOCAL ANÆSTHESIA.

During the past week Dr. Newman, of Stamford, has performed Cæsarean section under Dr. Richardson's process, and, so far as the operation is concerned, with entire success. The patient had been in labour from the noon of Thursday last until the noon of Sunday last, when Dr. Newman first saw her. She had extensive cancerous disease of the os uteri and lower segment of the uterus, and after many hours of uterine action the os uteri was so rigid and cartilaginous that even the point of the finger could not be introduced. It being obvious that there could be no natural labour, Dr. Newman decided on Cæsarean section, after rendering the parts to be incised insensible with ether spray. He used two ether jets with separate bottles, and a space one inch broad and six inches long was rapidly narcotised. The incisions through the abdominal parietes and uterus were simply painless, and the fœtus and placenta were very easily extracted.

The patient expressed that "she had felt a little scratching once" during the operation, and she complained of after-pain, evidently from uterine contraction. The fœtus was six and a half months old. Thirty-six hours after the operation the patient was doing well; there had been no sickness and no shivering, but intermittent pain—to use her own words, "like usual after-pain;" the pulse was 108, and the respiration 24, in the minute.

Whatever may be the result of this case, it is clear that the local anæsthesia was as perfectly successful as any anæsthetic process could be; and that again, as in Dr. Greenhalgh's patient, it caused good uterine contraction with not one untoward or dangerous symptom.

DEATH OF THOMAS ANSELL, M.D., F.L.S.

We use no empty phrase of journalism when we write that it is with the deepest regret we announce to our readers the death of the Chairman of the Court of Examiners of the Society of Apothecaries, Dr. Thomas Ansell. The epidemic which has now established itself amongst us has claimed in former visitations many victims from our Profession, but not often one that filled a more important station, or discharged onerous public duties more ably and more honourably. Writing as we do at a late period of the week, with little time to arrange our thoughts or to collect information, we fear we may do but scant justice to the memory of the kind-hearted generous friend, the conscientious high-minded public servant, and the well-informed acute Medical Practitioner whose loss we deplore. The memory of Dr. Ansell, of Bow, however, needs from us no monument. It will live in the hearts of a large number of his Professional brethren, and be especially cherished by those who were associated with him in his public duties.

Dr. Ansell was born in the year 1798. In his younger days, we believe, he had a liking for the adventure and excitement of the sailor's life, and he made a voyage to the East Indies. He ultimately, however, chose Medicine for his profession. He received his Medical training at the Middlesex Hospital.

In 1820 he obtained his diplomas from the College and Hall and settled at Bow, where he rapidly acquired a large and lucrative practice amongst the merchants and ship-owners who form the *elite* of that suburb. He continued to reside there throughout his long and useful life, and was looked up to as one of the *Dii majores* of the place. During the last few years he was Medical Officer of Health for the district, and brought to the duties of that office not only a large fund of common sense and energy, but a scientific acquaintance with chemistry and the laws of hygiene, such as few even amongst our scientific Profession possess. Dr. Ansell held a seat on the Court of Examiners at the Apothecaries' Hall for more than twenty years, and it is in connexion with that Court that his name is most widely known. For five years he held the office of chairman, to which post of honour he was unanimously elected by his colleagues; but whether as examiner or president of the Court, his whole heart was in the performance of his duties. All his energies were directed to increase the usefulness and extend the influence of the body to which he belonged. His single aim was to promote what he believed to be the welfare of the Profession by raising the education and sustaining the dignity and status of the general Practitioner.

To this end he devoted excellent natural abilities, acute perception, and shrewd common sense. He had a real love for science, especially for botany and chemistry, and for microscopical investigation. His studious habits and retentive memory kept him *au courant* with the advance of the day, and constant practice gave his knowledge a freshness and polish which many a younger man might envy. He was always ready to talk about the last chemical discovery, or to name a doubtful plant, and had always some new microscopical specimen to show his friends. As Chairman of the Court of Examiners, and the arbiter of the fate of many a candidate, he was just and considerate. To his colleagues he was endeared by a thousand acts of friendship, and by none will his loss be more deplored than by the Court over which he presided. In 1843 Dr. Ansell took a Medical degree in the University of St. Andrews. He was also a Fellow of the Linnean and Microscopical Societies.

Dr. Ansell had seen cholera formerly both in the tropics and at home, and ordinarily it would have been thought he was proof against its communication. The event, however, proved otherwise. He attended last Thursday week a fatal case at Bromley, and afterwards a second; during the few following days he complained of some indisposition, with diarrhœa, but was well enough to join some friends at a social party four or five days ago. But the disease which he had acquired declared itself with unmistakable severity on Monday last. He died of cholera on Tuesday, leaving behind him the memory of an able, energetic, warm-hearted, honourable man, and adding another name to the long list of martyrs to Medical duty.

FROM ABROAD.—MORTALITY RETURNS IN PARIS FOR 1865—DEATH FROM FEAR OF AN OPERATION—THE GERMAN SCIENTIFIC CONGRESS—AMERICAN MICROSCOPES.

TOGETHER with a meteorological chart for Paris in 1865, Dr. Vacher has just published a supplement to the Registration Report for March, 1866, issued by Baron Hausmann, which furnishes a summary of the deaths that occurred in the twenty *arrondissements* of that city during 1865. The total of these amounted to 51,285, 26,339 being males and 24,946 females. Of this number, 22,926 were natives of Paris, and 28,359 were born elsewhere. Of the deaths, 37,428 took place *à domicile*, 13,482 in the Hospitals, and 124 in the prisons, 251 bodies having been deposited at the Morgue. As to the causes of the deaths, 1162 of these took place from typhoid fever, 765 from small-pox, 945 from croup and diphtheria, 6591 from cholera, and 1568 from other zymotic diseases, making a total of deaths from zymotic diseases of 11,031, or 21·4 per cent. Cancer furnished 1494 deaths, phthisis 8399, and other constitutional diseases 535, the deaths from these causes altogether amounting to 10,428, or 20·3 per cent. Diseases of the heart caused 1458 deaths; of the lungs, 7536; of the brain, 6653; of the digestive canal, 6820; and of the urinary apparatus, 686. There were 706 suicides, 780 deaths from accidents due to carriages and other causes, while the total of 51,285 is completed by 5187 unclassified deaths. The following years have been marked in Paris by an exceptional amount of mortality:—1709 (famine), when there were 29,288 deaths; 1794 (famine and executions), 30,388; 1814 (typhus and the battle of Paris), 33,116; 1832 (cholera), 44,463; 1849 (cholera), 48,122; 1854 (cholera), 40,968; and 1865 (cholera), 51,285 deaths.

In a recent number of the *Gazette des Hôpitaux* M. Cazenave, of Bordeaux, narrates the particulars of an interesting case of death from fear just prior to an operation for lithotomy, and which, had chloroform been administered, would probably have been attributed to its influence. A distinguished Veterinary Surgeon, about 60 years of age, of good constitution, and possessed of great moral force, had suffered for a considerable period from multiple stricture of the urethra and a highly irritable bladder. After the urine had become purulent and ammoniacal, the presence of four calculi was ascertained. In the hopes of being able to perform lithotrity, M. Cazenave persevered for a considerable time in an endeavour to relieve the painfully spasmodic condition of the urethra. These attempts were most courageously borne by the patient, but he was excessively disappointed when informed that lithotrity, which he was very desirous of undergoing, was out of the question, and that some form of lithotomy was the only operation that was eligible. Of this he was known to entertain a great dread, but, nevertheless, at once gave his consent to its performance, retaining to all appearance his habitual calmness. In consultation it was determined to attempt the bilateral operation, and the patient having been placed and held in position by the assistants, M. Cazenave was on the point of introducing the catheter when the patient, who had exhibited entire calmness and serenity during the preparations, was observed to become pale and faint, and in the course of ten minutes, in spite of all that was done, he died. When this nervous syncope seized him, the operator had not yet even touched him.

The wonderful rapidity with which changes are taking place in Germany may be judged of by the fact of there having appeared so recently as the June number of Virchow's *Archiv* an announcement that the forty-first meeting of the German Naturalists and Physicians will be held at Frankfort from the 17th to the 22nd of September, 1866. Who knows, however, but that the "free city," having escaped the pillage which now menaces it, and become evacuated by its Prussian friends, may yet be able to open its arms to the peaceful men of science? Those who are sanguine enough to think so, and are desirous of repairing there, may communicate with Dr. Hermann Meyer or Dr. Spier, sen., the managers of the projected meeting.

A protective duty of 40 per cent. having pretty effectually prevented the admission of European microscopes into the United States, the scientific inquirers of that country find themselves in great straits for want of instruments, the number manufactured there falling far short of supplying the demand. The *Boston Medical Journal*, moreover, informs us that these home-made instruments have not only this artificial protection but also a natural one, inasmuch as they are far superior to those of the best London makers, which in their turn surpass any made in Paris. It is somewhat surprising, then, that these instruments having thus no possible fear of foreign competitors before them, and sure of a remunerative price, are not produced in larger numbers, and that it has become necessary to form a joint-stock company, the shares of which are held chiefly by contemplated purchasers, in order to produce them. One thing we may assure our transatlantic friends—namely, that if they do succeed in producing so superior an instrument, no national jealousy or fiscal regulation will prevent our becoming good customers; so they may as well put this inducement into their prospectus.

PARLIAMENTARY.—MR. DOVER'S METHOD OF DISINFECTING SEWAGE—CAPITAL PUNISHMENT AMENDMENT BILL—ARMY AND NAVY MEDICAL OFFICERS, IMPORTANT ANNOUNCEMENT BY GENERAL PEEL—WITHDRAWAL OF THE VACCINATION BILL—PUBLIC HEALTH BILL—THE TOOMER CASE—VETERINARY SURGEONS BILL.

IN the House of Lords on Thursday, July 19,

A brief discussion arose upon the motion of Lord Shrewsbury for a Select Committee to inquire into Mr. Dover's method of disinfecting sewage, but, although the merits of the plan were well spoken of, Lord Derby thought the subject was one which should be dealt with by the Royal Commission upon the Pollution of Rivers, and the motion was not pressed.

In the House of Commons on Friday, July 20,

Mr. Ewart asked the Secretary of State for the Home Department what course the Government intended to pursue with regard to the Law of Capital Punishment Amendment Bill.

Mr. Walpole said that, as the provisions of the Bill varied considerably from the recommendations of the Commissioners, owing to the great diversity of views upon the subject, Her Majesty's Government did not propose to proceed with the measure during the present Session. At the same time they were of opinion that it would be better to go to a second reading, in order that the Bill might be printed.

Colonel North asked the Secretary of State for War whether he would object to lay before the House the report of the committee presided over by Vice-Admiral Sir Alexander Milne relative to the Medical officers of the army and navy; and whether it was intended to adopt the recommendations of the Commission in favour of the Medical officers of the army.

General Peel said that there could be no objection to lay the report of the committee on the table. It had been moved for that very evening, and granted as an unopposed return. It was not only the intention of the Government to adopt the recommendations of the Commission in favour of the Medical officers, but to go beyond them. There would be no additional pay given this year, as it had not been provided for in the Estimates. It would not be necessary to publish a warrant in order to introduce the new regulations.

On Monday, July 23, the Vaccination Bill was withdrawn.

On the order for going into committee on this Bill,

Colonel Barttelot expressed a hope that the Government would not proceed further with this important measure this Session, as the House could not have an opportunity of fairly discussing it.

Mr. Corry had been very anxious that the law relating to vaccination should be amended during the present Session, because it was impossible to read the able reports of the Medical officers of the Privy Council without seeing that it was in a very defective state. But he had ascertained from hon. gentlemen on both sides of the House that the measure was likely to meet with great opposition, and it was therefore very doubtful whether it could be carried through this year. Moreover, in the opinion of his noble friend the President of the Council, as well as of his right hon. friend the Home Secretary, some of its provisions required very careful consideration; and, under these circumstances, it was not his intention to proceed with the Bill in the present Session.

The Bill was then withdrawn.

On Tuesday, July 24, the House of Commons went into committee on the Public Health Bill. After a short debate the clauses from clause 1 to clause 10 were agreed to.

Mr. Bruce said he would confer with the Government in order to obtain an early day for proceeding with the Bill.

In answer to a question by Mr. Eykyn in reference to the Toomer case, Mr. Walpole said that he expected an application would be made in a day or two to the Home Office on behalf of the prisoner, and he promised that the case should receive his best attention.

The Veterinary Surgeons Bill was withdrawn.

Cholera in France.—The Paris correspondent of the *Times*, July 24, says:—"The alleged appearance of cholera at Boulogne-sur-Mer is contradicted by a letter from Dr. Livois, the mayor, who states that the sanitary condition of the town is excellent. The cholera was diminishing at Marseilles by the last accounts. On Friday, out of 44 deaths, 19 were from cholera; and on Saturday 36, and 16 from cholera. In Paris the cases were rather numerous last week, but it is difficult to get an accurate account, as the authorities have forbidden the journals, and particularly the Medical journals, to mention them. It is believed that the malady had been lurking for some time in the poorer quarters of the capital, and became developed by the intense heat which preceded the great thunder-storm on Monday week. The heat, however, has been much diminished since then, but the order issued by the Ministry of the Interior prevents the public from knowing whether the public health is equally improved." A correspondent informs us that the deaths from cholera in Paris during last week amounted to 1500. The cholera reports from Amiens do not indicate much amelioration; on Sunday there were 33 deaths, and on Monday 40.

THE CHOLERA AT SOUTHAMPTON.

(From a Correspondent.)

The eighth report of the Medical officer of the Privy Council, containing Professor Parkes' account of an outbreak of cholera in and about Southampton in September and October, 1865, had only just been presented to Parliament when the disease reappeared in this town, and assumed a malignity of type and a fatality of character which, in the course of a week or ten days, far exceeds that of the preceding year.

Up to June 10, 1866, the town of Southampton had enjoyed a singular immunity from disease of any kind, and diarrhœa was unknown in the place. On that day the Peninsular and Oriental steamship *Poonah* arrived in the Southampton Water, having lost a man from cholera on the previous day, whose remains were committed to the deep seas. On the 11th, 12th, and 13th June several cases of diarrhœa occurred amongst the men of the same ship. On the 13th Mr. Bencraft was called to see a child belonging to one of these men, who had been ill with severe vomiting and purging and sleeping in the same bed with his father, and who, after five hours' illness, died of cholera. The father of this child got worse, and died two days afterwards.

On June 15, Dr. Griffin was called upon to treat a case of cholera which proved fatal on the 17th of the same month. These cases created but little alarm in the public mind at the time, and every one thought and hoped that they were sporadic in character, and that the town would not suffer from their introduction. Indeed, the brief reference to the *Poonah's* cases is only introduced into this notice for chronological purposes, and it is in no way contemplated to attempt to establish the fact that cholera was introduced into this port by her crew or passengers.

On June 20 another fatal case occurred; and then, with a change of temperature from great and oppressive heat to extreme cold, the disease remained dormant until about July 7, when it may be said that cholera broke out in some parts of the town where sanitary regulations are more or less disregarded; and from this date up to Tuesday, the 24th inst., there have been recorded 120 cases of cholera, out of which number sixty-six have had a fatal termination.

Taking the cases in chronological order, they run thus:—

June 17 .	. 2 deaths	July 18 .	. 5 deaths
,, 20 .	. 1 ,,	,, 19 .	. 8 ,,
July 7 .	. 2 ,,	,, 20 .	. 5 ,,
,, 10 .	. 1 ,,	,, 21 .	. 3 ,,
,, 11 .	. 3 ,,	,, 22 .	. 3 ,,
,, 12 .	. 4 ,,	,, 23 .	. 3 ,,
,, 14 .	. 5 ,,	,, 24 .	. 6 ,,
,, 15 .	. 5 ,,		—
,, 16 .	. 4 ,,	Total	. 66 deaths
,, 17 .	. 6 ,,		

The mortality is great, more than 50 per cent. No sooner had the outbreak been recognised than the local Board of Health set to work in good earnest to arrest, by every conceivable means in their power, the spread of this much-dreaded scourge. Dr. Macormack, the health officer of the town, was authorised to take a large and well-ventilated house for the reception of patients, to engage nurses and attendants of every description. A system of house-to-house visitation was immediately carried out, the Mayor, Mr. Emanuel, and Mr. Alderman Stebbing (chairman of the local Board of Health), accompanied by the indefatigable officer of health, visited the sufferers every two or three hours, administering to them all the comforts which their necessitous condition required, these visits ending on some days as late as one or two o'clock in the morning.

The disease occurred almost exclusively in the districts of the parochial Medical officers; indeed, the pestilence may be fairly said to confine itself, as on all occasions, to the most dirty, badly-ventilated, and poverty-stricken parts of the town.

The local Board of Health have engaged seven additional Medical men to attend upon the suffering portion of the population, and every one is lending a helping hand to their unfortunate fellow-townsmen.

At the time of writing this imperfect narrative, there were no less than seventeen cases of cholera under treatment in the Cholera Hospital. Every Medical man who sends cases into this establishment is authorised to treat himself, or to direct Mr. W. Winwood Reade, the indefatigable intelligent House-Surgeon, to carry out their instructions for that purpose.

Messrs. Griffin and Bencraft have given a fair, extensive, and prolonged trial to the ice-bag applications to the spine, and the conclusion at which they and other observers have arrived is the abandonment of that mode of treatment. Dr. Cheeseman, who has had a large number of cases, has resorted to the old plan of administering calomel, and he thinks, indeed he feels confident, that his cases have done better than others. Dr. Aldridge is very sanguine as to the efficacy of arsenic in cholera cases. Dr. Wiblin has suggested, and is now carrying out, the hypodermic administration of remedial agents; he injects under the skin in various parts of the body a solution of camphor and turpentine, gr. iv. of the former to ♏xx. of the latter; and another preparation of gr. ¼ of bichloride of mercury dissolved in ♏xx. of spt. turpentine.

So far, the cases thus treated promise remarkably well, and Dr. Wiblin most earnestly recommends that an extensive trial should be given to this method of treatment.

On Tuesday evening the Mayor called a meeting of the Medical Profession at the Audit House to consult and advise with them as to the best means to be taken to arrest or "stamp out" the disease. The meeting was addressed by Mr. Alderman Stebbing, Professors Parkes and Maclean, Dr. Luke, Mr. Sampson, and several other gentlemen. The Medical men present pledged themselves to give every possible assistance to the local authority in carrying out the vigorous sanitary and precautionary measures suggested at the meeting.

THE CHOLERA AT CONSTANTINOPLE.

(From a Correspondent.)

THE following letter was addressed to a Medical friend in America, and by him published in the *Chicago Medical Examiner*. As the cholera has already appeared in England, it is thought that a wider circulation of the information contained in the letter may be useful. The only merit claimed for these Notes is that they are a truthful representation of actual cases of cholera at Constantinople during the whole period of its stay in that city in 1865. T. C. T.

London, July, 1866.

NOTES ON THE CHOLERA AT CONSTANTINOPLE, 1865.

By an American Missionary.

CONSTANTINOPLE, August 28, 1865.

Dear Doctor,—For nearly two months the cholera has raged with great violence in this city. My opportunities for observing the disease have been considerable. It is now four weeks since the disease appeared in that part of the city where I was labouring. Since that time I have been in constant attendance on cholera patients, having, together with the Rev. Mr. Long, a Methodist missionary, devoted my whole time to the care of the sick. In the notes I shall make I will confine myself mainly to what has come under our own observation. A few remarks, by way of introduction, may help you to understand what follows.

1. The khans of Constantinople are large stone buildings, surrounding a court. These buildings vary in size, position, cleanliness, &c., &c. Some of them contain 300 rooms, and will accommodate 3000 to 4000 persons. Others contain only 30 or 40 rooms. The one in which we laboured has 175 rooms, and, before the cholera broke out, had a resident population of 2000 persons. These persons are nearly all adult males, who come to Constantinople from the far interior, to do business here. A few of these club together and take a room in a khan. If in good circumstances, three or four will occupy one room; if poor, sometimes as many as fifteen or twenty persons occupy one room. No one knows how many of these khans there are in the city, but there must be several hundred. I should roughly estimate the whole number of persons resident in such khans at 200,000. It is more rather than less than this number. Many of these rooms are very damp, and the air very bad. An open sewer came into one corner of the khan where we were, and deposited its contents into a large tank or hole which had no outlet. You can imagine what exhalations arose, and still arise, from that place. From this brief description you can easily see that a densely crowded khan is a rare field for cholera.

2. Mr. Long and I had a good room at one of these khans, where we met daily, attending the sick, administering medicine, giving advice, and making ourselves generally useful. We generally visited the patients together, consulted in regard to the treatment, in all respects sharing the labour and responsibility.

3. The natives of this country have an idea that a man cannot be considered sick until he is brought *down to his bed*; that he is well as long as he can keep on his feet. Many who have been attacked with cholera diarrhœa have kept on their feet, and sometimes even at their work, until the disease has exhausted their strength and they have come to the borders of the grave.

4. We have attended just 102 cases of those who were in bed when we called. These were bad cases, the symptoms plain; a number of them being in the collapsed state, and past hope, when we began to attend them. Of the 102, 18 have died; all the others have recovered, or are recovering. Besides these, we have given medicine to a large number, probably 350, who have come to our room with cholera symptoms, either diarrhœa or vomiting, or both. Of these, I presume, not 3 per cent. have died.

5. The circumstances under which we have laboured have been unfavourable, with two exceptions. As these men are away from home, and most of them poor, *proper nursing* has been impossible. I have already mentioned the dampness of the stone rooms, and the bad air; these men are not cleanly in their persons; they do not change their clothes often; lie down at night in the same clothes they have worn all day; are careless in all their habits, but especially in regard to their diet.

The two favourable exceptions are:—(1.) That the patients have generally *obeyed our directions*. Of those who have died, probably five out of six have not followed our instructions strictly. (2.) Most of our patients have been men in the *prime of life*; they have had a great deal of vital power to resist disease, and to recover after the disease is checked. We have noticed that old persons and persons affected by any other disease, especially if chronic, are pretty sure to die if attacked by cholera.

I will now give some of the symptoms, as we have observed them; then some of the remedies; and, finally, a number of illustrative cases.

Symptoms.

The disease appears to consist of two stages. When first attacked, the patient has a diarrhœa; this causes little or no pain; the discharges are like rice-water, or clear water with little white particles in it, like the pulp of a white turnip; the discharges are few or many, according to the violence of the attack; pulse quick; mind active and restless. The diarrhœa is often accompanied by vomiting a yellowish water. When there are both diarrhœa and vomiting, the attack is more severe, and the case more dangerous, than when there is only diarrhœa. If these symptoms are not promptly checked, the strength of the patient will be exhausted in a few hours, and he will pass into the second stage.

In the second stage, there is not much diarrhœa, and but little vomiting; the patient's hands, feet, and limbs become cold; pulse feeble; skin on the fingers shrivelled; colour of the hands and feet dark, as if the blood had settled in them; eyes heavy, sunken, and often turned up, showing much of the white of the eye; mind dull and insensible. In almost all cases, in both stages of the disease, there has been more or less fever, sometimes high and violent, sometimes low and heavy. The patients, almost without exception, have complained of great internal heat, and have *begged for water*. This has been true, even when their limbs have been quite cold. This raging thirst is one of the most marked symptoms of cholera, and one of the most difficult things to control. These are the most general symptoms. Of course there are exceptions, and, in some special cases, there are symptoms not mentioned at all above, generally arising from peculiarities in the individual, but in all cases the attack begins with vomiting or diarrhœa. If these are not checked, the patient will certainly die.

Remedies.

Our main reliance has been upon a mixture composed of equal parts of laudanum, tinct. of rhubarb, and spirits of camphor. (a) The ordinary dose is thirty drops, but when a second dose has been necessary, we have generally doubled it. We have often given sixty drops, or a large teaspoonful, for the first dose, when the case was severe. In two cases, where there were both severe vomiting and diarrhœa, I gave ninety drops the first dose with the best effect; both patients recovered. This medicine is intended especially for the diarrhœa. When it has been difficult to check the vomiting, we have given another mixture, which we call "mixture No. 2." It is composed of equal parts of tr. opii, tr. capsici, tr. sem. cardamomi, and tr. zingiberis. This "No. 2" has often proved very efficient; dose, thirty to forty drops, or more, according to circumstances. We have put strong mustard plasters immediately, in almost all cases, on the feet and stomach. When the feet and arms have been cold, we have had them rubbed rapidly with rum or brandy, have applied bottles of hot water or hot bricks, and have taken other means to produce heat and circulation of the blood in the extremities. In many cases, these external applications have had a good and decided influence. In a few cases we have stopped the diarrhœa by injections of starch and laudanum. It has been necessary to forbid the use of water *entirely*. Many of the patients who have persisted in the use of water have died; others have been saved with great difficulty. Of course, the patient should eat nothing until the crisis of the disease has passed, and the patient begins to recover. Here has been one of our greatest troubles; the natives think that unless they take a large supply of food they cannot recover their strength. Several have thus brought on fatal relapses.

Illustrative Cases.

Case 1.—Hagop, an Armenian, from Yozgat. This was the first case I had. Age 25. Was in the second stage when I first saw him; had been down twenty-four hours with diarrhœa and vomiting; had taken no medicine; had severe cramps in his legs; hands and feet cold and dark-coloured. I gave him large doses of mixture No. 1 and brandy; put two men to rubbing his legs and arms; pulse very low; we checked the vomiting, and the rubbing removed the cramp. I worked over him three hours; left him, towards evening, to go home. Soon after I had gone his friends called a barber and bled the patient, and he died in a short time. (In this country barbers bleed and draw teeth.) I felt special interest in this case, as he was an only son. The old father was with him, and begged hard that we should try to save his son's life. The immediate cause of his death was the bleeding.

Case 2.—Marderos, a boy, 14 years old, Armenian; was passing into second stage, or collapse, when I first saw him; had a high fever, great heat internally, but feet and hands soon became cold; begged incessantly for water. Gave mixture No. 1, checked the diarrhœa, put mustard plasters on feet and stomach, rubbed him a great deal with rum; two men worked over him constantly for several hours. Next morning he was better, but had a low fever. He recovered slowly, but is now well.

Case 3.—Sdepan, brother of Marderos. He assisted in the care of M., and became very much exhausted; was taken with violent vomiting and purging, which had continued three hours when I saw him. Gave him a strong dose of No. 1, which he immediately threw up; in a few moments, gave him a second dose, followed by a little brandy; made him lie flat on his back; he retained this dose, which checked the disease. He recovered with very little fever. In three days he was about his room.

Case 4.—A *hamal*—burden-bearer. (As I shall mention this class of men often, let me say that they are men of immense physical strength; the loads they sometimes carry on their backs are enormous, weighing from 200 to 600 lbs. Of course they are men of good health. Most of them are Armenians from Van.) A man of great size and strength, in second stage; hands and feet cold and blue; voice thick; mind dull; his whole body stiff and hard; had taken no medicine; was lying between an open window and an open door, with a strong draught of wind passing over him; his companions were rubbing his feet and hands. I considered him beyond hope. Gave him sixty drops of mixture No. 1, and a large dose of brandy; left brandy to be given him every half-hour during the night. Next morning went to his room, expecting to find him dead, when he saluted me with a "good morning, Sir." His companions said that about midnight he opened his eyes, sat up, and asked for a bowl of water to wash his face. He recovered without any relapse, and with very little fever.

Case 5.—Another *hamal;* passing into collapse when I saw him; gave the usual remedies, and put mustard plasters on his feet, arms, and stomach; disease checked, but his thirst was so great that in the night he crawled to a jug of water and drank freely, which brought on a relapse; both the diarrhœa and vomiting returned. The next day he was very low, stupid, dull fever; pulse very feeble. Gave him brandy in large doses; put men to rubbing his limbs with rum. Symptoms checked, but his strength was gone. The third morning he was alive, but his body was covered with little pimples and festers; very feverish; persisted in drinking water during the previous night; had had two discharges. Died on the third night. I feel quite confident that he would have recovered if he had obeyed our directions.

Case 6.—An Armenian carpenter, old man; while at work on a building was taken with a diarrhœa, but slight; seemed struck down by heat; brought into the khan about 3 p.m. I gave him mixture No. 1. He had a burning fever; great thirst; begged for water; respiration very difficult; had no more diarrhœa, but died the same night, about nine hours after he was first attacked.

Case 7.—A Bulgarian boy, 17 years old; had been sick, when we first saw him, about ten hours; had violent vomiting and purging; was entirely exhausted; eyes turned back and sunken; feet cold; skin shrivelled; his whole appearance indicating that death would follow very soon. Gave him a dose of mixture No. 2, which he immediately threw up with a great quantity of yellowish water. Gave him another dose, with two teaspoonfuls of brandy; put mustard plasters on feet, arms, and stomach; disease was checked, but typhus followed. After a sickness of thirteen days he was able to leave his room.

Case 8.—A Greek tobacconist, 25 years of age; strong, very healthy; attack sudden and violent; had diarrhœa and vomiting. We did not have the exclusive charge of this case; when others had attended him for some time, and there seemed no hope of his recovery, we were called. We applied mustard plasters to his feet, arms, and stomach; gave him mixture No. 1 and some brandy; his feet were cold—applied hot bricks, bottles of hot water, etc., to his limbs, and had them rubbed. He was attacked early in the morning; when we left him, about 5 p.m., there seemed some hope of his recovery, as the discharges had ceased. As we left the room, we met a Jew Doctor, who said he must be *bled.* We told him that if he was bled, he would die. After we left, the Jew M.D. bled him, and he died almost immediately.

Case 9.—A Russian Armenian, an old man, had no one to take care of him; when I found him he had a jug of water by his side, from which he drank freely; he had both vomiting and diarrhœa; both were checked by the usual methods; but he would not desist from drinking water. The next morning he was alive, but the jug of water, which I had removed, was again by his side. His voice was thick, and all his symptoms were bad. He was entirely alone, and so he died before dark, having been sick nearly two days.

Case 10.—Turkish *khoja*, or teacher, 35 years old, strong, in the prime of life; passing into the second stage when called. Mixture No. 1, mustard plasters, brandy, and rubbing saved him. The muscles of his legs were cramped, as if in knots. A very marked illustration of the influence of medicine—we only gave him medicine once.

Case 11.—Turk, young man; had been sick twelve hours when we saw him; did not know how many discharges he had had, he had not counted them, thought 15 or 20; pulse low; whole system much depressed and exhausted. The father, in his ignorance, had given him as much water as he wanted, but said, "as soon as he drinks he either vomits or his bowels move." Sixty drops of mixture No. 1; mustard plaster (the old man made a plaster long enough to go clear round the boy's body). When we returned, after seeing him the first time, and found such a monster plaster ready, we laughed not a little, but told him to clap it on, which he did. The boy recovered.

(a) This medicine is generally known as the "Hamlin Mixture." It was introduced at Constantinople by the Rev. Cyrus Hamlin, D.D., an eminent American missionary, and has been used by him with great success in three terrible visitations of the cholera in that city. It was prepared by some of the principal druggists in Constantinople during the prevalence of cholera in 1865, and great quantities were sold and used with marked and happy results.

Case 12.—An Arab, 25 years old; symptoms very bad; diarrhœa, vomiting; feet becoming cold. We gave him a large dose of No. 1, and a good dose of brandy; ordered the mustard plasters and rubbing. In three days he was about his business.

Case 13.—A poor Armenian boy, about 17 years of age; passing into second stage. Dr. Pratt, an experienced missionary Physician, saw him; said he thought there was little use in giving him medicine. Ordered a strong dose of No. 2, with brandy in large doses, every twenty minutes, until he began to improve. Put on the mustard. Much to our surprise he recovered.

I might go on and fill several sheets with such particulars, but have not the time, and perhaps it would add nothing to the value of these notes. I fully intended to give you the particulars of at least twenty-five cases. All I can now do is to "close with a few remarks."

1. Pardon the imperfection of what I have written. I know but little about Medicine and Medical terms. Perhaps there will be nothing new or peculiar in all I have said. I have written only as an *observer* of actual cases of cholera, and not at all as one competent to treat the disease or to describe it.

2. My observations have convinced me that the operations of the mind have great influence in bringing on or in keeping off the disease. I have known several instances where fear seems to have been the principal or exciting cause of the disease, while very few are attacked whose minds are entirely free from fear and anxiety.

3. When the remedies are applied *early* in the first stage of the disease, it can be easily controlled as a general rule. When not till the patient is in the second or malignant stage, success is very doubtful.

4. From the time the cholera first came here, there has been an impression that rum, brandy, etc., would keep it off; the consequence has been, that about three-fourths of the population went furiously to drinking bad New England rum, and all other kinds of liquor they could lay their hands upon. The effect has undoubtedly been very bad.

5. It is impossible to estimate the number of deaths by cholera, in this city, during the past two months. The published official statements are notoriously false, heing far below the truth. One of our friends, a Medical man, who is more or less connected with the Government, says he was one day in the office of the Grand Vizier, or Secretary of State, and saw there the true official summary of the whole number of deaths for the previous Monday. This number included all the suburbs of the city, and amounted to 1879 for that day alone. This was some days after the crisis of the pestilence had passed. Many other facts have come to our knowledge to confirm his statement, but I will not mention them now. My impression is, that if we should take 500 as the average number of deaths per day, for sixty days, we should be below, rather than above, the truth. This gives 30,000 as the whole number. Many place it as high as 58,000. The desire of the Government to prevent a panic has kept them from publishing the true returns. It may be doubted whether the Government itself knows the whole truth.

Unqualified Assistants.—The danger of leaving an important Surgical charge in the hands of unqualified assistants has been recently exemplified at Coxhoe, in Durham. A boy named Matthew Waugh was smashed by some coal wagons on the Bowburn Colliery Railway. The main injury received was a compound fracture of the right leg. Mr. Carnes, the Surgeon to the Colliery, was sent for, but he was absent from home. Two unqualified assistants attended, and ordered the removal of the patient to the County Infirmary. He was removed in a cart to Durham, and died soon after his arrival from hæmorrhage and shock. It appears that nothing had been done by the gentlemen who saw him at Coxhoe to guard against hæmorrhage, and a considerable loss of blood took place during the journey to Durham. A coroner's jury returned the following verdict:—"That Matthew Waugh died from exhaustion and loss of blood on the 5th instant, consequent on an injury to his leg received by a wagon going on to it, at Coxhoe, on the 4th instant; and we are of opinion that he did not receive proper treatment from the Medical men who were called to the case; that he ought not to have been removed to the Infirmary in the state he was in, and that Mr. Carnes ought to have left more competent men to take charge of his patients in his absence."

DR. SMITH'S REPORT ON THE METROPOLITAN WORKHOUSE INFIRMARIES.

Last week we gave Dr. Smith's conclusions in full; the facts upon which these are based deserve attention. The results of his investigation, which had reference to the classes of sick, the general accommodation apart from the wards, the beds, bedding, furniture, and utensils, the cleanliness, ventilation, nursing, and Medical attendance, are arranged under three heads—

1. Details of Inspection.
2. General Review and Suggestions.
3. Government and Supervision.

Under the first section some complaints are made of the sites of some Workhouses, especially those of Lambeth, St. George the Martyr, St. Saviour's, St. Olave's, Rotherhithe, Poplar, St. George's-in-the-East, and Bermondsey.

The drainage was defective at Whitechapel, St. Luke's, St. Pancras, St. Margaret's at Kensington, and a few others. With reference to the classes of sick, we find that in only two Workhouses are developed cases of fever (contagious diseases) willingly or usually retained; they are generally sent to appropriate Hospitals. There are special wards for such cases at Poplar and Fulham. Sometimes fever cases are scattered amongst the general mass of inmates. Itch cases are sometimes placed in separate wards, and are not sufficiently isolated. Venereal cases are usually sent to the Lock. As regards children, the absence of a sick nursery is a too general defect, though children are usually sent to separate schools. Dr. Smith observes that Workhouses are not Workhouses in the proper sense of the word, nor Hospitals, but really asylums "where the aged and infirm are provided for during life, and where consumptive and other chronic cases, etc., end their days." This is important to remember in regard to needed alterations.

The question of cubical and floor space is fully discussed, and tables are given to show the cubical and floor space in the several wards of different Workhouses; the varying range in the same institution; and also the number of wards used day and night, found to have less than 500 cubic feet space (the standard adopted by the Poor-law Board as sufficient). The only Workhouses that were found entirely free from the charge of want of prescribed ("official") space were St. Saviour's, St. Olave's, St. George's, Mount-street, and Brompton, Shoreditch, St. James', and Hampstead (that is to say, 7 out of 40). In some cases the majority of the wards were deficient in this particular. At Greenwich, 20 wards; Clerkenwell, 9 out of 12; Strand, 19 out of 24; St. Margaret's, at Hackney, 13 out of 19; the evil is "indefensible and reprehensible." In nine cases the floor space in one or more rooms has been reduced to less than 40 feet (50 feet being the standard). We notice, too, that overcrowding is freely allowed in wards that contain "itch, venereal and foul cases," where such a thing is especially undesirable.

Dr. Smith enters fully into the plan of construction of the Workhouses, and shows that "additions, whether to the main building or in the erection of infirmary, fever wards, casual wards, imbecile wards, and offices, have been made without unity of design, and the erections have been placed upon the land without order and without regard to the appearance or the openness of the site." There is a general need of improvement, of which some of the old buildings are susceptible and others not, as Islington. As to height of wards, it is usually 10 to 11 feet; some are only 9 feet, others 12 feet; the width is more commonly 17 to 18 feet. At Hackney the wards are much contracted in height and width. On the whole, however, Dr. Smith is satisfied with the mere wards themselves.

The beds are almost universally made of flock, some of coir, and others of straw or hair, and a few of feathers. "Whilst almost universally the beds are comfortable, more systematic care is required to keep them in order;" they get into that condition in which there appears to be "a handful and a-half of feathers at either end, and nothing in the middle." The bedsteads are almost all of iron. A want of taste is observable in regard to the rugs and the sombreness of the walls. The blankets are less thick than they should be. Mattresses are not often seen; "this deficiency, and the use of cheap bedsteads with rigid bottoms, and the possible occurrence of thin beds, is a serious defect in the bedding of some of the Workhouses." The supply of books, chairs, soap, basins, buckets, tins, night-stools, sheeting (waterproof), and many more things of such kind are noticed in detail. "In several Workhouses the only benches provided are without backs . . . . there is, however, a general defect in comfort in this matter; and it is painful to see the aged and infirm, and particularly the sick, sitting upon narrow benches without backs or cushions;" there is also a necessity for the provision of screens to shield from view the dying; woollen caps, spectacles, looking-glasses, napkins, bed-trays are provided in most places; the supply of towels varies. In a few—Marylebone, St. Giles, Westminster, Islington, Hampstead, and St. George's, Brompton—each inmate has a separate towel; generally, however, two or three round ones are changed twice a week—"in fact, the towels were generally deficient in size, quantity, and quality." Combs and hair brushes are few and far between, a fact that accounts for the transmission and spread of ringworm and the like. Soap appears to be freely supplied. There is a general deficiency, though, in the washing apparatus at the Fulham Workhouse. There were wards supplied with one basin for general use, and at Kensington and Paddington some of the inmates used the chamber-pots to wash in.

Dr. Smith notices that "waste paper for use at the water-closet was supplied in but very few Workhouses. This appears to be both a hardship to the inmates and a disgrace to the guardians, and has led in numberless cases to the use of old towels, dusters, and dish-cloths, which were thrown down the water-closet, and in not a few instances stopped them up;" and it appears that most of the Bibles and prayer-books, which, however, are few, were in a more or less dilapidated state—a circumstance which is easily accounted for by the want just spoken of. In reference to libraries, periodicals, games, and similar amusements, the Report says, it was "certainly bad to see so many hundreds of persons with nothing to amuse them, who, from defective education and long residence out of the world, had nothing to think about, and who sat or lay looking at the bare walls or their scarcely more animated fellow-inmates." It appears that lunatics are always well cared for. The supply of baths is good. Though waterproof sheeting is generally used, yet there was an absence of such special things as urinals, and of tin vessels for vomits. Amongst those Workhouses in which creature comforts and furniture are most abundantly supplied are Marylebone, Islington, St. George's at Brompton, and the City of London.

Dr. Smith seems to pass an eulogium upon the cleanly condition of all wards, "having regard to the dirty habits of the inmates and the great number of persons of the lowest class who were there congregated together."

Ventilation is neglected and ignored completely, for ventilators are stopped up almost universally. "The root of the evil," we are told, "is doubtless the indifference to this subject which until now has existed, and even yet exists, in reference to both private houses and public buildings; to want of due consideration of and knowledge upon the subject by those having the immediate charge of the wards, and to the rough and ready but most inefficient habit of relying upon windows only for ventilation."

Artificial aids to ventilation, such as open grates, perforated panes, perforated zinc, artificial openings, Arnott's ventilators, and Louvre lights are used, but in some rooms they are wanting; where they are found they are inefficient, generally closed, the windows almost always so—the ventilators are also too small, or allowed of strong draughts; in some cases—*e.g.* the Strand—the ventilation was entirely checked by the formation of the landings, passages, and doors. In other cases there are plenty of places for the erection of ventilating apparatus, though this was not attempted.

As regards nurses, Dr. Smith says that they "were so old, ill-trained, and unreliable, as to render it needful to appoint paid nurses." Habits of drunkenness and pilfering are not common. In regard to the administration of medicine, we find that many of the nurses cannot read, but tell the different kinds of medicine by the appearance of the bottle and the contents, and though no serious results have happened, yet there exists clearly a very slovenly way of administering physic, and very considerable opportunity for the occurrence of mischief. A good deal of information is given as to the duties, salary, time devoted to duties by, and help afforded to, the Medical officer. The dietary depends chiefly upon the Medical officer, who can order what he chooses. "But it cannot be doubted that in many Workhouses there are defects in the cooking and distribution of the food so obvious that it is almost past belief they should not have been noticed by the officials, and long ago removed." Such are the main defects pointed out by Dr. Smith.

Recommendations for reform follow—firstly, as to the classes of sick. As the special Hospitals for infectious cases are generally full, "two suitable wards in every Workhouse, in which infectious cases might be placed," should be at once instituted, also some special arrangements for venereal and itch cases, and dangerous lunatics. The ailing amongst the aged and infirm should be treated in their own wards and in the body of the Workhouse, the sick, properly so called, being placed in separate and large wards; whilst day-rooms should be attached to all wards.

A comprehensive plan is needed to bring together the numerous detached buildings, and so economise space and increase the exercise and air ground. Clerkenwell, St. George's the Martyr, St. Giles's, Rotherhithe, and Poplar Workhouses are condemned; others demand extensive alteration. Some can be readily improved. He suggests as the most convenient-sized room one 20 feet wide, 10 or 12 feet high, 36 to 60 feet long, holding six to ten beds on each side. Suggestions as to water-closets, lavatories, and bath-rooms are made.

In reference to cubical and floor space, Dr. Smith points out that this is a matter involving sufficiency and economy at the same time. The borrowing powers of the guardians are somewhat limited, so that in building it is essential to use as little space as possible. Dr. Smith affirms that 500 cubic feet, the standard adopted by the Poor-law Board, is sufficient for each inmate. In this respect he is found to be in antagonism with the opinions held by a large number of Medical men. Let us see, then, upon what grounds Dr. Smith takes his stand, and by what arguments or facts he justifies his conclusions. This matter of space is really the most important one—certainly that most hotly discussed—in reference to Workhouse reform. "The question of space is essentially connected with that of the renewal of the contained air." A man confined in an enclosed space in which there is no current or movement of air will soon render the contained air impure, and the heavy carbonic acid will tend to collect below—that is, around the producer, especially at night when lying down. "Hence," says Dr. Smith, "there is practically a limit to the space which can be made useful by a man; and, except much movement of the air be artificially produced—as, for example, by persons walking about the room—he becomes surrounded by an atmosphere which differs from that of the most distant parts." The diffusion in still air of a heavy gas like carbonic acid is slow and insufficient. "The remark, therefore, of Dr. Angus Smith, that large space may mean only dilution of the poison is appropriate and striking." The ill effects just noted can be overcome by ventilation or the renewal of air. By this means we may have "a small space with the poison altogether removed." Large space, then, is one mode of getting pure air; but when it is a matter of economy, it becomes necessary to inquire what is the least amount of space required by each person. After referring to various experimental inquiries made by Dr. Percy and Dr. Bence Jones, Dr. Smith says, that "the only mode in which the question can be satisfactorily settled is to ascertain the amount of the excretory products and of the oxygen in the air of well-ventilated rooms which allow 500 cubic feet to each inmate; and if it should be shown that they are not compatible with health, but that the former is not greater and not less than are found in private dwellings affording much greater space, to fix the amount, and take steps to prevent an increase of the former and decrease of the latter." Dr. Angus Smith has made about 100 analyses and experiments on this point at Lambeth, Chelsea, East London and Homerton Workhouses; the day and night air being carefully examined. The comparative results are as follows:— "The quantity of carbonic acid in the open spaces in London during the daytime varies from ·0334 per cent. in Hyde Park to ·0428 per cent. in Smithfield; in the wards of St. Thomas's, ·046; in the law courts, ·0507 to ·203; in the theatres, ·0817 to ·320; and in the Hospitals at Madrid, from ·27 to ·43 per cent. But in the Workhouse wards in question, it was on an average ·0463, and at a minimum ·0443 per cent.—a quantity scarcely exceeding that in the open air, and equal to that in the wards of St. Thomas's. This is the quantity which is found during nearly eighteen of the twenty-four hours daily." At night the highest mean was ·0694; the lowest, ·0621—"highly satisfactory," showing "that no accumulation occurred as the night advanced." With regard to the quantity of oxygen in the open air, it is about 21 per cent.; in Workhouses "it need not be less than 20·88 per cent. at any period of the night, and 20·90 or upwards by day. These are perfectly within the limits of the utmost degree of health, and are far greater than those found in most dwelling-houses."

There is just one other essential point which Dr. Smith insists upon, that "there is a limit beyond which height of room is neither economical nor necessary, for the greater part of the respiratory acts take place within the lower four or five feet, and a volume of air which is far removed must be much less useful in diluting the more highly charged air than an intermediate one." The height should not exceed twelve feet.

As to bedding and furniture, several suggestions for improvement are made, and ventilation must be "independent of windows, effected by the simplest means, by the introduction of the outer air, and be beyond the control of the inmates and nurses." Into all these points Dr. Smith enters. The air should be warmed before admission.

Nursing should be effected by paid nurses, and there seems no reason why inmates should not be found in every Workhouse who, by training and the offer of a slight pecuniary advantage, could be made into assistant nurses.

The position of the Medical officer is criticised. Dr. Smith discusses the question of residence, which he thinks not necessary; the conjunction of private practice (all depending upon the extent of the latter); assistance by deputy, recommending that a resident assistant be appointed to all Workhouses having 500 inmates; that the Medical officer should not hold any district appointment in addition, and that his "clerical" work should be relieved; that the drugs be supplied by the guardians and dispensers provided when required; that the salaries should be increased, and the usual system of extras continued.

Greater facilities for cooking and serving up the food in a hot state are needed.

The third part of the Report, "On the Government and Supervision of the Workhouses," recommends a "patch-up" of the old system.

REVIEWS.

Circular No. 6, relating to the Materials in the Surgeon-General's Office, Washington, for a Surgical History of the late War. 4to. Pp. 66. November 1, 1866. Philadelphia: Lippincott and Co.

"This Circular," says Surgeon-General Joseph K. Barnes, "is published for the information of the Medical Officers of the American army." We would add, for the instruction of Surgeons in all services and countries, for the information of historians, and we would fain hope also for the warning of statesmen.

The American Army Surgeons have had unusual opportunities for advancing and establishing the position of military Surgery as a separate section of our Profession; less trammelled by official tradition than their European brethren, they had a field of observation which was practically boundless, with resources and means placed lavishly at their disposal by a great and generous people. That these advantages were made every use of is testified by the Surgeon-General, who speaks of the "commendable diligence, promptitude, and zeal of the Medical Officers," who have amassed material enough to give the Army Medical Officer work for many a day to come. The amount of material, when compared with that afforded by the French and British troops in the Crimea, may well be called unprecedented. The French in that campaign had, according to M. Chenu, 48,118 killed and wounded, the British 14,849, while the Americans, in the year ending June 30, 1862, out of little more than half the regiments in the field, had 17,496 gunshot wounds to record; next year about three-fourths of the regiments gave 55,974 gunshot wounds; and "the battle-field lists of wounded for the years 1864 and 1865 include over 114,000 names." These returns, when added up, must afford a pleasing subject for meditation to a nation which affects to follow the precepts of a Prince of Peace. No wonder the blessed art of healing derives but doubtful benefit from such devil's work. But let us look a little further, taking special cases—say, fractures of the femur. In the Crimea, the French army had only 459 cases, the English 194, the Americans 5000. Or again, take an operation, excision of the head of the humerus; the British had 16, the French 38, and the Americans 575; and 5480 specimens (bits of their fellow-citizens) have made the Army Medical Museum "richer, numerically at least, than the Medico-military museums of France or Great Britain." How is it that all this sounds strange in ears accustomed to Hospitals and dead-rooms, and make us think rather of the skulls on a Dahomey palace than of Lincoln's Inn Fields or Fort Pitt?

The means for obtaining these records were, however, very perfect. As the reports reached head-quarters at Washington, their contents were at once transcribed and classified in ten books, eight of which were reserved for regions, one for blood-vessels and nerves, the tenth being for wounds of a miscellaneous character. Five other volumes received the accounts of operations; and although this perfected system was only begun early in 1864, on September 1, 1864, there had been registered the histories of 30,435 wounds and 1179 operations, and these were again revised and classified in a manner "less elaborate than tha employed in the British statistics of the Surgery in the Crimea and more detailed than that followed by M. Chenu in the Surgical report of the Crimean War." By January, 1863, 1248 Surgical specimens had been collected and a list of them published. A suitable building was erected, and a staff appointed, consisting of "several artists, a colourist to prepare illustrations of Surgical pathology and representations of remarkable injuries, a draughtsman to make maps and plans, and two engravers." A Medical Officer was detailed to describe and classify the preparations, and the requisite workshops were connected with the Museum. Draughtsmen were also sent to battle-fields and Hospitals to portray the effects of recent wounds or the results of Surgery. A photographic gallery was erected, and photographs of typical specimens were sent, with short histories attached, to Medical directors, to be shown to the Medical Officers. The Museum now possesses four quarto volumes, with over a thousand photographic representations of wounded or mutilated men.

We shall now go carefully through Circular No. 6, beginning with "Gunshot Injuries of the Head," which, from the commencement of the war to October 1, 1864, numbered 5047. In the records they have been divided into—first, gunshot fractures and injuries of the cranium, including the perforating, penetrating, and depressed fractures; the fractures without known depressions, and contusions with encephalic lesion; secondly, the simple contusions and scalp wounds.

In the first class, of 704 cases 505 died, and 199 recovered; 107 of these were trephined, of whom 60 recovered. When operative procedures were instituted the recoveries were 45·3 per cent. In 483 cases treated by "expectancy" the ratio of recovery is only 20·5 per cent., but "it must be apprehended that this favourable *exhibit*" of trephining must some day be "materially modified." Of the second class, out of 3942 cases 103 died. "It is altogether probable *that in all* of the fatal cases some undiscovered injury was done to the cranium or its contents; or that the pericranium was removed and death of bone ensued, with consecutive lesions of the encephalon."—P. 9. Surely men die of scalp bruises and wounds without these complications! In Table X., p. 103, showing the number of cases of disease and injury for the year ending July, 1862, we find 2652 cases of erysipelas, for instance, but, so far as is "ascertained, the fatal results depended upon concussion or compression of the brain, or upon the formation of abscesses in the liver or lungs, in consequence of inflammation in the veins of the diploë. Several highly interesting cases are given of these secondary effects of blows on the head. In one, Surgeon D. P. Smith (a gentleman who visited this country shortly before the outbreak of the American civil war, and who left many friends behind him at the Medical schools) made five perforations with the trephine in order to remove diseased bone and give free exit to the pus. Convulsions, which were present before, did not recur, but the patient remained comatose and died twelve hours after the operation. This the recorder considers an illustration of the fallacy of Pott's well-known views; but the cases described by Pott did not resemble Dr. Smith's. We agree with Mr. Hewett that "the successful issue of a case of trephining for matter between the bone and the dura mater is almost unknown to Surgeons of our time." There is a traditional importance attached to a Pott's "puffy tumour," but practically it is of about as much moment in Surgery as ghosts are in society. They were both seen of old time, and some still believe in the possibility of their appearing in the present day. We once heard it asked in a large company, consisting chiefly of Hospital Surgeons, whether any one present had seen a puffy tumour as described by Pott. *Not one had.* Still, we would not talk of the *fallacy* of that distinguished Surgeon's views being illustrated by a case different from those he has described, any more than we would be inclined in an official circular to select our references from researches made more than a hundred years ago. The Museum possesses eight examples of fracture, with and without detachment and depression, of the inner table without apparent injury to the outer table of the skull, which the recorder believes to be the result "in most instances of a *small* projectile striking the cranium very obliquely, or possibly in some cases from a comparatively slight blow from a body with a large plane surface." This is not such a rare accident in civil life as the expressions in the Circular would lead us to believe it is in war. There are many cases recorded where blows on the head have broken the inner table without even injuring the scalp, and in two recorded in the *Glasgow Medical Journal* for 1864, death was caused by the fragment of bone dividing the meningeal artery. There is one very interesting case of recovery after penetration. "Corporal G. W. S., aged 29, was wounded at the battle of Fredericksburg, and six days after was admitted into the Hospital at Baltimore. The humours of the right eye had been let out by a ball which had likewise inflicted a slight wound of the lower lid. The left eye was prominent, but its functions were undisturbed. There were no pain nor cerebral symptoms, only slight headache. No one suspected that the projectile had entered the brain. The wound healed kindly, and after three weeks the man walked about the city habitually with a Hospital pass. He appeared to be well, except that he had an occasional pain over the left eye, until February 6, 1863, when he had a chill, followed by a slight febrile reaction. No marked cerebral disorder supervened, however, until February 10, when delirium was noticed at night. On the following day the patient was comatose, and at midnight of February 15 he died. A conoidal musket-ball was found wedged between the sphenoid and the left orbital plate of the frontal bone, and lying in contact with the dura mater. The orbital plate was pressed inwards and fractured, and a fissure extended through the superciliary ridge. Over the ball, at the base of the left anterior cerebral lobe, was an abscess containing about two drachms of pus. The ball was incrusted by callus, and the opening it made in entering through the walls of the right orbit was greatly diminished by osseous deposition."

In looking over the registers of gunshot injuries of the head two general facts are noticed—first, that in the after treatment of scalp wounds a *multitude* of Surgeons did not consider spare diet, perfect rest, and antiphlogistic measures of essential importance; and, secondly, that in the treatment of cranial fractures the general tendency was to the treatment of Guthrie in regard to operative procedures rather than the more expectant plan insisted upon by the majority of modern European writers on military Surgery. In gunshot wounds of the face hæmorrhage was the most serious and fatal complication; the difficulty of reaching the bleeding points led to ligature of the carotid "with the result of *postponing* for a time the fatal event." This we cannot comprehend, especially coming just after an allusion to the most questionable of Guthrie's doctrines. In these days, when we see all the facial bones removed by operation, sometimes with the relations of parts much disarranged by disease and the tissues morbidly vascular, we are at a loss to discover any good reason for the carotid having been *often* tied, especially with such a dreary prospect as mere postponement of a fatal result. A curious fact is mentioned in the section "Gunshot Wounds of the Neck." "Several instances are recorded in which large grapeshot, on striking the hyoid bone, were deflected, and buried themselves in the supra-spinous fossa of the scapula, or among the muscles of the back. These patients died from laryngitis or œdema of the glottis, and might have been saved perhaps by tracheotomy; but they died suddenly when Surgical assistance could not be immediately procured."

Of 187 cases of gunshot fractures of the vertebræ, all but seven proved fatal, and six of these were fractures of the transverse or spinous processes; the seventh case was one in which a musket-ball, having broken the spinous process of the fourth lumbar vertebra, penetrated to the vertebral canal. On September 20, 1863, the ball and fragments of bone were extracted at a Nashville Hospital. On July 26, 1864, the patient was at Quincy, Illinois, where he was reported as likely to recover. There are recorded no less than 5195 gunshot flesh wounds of the back, of which a large proportion are injuries from shell. Of the 2303 gunshot wounds of the chest, either penetrating or accompanied by internal thoracic lesions, the results have been ascertained in 1272; of these 930, or 73 per cent., were fatal. The mortality after thoracic flesh wounds was small, but, owing probably to the mobility of the tissues, they were commonly long in healing. In the treatment of penetrating wounds of the chest venesection appears to have been abandoned altogether. Hæmorrhage was treated by cold, rest, and opium: paracentesis or enlargement of the wound to evacuate effused blood is not reported as having been practised. Hæmorrhage from vessels of the costal parietes was very rare, and in the few cases recorded was a secondary accident. Bleeding from wounds of the intercostal arteries has presented theoretical rather than practical difficulties. Splinters were removed, sharp edges of ribs likely to wound the pleura or lung were rounded off, foreign bodies taken away, and paracentesis on the occurrence of empyema was practised when indicated; but with these exceptions the cases were left to the natural process of cure. The results of the so-called "hermetically sealing" penetrating gunshot wounds of the chest are such as to warrant an unqualified condemnation of the practice; the histories of these cases have been traced in most instances to their *rapidly fatal* conclusion. *One* successful case is recorded (p. 22); in it the posterior wound gave way, when the patient was suffering from fever, pain, and dyspnœa almost approaching to suffocation, and gave exit to a profuse discharge of clotted blood and pus. Few examples of recovery are recorded where the track of the ball passed near the root of lung. Fracture of a rib at the wound of entry was deemed a very dangerous complication, and the established opinion that penetrating wounds with lodgment of the ball are more fatal than perforating wounds was amply illustrated.

The following case is very remarkable:—Private Betts, aged 22, was, on May 3, 1863, when charging the heights of Fredericksburg, struck by a three-ounce grape shot. The ball comminuted the sternum at the level of the third rib on the left side, and tore through the costal pleura. It remained in the wound, and was removed by the patient. On the following day Betts entered the Hospital (how is not stated). Through the wound the arch of the aorta could be seen pulsating. The left lung was collapsed. When sitting up there was but slight dyspnœa. Several fragments of the sternum were removed, and the wound soon granulated kindly. He ultimately recovered perfectly. One patient received a small pistol shot in the left ventricle, which passed out through the right auricle. He lived for twelve hours, surviving longer than the other three cases of wounded heart which came under treatment. Three very remarkable cases are given of recovery after gunshot wounds, involving both the thoracic and abdominal cavities. In one, Sheridan, lung protruded from the front, and bile dribbled by the posterior wound. Three days after being wounded, Sheridan walked from the ambulance station to James's River, a mile and a half, with the hope of getting on board a gunboat; but he was taken prisoner, and sent to Richmond, where no dressings were applied to the lung hernia; but he now and then washed it, and it greatly receded. The bile ceased to dribble. He recovered, and was exchanged. Of penetrating wounds of the abdomen, there were 2164 flesh wounds and 543 penetrating. Of the former, 114 died from sloughing, the wounds having been inflicted by shells. Of the latter, results have been obtained in 414, and were fatal in 308, or 74 per cent.

In many cases, fæcal fistulæ were produced, which healed spontaneously. There were more recoveries from wounds of the large intestine than from those of the jejunum or ilium. In no case of wounded gut was a suture applied. All but four cases out of thirty-two where the liver was undoubtedly wounded died. The escape of omentum through the wound did not seem to be a very serious complication. In many cases the protrusion was cut off, and still the patient recovered promptly. In most cases of injury to the pelvic bones very tedious suppuration ensued, and Surgery could do but little except to facilitate the escape of pus and to remove dead bone as it became separated. The returns corroborate the observation of Stromeyer, that there is a greater liability to pyæmia in gunshot fractures of the pelvis."—P. 28. Surgeon S. W. Gross reports the case of a soldier who received a conoidal bullet in the right corpus cavernosum which became encysted. It gave no pain, and the patient refused to have it extracted.

We now pass to gunshot wounds of the upper extremities, which are recorded in four classes, of the scapula and clavicle, shaft and ends of the humerus, ulna and radius, carpus and metacarpus. It is only with the second class much progress in recording has been made. This comprises 2408 cases of gunshot fractures of the humerus. Recovery followed in 1253, death 436, result still undetermined in 719 cases. In cases treated by amputation or excision the ratio of mortality was 21 per cent.; where conservative treatment was adopted the mortality was 30 per cent. However, these statistics are as yet incomplete. Of gunshot fractures of the femur a table is given at page 31. The only recorded recoveries of fractures involving the hip-joint are those in which excision was practised. In fractures of the upper third the mortality rate is greatest for cases treated by amputation. There were 43 of these, and in 19 amputation was done at *the hip-joint;* why we are not told. Even allowing for the femur being much splintered, or even for extensive loss of soft parts, we can conceive no adequate reason for opening the synovial capsule of the hip-joint for fractures of the upper third of the bone. Surely sawing through the trochanter would serve every good end. "In the noted case of Kelly," who had his left femur shattered by a conical bullet fired at 300 yards, Mr. Shippen operated successfully, "the senior Surgeons of brigades having decided that exarticulation of the femur was expedient." We are not told *why* they did so; and unless they had some very good reason in those days when we find such men as Sir W. Fergusson amputating even through an abscess sooner than approach the trunk by one unnecessary hair-breadth—unless they had some reason based on Surgical principles, the "noted case of Kelly" is simply an illustration of recovery from an extensive mutilation, and does not advance true Surgery one whit. There is a portrait of Kelly reclining on a divan. It is a pity Surgical artists should content themselves with having the subject's hair nicely combed and his uniform becomingly adjusted, while they leave exposed the baser parts. Then, again, Mr. Packard had a case where amputation had been performed in the lower third of the thigh. The progress of the case was untoward; *necrosis* eventually extended *as high as the trochanters*, so *exarticulation* was performed. The patient recovered, and we are glad of it. We have no doubt everything was cleverly and well done; but is it consistent with the principles of modern Surgery to take the head of the femur away when the necrosis only reaches the trochanters? If Nature had been irritated by its presence, she would have indicated her intentions, and not stopped at the trochanters. "Excision gives seven recoveries after fractures of the upper third. Two of these were excisions of the head and a portion of the shaft of the femur, four were formal excisions of the continuity, and one was a removal of fragments and rounding off of sharp edges of bone, which *was admitted among the excisions* with great reluctance."—P. 32. The latter and the obliging qualification appended remind us of cases we often see even in London, where the joint has been opened, scraped, picked at, shut up again, and called an *excision*. It would be well to limit the use of a word to one proceeding alone. It does not signify what a thing is called so long as the reader knows what is meant. If resection were reserved for removal of articular ends of bones, and excision for cutting pieces off their shafts, it would assist him very much and prevent trifling cases being smuggled in to fill a list under some important appellation. We hope the American compilers are careful as to this, and not like Moore's tuft-hunter, who for a guest thought that

"At a pinch Lord Ballyraggan
Was better than *no lord at all*,"

and scrape together their materials indifferently so long as their names sound well, because, like Falstaff's soldiers, they'll "fill a (statistical) trench as well as better men."

(To be continued.)

Partridge *v.* Toomer.—A memorial is about to be presented to the Home Secretary, submitting for consideration the case of Mr. Toomer, convicted before Mr. Justice Shee, at the late Reading Assizes, of a rape on Georgiana Partridge.—*Observer.*

GENERAL CORRESPONDENCE.

THE TREATMENT OF CHOLERA BY MEANS OF ICE AT SOUTHAMPTON.

Letter from Dr. John Chapman.

[To the Editor of the Medical Times and Gazette.]

Sir,—So far as I am aware, the only Medical men in Southampton who, during the present cholera epidemic, have had any patients treated by means of modifying the temperature of the spinal region are Mr. Bencraft and Drs. Griffin, Cheeseman, and Olliver.

The aggregate number of cholera patients treated by them up to the 20th inst. was 72; of these, 44 were submitted to ordinary treatment, 25 had died before I left Southampton on the 21st inst., and of the 19 survivors some had recovered and some were recovering. Of the 28 who had been treated by means of ice 13 had died before the 20th inst., and of the 15 survivors some had recovered and some were still recovering.

According to these statements, it appears that whereas only 43 per cent. of those patients submitted to ordinary treatment have recovered, 53 per cent of those treated by means of ice have been saved.

But this comparison of the aggregate results of the two methods of treatment is far from showing the full remedial power of my method of treating cholera as compared with the others adopted in Southampton. It will be observed that of the whole 23 patients treated by Mr. Bencraft the only 4 who survive were treated by ice. Again, if Dr. Griffin's patients be ranged into three classes of cases—viz., cholerine, slight collapse, and complete collapse, as he has carefully distinguished them—it will be found that there are 10 of the first, 5 of the second, and 7 of the third class. Now as all the patients treated by him or in conjunction with me by means of ice were of the second and third class only, it is necessary, in order to institute a correct comparison of the two methods, to ignore the 10 cases of cholerine, and to compare the results of treatment in respect only to the cases of slight and complete collapse. The results are as follows:—

Cases under Ordinary Treatment.—Slight collapse, 5; all recovered. Complete collapse, 7; all dead.

Cases under Ice Treatment.—Slight collapse, 3; all recovered. Complete collapse, 10, of whom 5 recovered.

It thus appears that while all the cases of complete collapse—viz., 14—which were submitted to ordinary treatment by Mr. Bencraft and Dr. Griffin, died, 4 of Mr. Bencraft's cases, and 5, or the half, of Dr. Griffin's cases, altogether 9 out of 22, or 40 per cent. of those treated by means of ice, recovered.

I may add that Dr. Griffin expresses himself satisfied that the spinal ice-bag, if properly applied, arrests alike the cramps, the purging, and the vomiting of cholera patients, and that it makes them warm. If it does these things, it subdues the four great symptoms characteristic of cholera.

In presence of these facts—verifiable by authentic documents in my possession written by me from the dictation of the several Medical men to whose patients they refer—the question immediately arises, How comes it that my method of treating cholera is reported to have been abandoned at Southampton? The reason is as follows: Mr. Bencraft and Dr. Griffin were known to be treating cholera patients by means of ice, and Dr. MacCormack, whose duty it is to keep a record of all the cases of cholera at Southampton, assumed that every case of cholera occurring in the practice of those gentlemen was treated by my method, and therefore alleged that every case of death from cholera which they reported was a case in which my method of treatment had been adopted. As a matter of fact, up to the 20th inst. Mr. Bencraft had reported 23 cases of cholera; of these 11 were not treated by ice at all, and they all died. And up to the same date Dr. Griffin had reported 35 cases; of these, 22 cases were not treated by ice at all. As already stated, 10 of these were cases of cholerine, 5 were cases of slight collapse, and 7 of complete collapse; those of the two first groups recovered, all of the last died. So that, in fact, 11 of Mr. Bencraft's and 7 of Dr. Griffin's fatal cases are officially reported by Dr. MacCormack to have been treated by means of the spinal ice bag; whereas in no one of these cases had it been applied at all! According to him, 31 deaths have followed the treatment of cholera by ice in Southampton; whereas, in truth, only 13 deaths have followed that treatment, although it was most imperfectly tried.

I am, &c.
John Chapman, M.D.
25, Somerset-street, W., London, July 25.

DILUTE NITRIC ACID IN CHOLERA.

Letter from Dr. R. A. Warwick.

[To the Editor of the Medical Times and Gazette.]

Sir,—In the report of a case of cholera lately under the care of Dr. Hughlings Jackson in the London Hospital, I observe the treatment adopted was the administration of sulphuric acid and peppermint water; hot bottles applied to the feet; brandy and injections of hot water. In the other cases under the care of Drs. Andrew Clark and Fraser, somewhat similar remedies were ordered. My object in remarking on these cases is to direct attention to the advantages which I believe the dilute nitric acid possesses over the sulphuric in the treatment of cholera. In the *Medical Times and Gazette* of October 14, 1865, the "Week" contains the experience of M. Worms, *Medecin-en-chef* to the Military Hospital du Gros-Caillard, who requests you to draw the attention of English Practitioners to the favourable results which have been obtained in the treatment of cholera by sulphuric acid. He points out that it is chiefly in the first stage of the disease, before the choleraic type has become fully developed, and when diarrhœa is the only alarming symptom, that the rapidly beneficial effect of the acid is observable.

After describing the mode of giving the acid, he then goes on to say, "This treatment puts a stop to the purging, but not to the vomiting, which it, on the contrary, increases—the increase being generally to be hailed as a favourable symptom." You remark, "Of course, it is not a new remedy in the disease," and neither is the nitric acid. Dr. Mason Good mentions its efficacy in cholera, and from what he wrote my father was induced to prescribe it in cholera. I would briefly state the conclusions arrived at, after trying it for the last thirty-five years. When the patient has diarrhœa without vomiting, but with a feeling of sickness, the sulphuric acid is prescribed, and, as M. Worms very truly remarks, "it is rarely necessary to exceed three doses." On the other hand, when there is vomiting with purging, cramps, suppression of urine, etc., the dilute nitric acid is given with a small stimulating dose of opium (tinct. opii ♏ iij. to ♏ v., simple syrup and peppermint water). The first dose, or a portion of it, is generally rejected, but should be repeated in a quarter of an hour, and continued at intervals according to the severity of the symptoms. Now, by the nitric acid, both the vomiting and the purging will be stopped; small portions of ice are also occasionally given, and turpentine freely applied in some of the cases. What I particularly wish to point out is that whereas the sulphuric acid is more beneficial in diarrhœa, the nitric acid is much more efficacious in cholera. I fully concur with the remarks of Dr. Henry MacCormac as to the value of sulphuric acid as a prophylactic, and its great efficacy will, I believe, be found in its early exhibition when diarrhœa is present and before vomiting shows itself; but when vomiting and other symptoms of cholera are developed, the nitric acid will be found the most effectual remedy.

Two cases of cholera have lately come under my care—one, a male, aged 46; the other, a female, aged 65. There was vomiting, rice-water evacuations, cramps, suppression of urine, dusky skin, and, in one, feeble voice. The nitric acid, with the small stimulating dose of opium, was prescribed, and both cases rapidly recovered.

I am, &c. R. Archer Warwick, M.D.
5, Hill-rise, Richmond, S.W., July 25.

The Projected Convalescent Hospital at Lyons.—The Empress Eugénie, amongst her other benevolent proceedings, has determined on instituting a Convalescent Hospital at Lyons. "There is," she observes, "notwithstanding the great increase of charitable establishments at Lyons, still a deficiency. The foundation by the Emperor in 1855 of a Convalescent Hospital at Vincennes has exhibited how useful it is not to allow patients to pass without any transition from the Hospital to the workshop, and I am very desirous that the same idea should be realised at Lyons, and to that effect I make over in perpetuity to the Administration of Hospitals in that city the chateau of Longchêne, together with its dependencies, in order that it may be converted into a Convalescent Asylum."

REPORTS OF SOCIETIES.

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EPIDEMIOLOGICAL SOCIETY.

At a late meeting of this Society, Dr. Richardson gave his views of the origin, cause, and prevention of cholera.

The positions, he said, I am prepared to maintain in respect to the cause of cholera and its propagation may be summed up as follows:—

The cause of cholera lies outside the organism.

The cause, when once in operation, can be carried from place to place.

It can be carried in clothing or on any solid substance. As dried scale, it may possibly be wafted a few feet by the air; but the great medium for its diffusion is water in fluid or vapour.

The poison thus set in motion increases in the bodies of infected persons, but only in the alimentary canal.

The evidence is all to the effect that the poison escapes from the bodies of the infected only from the alimentary system.

The evidence points directly to the fact that in all cases of infection the poison is always, and only, received by the alimentary canal.

After the close of the Crimean campaign the council of the Epidemiological Society issued a series of questions to the officers of the Black Sea fleet in relation to the epidemic of cholera that prevailed in the fleet during the occupation.

At the time of the outbreak of the cholera the population of the fleet numbered 12,572 men, these men all living under the same conditions, except in one particular, yielded 710 cases of cholera, and 397 deaths. Of these cases in the gross 91·26 per cent. of the men attacked were supplied with water derived from springs at Baltschick, a spot on which French troops had been quartered while suffering from cholera; the troops had washed their clothing at these springs, and the ground for a great distance around was saturated with their excreta. The remaining 9·74 per cent. of the infected were supplied with water partly from Baltschick. Three other crews of vessels suffered from severe diarrhœa, and of these two positively took in water from Baltschick, and the third probably so. In one vessel which used distilled water, water condensed from the steam of the engines, cholera broke out, a circumstance which might at first sight appear to go against the water dissemination theory; but on examination it turns out that this water was passed to the tank through a foul hose pipe, by which it was made impure. In all the other ships supplied with distilled water not a case occurred. The contrast is most striking; an experiment, devised for the direct determination of the truth, could not be more demonstrative.

The evidence is not less conclusive when we pass to the facts which bear on the progress of the disease amongst the officers and men of infected vessels. I find that the officers in such ships were attacked in the proportion of 1 in 177, the men in the proportion of 1 in 16·29.

Reading the narrative as it stands, I see no way in which to account for the comparative exemption of officers, except the very obvious one that the men, as a body, partook most freely of the infected water with which the ships were supplied without disinfecting it by heat. The officer took his wine, tea, or coffee, the sailor his grog. That the disease did not become distributed amongst the crews by mere personal contact with the infected is proved by the fact that in one ship several infected persons were removed, and that there was not a case of communicated disease amongst those who received them.

Incidents not a few and of the most striking character stand out to attest the mode of propagation of cholera, and to prove that by water supply the disorder was most commonly reproduced. In Constantinople one of these signal evidences was made manifest. Mr. Blogg, who was present during the worst of the epidemic, has been good enough to furnish me with a fact that came under his own direct observation. It was this: The wearing apparel, the bedclothes, and the mattresses of the sick were washed at one of the fountains of the city in the neighbourhood of Tavatola. The waste pipe of the fountain being broken, this foul water became mixed with the drinking water of Tavatola. In one day after this event sixty persons in the small district supplied from this foul water were stricken with the malady.

In Paris, if all the facts had been published, similar truths were laid open; and one enterprising and eminent Physician

—Dr. Vacher—was so clear in his views on this subject that he wrote to the Administration, begging to have water from the public reservoirs that he might determine the organic impurity. The authorities, knowing necessarily what the disclosure would be—well aware, in fact, that the water of Paris was poisoned with organic matter derived from sewage—refused, in a tone of the most peremptory kind, this simple request.

Snow did not sufficiently recognise that the vapour of water was an active means of conveying the choleraic poison. This truth, however, has been abundantly proved since his death. My friend Mr. Watkins, of Towcester, has shown, in a paper marked by singular acuteness of observation, that in the last epidemic which occurred in his district the persons most constantly and fatally attacked were the women who washed the clothes of the sick. This circumstance, which has been largely confirmed by other observers, is almost a necessary occurrence. Unless every portion of the garments washed were actually exposed to 212° Fahr. instantaneously, the organic poison would (at lower temperatures) begin to pass off with the vapour, and those exposed to the vapour could only escape, I had almost said, by accident.

Snow, again, did not recognise the escape of the poison from the infected body directly in the form of water vapour. This is a point of the greatest importance, because it determines the dissemination of the poison to a considerable degree. Thus when the temperature of the air is low, the fluid excreta condense on the body or on the clothing, and the poison is confined and limited in its effect; but when the temperature is raised, the poison disseminates readily in the vapour of water from the fluid exhalations. This is, I believe, without any further mystery, the reason why cholera always spreads most easily when the temperature is moderately high.

And for the same reason cholera spreads most easily in crowded rooms. In these rooms the temperature is artificially raised, and hot fluid foods, prepared often in the rooms, and always introduced into them, surcharge the air with moisture and heat. In such an atmosphere the poison of cholera in vapour of water finds an equable and easy surface for distribution, vapours acting virtually as vacua the one to the other.

Once more, in modification of Snow's view respecting the propagation of cholera, I think that larger experience, from the time he moved amongst us, has shown that the dried choleraic matter deposited in infected clothing may be carried further and more readily than he supposed.

Lastly, we may perhaps with some fairness believe that he urged rather too strongly the idea that the choleraic poison is often conveyed on the hands of attendants, or on utensils that have received choleraic excreta.

It will be well remembered in this place that our distinguished colleague held to no point so tenaciously as the non-spontaneous origin of what he called the "cholera cell." This was a perfectly natural position for him to take, because in his time the germ or cell theory of disease was predominant, and because no suspicion even had been offered that organic poisons, or rather poisons derived from organic animal substances, could take any except the cell form. This being the prevailing thought, the question of the origin of the assumed cholera cell merged into the question of the spontaneous generation of organic cells altogether; and as the universal evidence was opposed to spontaneity, Snow, with the rest of the thoughtful of his compeers, held that the cholera cell always demanded for its reproduction a pre-existing cell.

In this particular I believe him to have been incorrect, not from opposition to the truth, but from his wanting possession of those advances in physical Medicine that have been made since he died.

An observation made originally by myself last year on the nature of the poisonous product of pyæmia throws a new and simple light on this question of the origin of organic animal poisons. In experimenting with the albuminous exudative matter derived from the diseased open surface of a patient suffering from pyæmia, I found that the poisonous matter presented the characters of an alkaloid. I learned that it was derived from the decomposition of albuminoid substance; I marked it as an "animal alkaloid," I named it "septine," and I showed that by its mere presence on a secreting surface it transformed albuminous secretion into matter like unto itself.

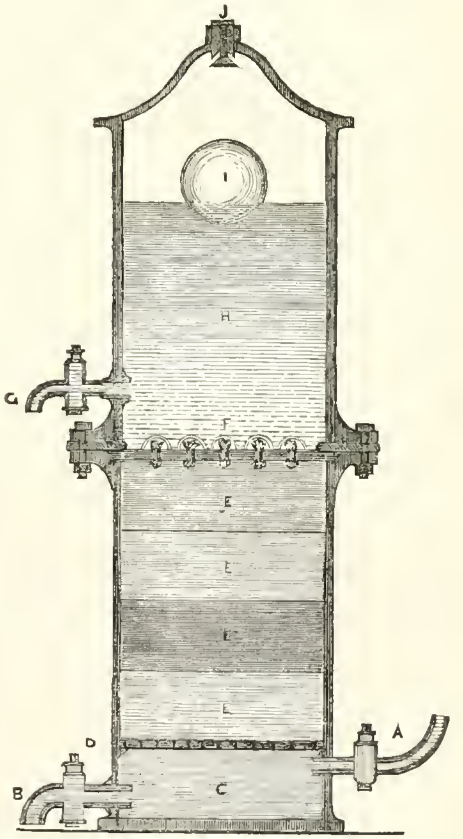
These researches on the existence of an alkaloid occurring in the body during disease have been this year singularly confirmed physiologically by Dr. Bence Jones's discovery of an alkaloid natural to the tissues which is also derived from albumen, and which he has named quinoidine.

With the facts before us that from albumen organic alkaloidal poisons can be formed by mere physical change of elements, the hypothesis of the necessity of cell growth for the production of organic animal poison falls to the ground. We need not now enter on the question of spontaneous generation at all; the formation of the poison, although from organic substance, has nothing to do with the origin life; the poison is a purely chemical change of organic substance; a resolution rather than a construction; a movement from the active or vital towards the inert or dead condition of matter.

In respect to cholera: the view that the poisonous matter is in the excreta in the form, not of an organic cell, but of an organic animal alkaloid, makes what was before difficult perfectly simple. As the exuded or excreted matter from a wounded surface can, and does—under certain conditions of oxidation which we have yet, by a few simple experiments, to learn—produce pyæmic poison, so the excreted matter from the alimentary canal is equally capable, under peculiar conditions of oxidation, of producing an alkaloidal organic poison, which, soluble in water, but admitting of deposit on desiccation, passes easily from one person to another under the agency of those physical states which we have seen as peculiar to the development and progress of the epidemic.

NEW INVENTIONS.

BAKER AND WOODROFFE'S HIGH-PRESSURE FILTER.



A, Inlet for supply. B, Unfiltered supply. C, Chamber for sediment. D, Perforated plate. E E E E, Filtering media. F, Perforated plate with sponges. G, Filtered supply. H, Filtered water. I, Float. J, Air valve.

These filters, say the inventors, are capable of filtering from 1000 to 10,000 gallons per day, according to size, and intended to supply a want long felt to exist—namely, a good filter which should do its work without any personal attention, and be capable of giving any required quantity of pure, limpid, colourless, and tasteless water. It is equally adapted for attaching directly to the mains or to the cisterns; and the water is filtered the last moment before drawing. It is so constructed that water may be drawn direct from the supply without passing through the filtering medium, which operation is of great advantage in causing a retrograde motion from the upper chamber and cleansing the impurities from the lower portion of the vessel which become arrested therein by the filtering process. Prices vary from 5 to 10 guineas.

BOOKS RECEIVED.

Thirty-sixth Annual Report of the Belfast District Hospital for the Insane. 1866. Belfast. Pp. 30.

. Gives statistical information as to number of admissions, ages, occupation, religion, social condition of patients, the supposed causes, the forms of diseases, and their duration.

The Glasgow Medical Journal. New Series. July, 1866.

. Amongst others is an interesting paper by Dr. Banks, on the Development of the Generative System, the object being "to show what becomes of those tubes or ducts connected with the Wolffian bodies whose development is arrested during life—viz. the Müllerian duct of the male and the excretory duct of the female."

On the Treatment of Pneumonia. By A. Smith, M.D., Surgeon Royal Artillery. Edinburgh: Oliver and Boyd. 1866. Pp. 31.

. An analytical account of 108 cases treated in the Hospital of the 47th Regiment, at various stations in Canada. The author's experience teaches him that the employment of blood-letting at the outset of pneumonia in its sthenic form was attended with most beneficial results, that it limited the stage to which the diseased action advanced. A capital essay.

Statistical Tables of Patients treated in Guy's Hospital during 1865. By J. Charles Steele, M.D., Superintendent.

. Contains also a description of the system of ventilation and warming adopted at Guy's, with appended sectional drawings of the mechanism by which fresh air is introduced to the heating chambers in the basement of the buildings, and the method of extraction of the vitiated air.

Six Days on the Mast: a Narrative of the Loss of the *Excelsior*. Second edition. London: Houlston and Wright, Paternoster-row. Pp. 39.

. "At 10.30 p m., amid the raging of the storm, in the pitchy darkness of that awful night, without any warning of the impending danger, a heavy thud was heard and felt by all on board, and immediately the cry went forth from stem to stern, 'O God, the ship has struck!'" Soon she settled down, and twenty-one of those on board got into the fore rigging. For six whole days, "just eighteen feet above the level of the sea, with no protection from the spray of the billows and the cold winds of February but a few feet of canvas, without food, without drink," the majority lived—an exemplification of the length of time which human beings can live under the most intense privation and suffering. One of the survivors was a "fair young delicate woman, recently a mother."

The Medical Reporter: a Semi-monthly Record of Medicine and Surgery. July, 1866. Edited by Drs. Alleyne and Potter. Pinckard, Saint Louis. Pp. 24.

Edinburgh Medical Journal. July. 1866. Edinburgh: Oliver and Boyd.

. Amongst others contains a paper on "Prison Dietaries in Scotland," and the "Mode of Action of Strychnine," by Dr. Spence.

Quarterly Journal of Microscopical Science. July, 1866. Edited by Dr. Lankester, F.R.S., and Mr. Busk, F.R.S. London: John Churchill and Sons. Pp. 200.

. Contents.—A New Adjustable Diaphragm—Description of New and Rare Diatoms, by the late Dr. Greville—On Pacchionian Bodies, by Dr. Bastian—On a Form of Leaf-holder for the Microscope, and a Revolving Slide-holder with Selenite Stage—A Binocular Microscope for High Powers, by F. H. Wenham—The Constitution and Laws of the Microscopical Society; and on the Surface-Fauna of Mid-Ocean, by Major Samuel Owen, F L S.—besides the ordinary abstract of the progress of Microscopical Science.

On the Constituents of Food, and their Relation to Muscular Work and Animal Heat. By F. C. Donders, M.D., of Utrecht. Translated by W D. Moore, M.D., &c. 1866. Dublin: John Falconer, Upper Sackville-street. Pp 45.

. Reprinted from the *Dublin Quarterly Journal of Medical Science*, 1866. An essay devoted to the consideration of "what idea respecting the origin of muscular work and heat the present state of science justifies."

Nineteenth Report of St. Mark's Ophthalmic Hospital and Dispensary for Diseases of the Eye and Ear. Pp. 15. Dublin: Alexander Thom. 1866.

A List of Messrs. Churchill's Publications on Chemistry, Materia Medica, and Pharmacy. July, 1866.

Annual Report of the Royal Edinburgh Asylum for the Insane for the year 1865. Pp. 40. Edinburgh: Royal Asylum Press. 1866.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted members of the College at a meeting of the Court of Examiners on the 24th inst., viz.:—

Messrs. Thomas Beard Burton, Barbadoes, West Indies; Robert Vacy Ash, Stratton, Cornwall; Thomas Aubrey Turner, Wellington-square, Chelsea; Charles Henry Denny Robbs, Grantham, Lincolnshire; John Parks, Bury, Lancashire; George Francis de la Cour, Chatham; John Hougham Bell, Caroline-street, Bedford-square; Charles Lyon Ridout, Egham, Surrey; Frederick William Jackson, Broadstairs, Kent; Foxon Foxon, Maddox-street, Hanover-square; George Henry Dodsworth, Turnham-green; Charles George Coles, Blenheim-crescent; Edward Alfred Drimmell, L R.C.P E. and L.S.A., Lewisham-road; Reginald Eager, Guildford; Edward Clarke, M.D., Philadelphia; Frederick Hastings Watson, Norwich; Frederick Douglas Power, Queen-square, Bloomsbury; Henry Grattan Wilson, Great Malvern; George Moore, Birmingham; Owen Evans, L S.A., Panby Trifriw, Conway; John Ashton Richardson, Hull; and James Marr Pringle, Tynemouth.

At the same meeting of the Court, Mr. George Bewsher Beale, of H.M S. *Excellent*, and Mr. Robert Longstaff Bett, of the Royal Naval Hospital, Haslar, passed their Examinations for Naval Surgeons. These gentlemen had previously been admitted Members of the College, their diplomas bearing date respectively January 7, 1858, and April 15, 1859. The following gentlemen were admitted Members on the 25th inst., viz.:—

Frederick Vinay Cardozo, Madras; Thomas Wilson, Longford, Ireland; Alfred Claude Taylor, Nottingham: Maxwell Francis Reilly, Dublin; Evan Elias Williams, Bangor, North Wales; John Lewis William Ward, Cardiff, South Wales; Frederick William Salzmann, Brighton; George Bainbridge, Harrogate; Frederic Flint, Canterbury; Jean Baptiste Polyxen Vandagne, Mauritius; Thomas Charles Croose Wheatcroft, Cannock, Staffordshire; Frederick William Lambert, Farsley, near Leeds; Horace Chaldecott, Dorking; Robert Charles Moon, Brighton; Frank Askwith Taylor, Romsey, Hants; Adolphus Henry Blackwood Hallowes, Canterbury; John Stedman, Islington; Thomas Bell Hay, L.S.A., Caledonian-road; and John Wreford Langmore, Sussex-gardens, Hyde-park.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to practise on Thursday, July 19:—

John Joseph Bingham, Staveley, Derbyshire; Peter Harding, Shrewsbury; George William Mousley, Atherstone; Henry Beaumont Pattinson, Havitree, near Exeter.

The following gentlemen also on the same day passed their First Examination:—

Edward Bowles Crowfoot, Timothy Wood Lee, and Charles D. Dutt, St. Bartholomew's Hospital; Edward Sunderland and John Webb, Guy's Hospital.

APPOINTMENTS.

. The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Braddon, C. H., M.D., has been appointed Surgeon to the New Bailey Prison, Salford

Habershon, Dr., Assistant-Physician to Guy's Hospital, has been appointed Physician in the place of Dr. Gull, who has resigned.

Hartley, E., M.R.C S E., has been elected one of the Honorary Medical Officers of the Royal Pimlico Dispensary.

Jackson, Dr. Hughlings, and Dr. Henry G. Sutton, have been appointed additional Demonstrators of Pathology at the London Hospital.

Jenner, W., M.D, F.R.S., has been appointed Consulting Physician to the Hospital for Diseases of the Throat.

Maling, E. A, M.R.C S.Eng., etc., has been elected Honorary Assistant-Surgeon to the Sunderland Infirmary and Dispensary.

Moxon, Dr, Pathologist to Guy's Hospital, has been appointed Assistant-Physician.

Rose, H. C., has been appointed Surgeon to the Hampstead Dispensary.

Ward, C. P., M R.C.S.E., has been appointed House-Surgeon to the Royal Pimlico Dispensary.

Yeld, H. J., M.D., M.R.C.S Eng., etc., has been elected Honorary Assistant-Surgeon to the Sunderland Infirmary and Dispensary.

Yeld, Dr., and Mr. E. A. Maling have been appointed Medical Officers of Health for the borough of Sunderland.

BIRTHS.

Adams.—On July 6, at Ashford-road, Maidstone, the wife of M A. Adams, M.R.C.S., of a daughter.

Curgenven.—On July 23, at 11, Craven-hill-gardens, the wife of J R. Curgenven, M.R.C.S., of a daughter.

Harrison.—On July 16, at 38, Ablewell-street, Walsall, the wife of A. J. Harrison, M.B., of a son.

Howell.—On July 21, at Great Dunmow, the wife of Horace S. Howell, M.D., of a son.

Martyn.—On July 20, at Clifton, Bristol, the wife of Dr. Martyn, of a son.

Page.—On July 19, at 11, Queen-street, Mayfair, the wife of W. E. Page, M.D., of a son.

Stilwell.—On July 19, at Beckenham, the wife of R. Stilwell, M D., of a daughter.

MARRIAGES.

Clemenger—Powell.—On July 19, at Llanbellig, W. G. W. Clemenger, Surgeon-Major H.M.I A., to Amelia Maria, eldest daughter of E. G. Powell, Esq., of Coedmawr.

Hind—Hadley.—On July 18, at St. Thomas's, Ryde, Isle of Wight, J. W. A. Hind, M.R C.S, to Minna Amelia Margaret Rosalinda, youngest daughter of the late Captain W. H. S. Hadley, 68th Regiment.

Trevor—Evans.—On July 17, at St. Mary's, Islington, James E. Trevor, M.R.C.S., of Colney Hatch, to Matilda, third daughter of the late W. Evans, of Islington.

Weaver—Wright.—On July 19, at Frodsham, Cheshire, F. P. Weaver, M D., of Frodsham, to Mary Berry, eldest daughter of E. A. Wright, Esq., of Oldham.

DEATHS.

Ansell, T., M.D., at Harley-place, Bow-road, on July 24, in the 63th year of his age.

HAWKES, T. C., at Okehampton, Devon, on July 16, aged 87.

PRESTON, W. C., L.S.A., at 8, New Bridge-street, Newcastle-on-Tyne, on June 23.

YOUNG, E. (late of the H.E.I.C.S.), on July 23, aged 52.

POOR-LAW MEDICAL SERVICE.

. The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

St. Thomas Union.—Mr. Andrew Bennie has resigned the Lympstone District; area 867; population 1122; salary £10 per annum.

Taunton Union.—Mr. Metcalfe has resigned the Bishop Lydeard District; area 14,961; population 4020; salary £80 per annum.

Ticehurst Union.—Mr. Donald MacKeith has resigned the Bodiam District; area 1582; population 303; salary £10 per annum.

APPOINTMENTS.

Midhurst Union.—Collins Curtis, M.R.C.S.E., L.S.A., to the Third District.

Romford Union.—Robert L. Jordison, M.R.C.S.E., L.S.A., L.M., to the Fifth District.

Towcester Union.—Robert F. Allen, M.R.C.S.E., L.M., to the Towcester District, and the Workhouse.

Williton Union.—Christopher Williams, M.R.C.S.E., L.S.A., to the Williton District, and the Workhouse.

CHOLERA.—During the last ten days, four patients with cholera have been received on board the *Belleisle*, now moored near the *Dreadnought* for the purpose of receiving all cases that may apply for admission at the latter ship. Of these, one, who died three hours after admission, was brought from a vessel lying in the London Docks. He had been living on board the vessel, was frequently intoxicated during that time, and was said to have drunk water out of the dock. This last statement is, of course, very significant. Of the others, one came directly from a vessel moored close to Dockhead, Bermondsey; one from 7, Neptune-square, Wellclose-square; and the third from the Wells-street Sailors' Home. This last is at present a mild case, and may go no further than a condition of premonitory diarrhœa with slight vomiting. These are the first cases of cholera received by the Seamen's Hospital Society; and it is a remarkable fact, that the port of London has remained more free from the disease than any other place constantly having arrivals from Antwerp, Rotterdam, and other towns in which cholera is now epidemic. Two more cases were admitted on Thursday, making a total of six, of which two have died. Another expected hourly from Gravesend, according to telegram just received.

THE following are the last week's Cattle Plague Returns.

Census Divisions.	1. Attacked.			Back cases reported in the week ended July 14, 1866.	2. Result of reported Cases from the Commencement of the disease.				
	Week ended June 30.	Week ended July 7.	Week ended July 14.		Attacked.	Killed.	Died.	Recovered.	Unaccounted for.
Metropolitan Dist.	..	5	1	..	7909	3427	3714	318	450
South Eastern Co.	1	1	..	..	4880	1705	2539	465	171
South Midland Co.	28	58	25	6	20732	8735	10069	1541	387
Eastern Counties	8	12	19	..	11445	5409	4848	789	399
South Western Co.	..	..	17	..	1775	672	825	207	71
West Midland Co.	41	67	31	..	14822	6303	6094	1518	907
North Midland Co.	39	27	38	9	18971	10931	6270	1223	547
North Western Co.	127	123	144	276	71913	24906	35028	8455	3524
Yorkshire	7	14	20	4	34571	7919	18355	5936	2361
Northern Counties.	3	..	..	..	8636	4931	2613	974	118
Monmouthshire & Wales	3	5	7	60	8361	1171	5791	1102	297
Scotland	3	1	2	..	46860	6262	28088	10707	1803
Totals	260	313	304	355	250875	82371	124234	33235	11035

The Return shows that 304 attacks were reported to have occurred during the week ended July 14, being a decrease of 9 on the previous week.

Correcting the total by adding an estimated average of attacks commencing during the week, but which may be subsequently included under the heading "Back Cases," the number for the week will be 342.

Note.—2 Inspectors, who reported cases last week, have not reported in time for this return, viz., for the county of Lancaster 1, and Cambridge 1. These Inspectors reported 21 cases last week.

GOOD SAMARITANS (who wish the benefit of the oil and twopence themselves).—The London Society of Compositors has recently subscribed £81 18s., in accordance with their annual custom, to most of the metropolitan Hospitals and Dispensaries, in order to be able to introduce members who may require Medical aid to the benefits of such charities.—*Press News.*

NOTES, QUERIES, AND REPLIES.

Be that questioneth much shall learn much.—*Bacon.*

T. D.—1. The same salt. 2. There is none.

Dr. Cotton's second case of Aneurism of the Pulmonary Artery will appear immediately.

Andrew Wyllie, M.D.—We think you were justified in signing the certificate, and that no society ought to dispute it.

The Case at the Royal Free Hospital.—The inquest will not be concluded until we have gone to press; we therefore, in justice to all parties, reserve our comments until next week.

An Incipient Botanist.—Your specimens have been received, but our Publishers, thinking your note was intended for the Editor of the *Pharmaceutical Journal*, handed it over to him.

The *Alloa Advertiser* of Saturday, July 21, contains a sensible, well written article on the payment of Medical fees and the difficulties and annoyances of Medical practice. It is well that the outside public should be informed of these matters by non-Medical journals, and we thank our contemporary for its well-timed advocacy of the claims of our Profession.

The Suspicious Death at Coxhoe.—The case of George Bell, who was supposed to have been murdered at Coxhoe, presents a divergence in the Medical evidence (to use the mildest term) which it seems impossible to reconcile. Mr. Carnes, who made the post-mortem examination, deposed to having found considerable and severe injuries of the head. The body was afterwards exhumed, by order of the Home Secretary, and the Surgeons who examined it the second time found no traces of bruise, wound, or fracture. It appears simply impossible to reconcile the two accounts. It is but fair, however, to add that, at the time of the second examination, the body was much decomposed, and the brain had been removed.

Workhouse Infirmaries.—The Association for Improving the Condition of the Workhouse Infirmaries in the Metropolis had a prolonged interview with the President of the Poor-law Board on Thursday. Our space forbids any further reference to the subject this week; but we may observe, first, that many evils of the present system may be mitigated by an improved organisation and staff, and by a skilled system of inspection; but, secondly, that more Hospitals are wanted. There is not a Workhouse Infirmary in London at the present moment which is not pressed for room (quite apart from the cholera epidemic) for cases of zymotic disease.

Erratum.—In the pass-list of the Royal College of Surgeons of the 18th inst., *for* A. S. Atkyns, *read* Alfred Ashford Atkyns.

Dr. Walter G. Barker, of Worthing, in a communication in reference to a review of his late work on Diseases of the Respiratory Organs, says:—

"I am charged with being 'somewhat inconsistent' in ascribing various diseases to emanations. I ascribe all epidemic diseases to emanations, resulting either from animal or vegetable decomposition, or to infection; but these causes are local. What I deny is that there is any general and superadded atmospheric poison which is the cause of cholera, influenza, cattle plague, etc.; if so, where does it come from, where does it go to, and what is it? And I shall be very much surprised if any man, after he has read the grounds upon which I have formed that opinion, should ever venture to assert it again."

We subjoin a passage from Dr. Barker's book (p. 194), which will put the reader in possession of his opinions on the causation of epidemic disease, and the relation between derangements of the bowels and those of the lungs.

"I would imply that the cold, dry winds of winter, or great atmospheric fluctuations at these periods, bear the same relation to influenza, whooping-cough, and measles, as heat, moisture, and a stagnant atmosphere do to cholera, typhus, and typhoid fever; that is, they are the atmospheric conditions by which the local causes are brought into fatal effect; for whooping-cough and measles, like influenza, notwithstanding their infectious nature, are to the robust but rarely fatal or even severe diseases; but when occurring amongst the inhabitants of crowded towns and cities, with depressed nervous power, are the most severe of epidemics. Whilst, however, as I have before explained, the cold, dry winds of winter are the actual as well as exciting cause of the lung disorders, their fatal results being mainly owing to local conditions, the heat and moisture of summer, with a stagnant atmosphere, are not in themselves capable of producing these diseases [that is, cholera, typhus, and typhoid fever, etc.], but are merely the general conditions by which the local are brought into operation. Nor, as is well known, are the former at all times necessary, for in London and our large cities there are localities permanently so pestiferous, from the absence of all sanitary regulations, as to engender these diseases at any time or season, even the most healthy. The above appears to me to offer the readiest explanation of this most obscure subject, of which, however, much remains to be learned."

THE ARMSTRONG FUND.

The Treasurer of the Gravesend and Milton Dispensary and Infirmary begs to acknowledge with thanks the receipt from Thos. Hunt, Esq., of the sum of 7*l.*, being the balance of subscription after defraying the expenses incurred by Messrs. Armstrong in the case of Rudman *v.* Armstrong.

Gravesend, July 25, 1866.

CONTRIBUTIONS FOR THE WIDOW OF A DECEASED SURGEON.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The following further contributions have been received by Dr. Letheby for the widow of a deceased Surgeon:—Frank Godfrey, Esq., 5s.; J. J. H. Sochee, Esq., 5s.; P. F. £2. I am, &c.

W. SPENCER WATSON.

27, Montague-street, Russell-square, July 25, 1866.

Poor-law Medical Reform.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I shall feel obliged by your giving insertion to the reply to the letter I addressed to the President of the Poor-law Board on July 9.

"Poor-law Board, Whitehall, July 10. Sir,—I am directed by Mr. Gathorne Hardy to acknowledge the receipt of your letter of the 9th inst., and to thank you for the papers forwarded with it. He regrets that, as he has scarcely entered upon the duties of his office, he is unable at present to make any appointment for an interview. — Your obedient servant, J. Stewart Hardy."

In the House of Commons, on July 7, Mr. Hardy said, "I quite admit the present evil condition of the Infirmaries throughout London It is in the power of the Poor-law Board to take care that there is efficient and sufficient Medical superintendence, and that the salaries of the Medical officers should be fixed at a proper sum. It is also in the power of the Poor-law Board to take care that there is sufficient nursing. I trust that the House will allow me a little time now that I am wading through a vast mass of information, for I can assure hon. gentlemen that I am desirous to apply a remedy. I think the powers of the Poor-law Board have not been put in force, and I ought not to ask the House to legislate until I have tried them. In the next Session of Parliament I shall be prepared to state what course I may think proper to recommend in respect of any new legislation.

From the foregoing statement of the President of the Poor-law Board, I think there can be little doubt he fully intends to place the Poor-law Medical relief of this country in a more satisfactory state than it is at present, and I hope the time is not far distant when the Poor-law Medical officers will be fairly remunerated for their services. Allow me here to call attention to the Report of Dr. Edward Smith, Medical officer to the Poor-law Board, which has only just been laid before Parliament. He says (page 62): "It should not be impossible to arrive at an agreement amongst Medical men as to the sum which should be regarded as fairly sufficient. If the recommendation already made be effected—viz., that the Guardians in all cases provide drugs, and in suitable cases a dispenser—would it not be satisfactory generally for the salary to be calculated at the rate of 10s. per adult in the average maximum number of inmates in the Workhouse at one time, two children, as defined by the Poor-law (viz., persons under 16), to be considered as an adult?" He also says "that extras for midwifery, &c., as allowed by the Poor-law Board, should be added, and the Medical officer should sign lunacy certificates, and receive the fees." This would require a considerable increase in the salaries of nearly all the Medical officers, and particularly of those in the larger Workhouses, and it would probably lead the Guardians to appoint one or more resident Medical officers to each Workhouse, who would devote their whole time to the duties of the office.

Should Mr. Gathorne Hardy, after a reasonable period, fail to name a time for me to present the petition of the meeting of July 5, I will again communicate with him; but I think it hardly fair to press him now too much, considering the statement made by him in the House of Commons "that he is wading through a vast mass of information," but rather give him a little breathing time. I am, &c.

12, Royal-terrace, Weymouth, July 21, 1866. Richard Griffin.

COMMUNICATIONS have been received from—

Dr. W. Cooke; A. A. Atkyns; Dr. F. Brown; T. C. T.; Dr. J. C. Thorowgood; Dr. G. F. Blandford; Dr. B. W. Richardson; Dr. Tilbury Fox; Mr. E. Ludlow; Dr. Lionel S. Beale; Dr. Barlow; Mr. T. M. Stone; Dr. Nursey; Mr. J. Chatto; Dr. J. Blake; B. Nicholson, M.D.; R. Griffin, Esq.; Apothecaries' Hall; J. Lewis, Esq.; W. G. Barker, Esq.

BOOKS RECEIVED—

Markham on Bleeding and Change in Type of Diseases—Vivisection: is it Necessary or Justifiable?—Reports on the Visitation of Examinations—Macnamara on Leprosy—The Eighteenth Annual Report of the Somerset County Lunatic Asylum.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 21, 1866.

BIRTHS.

Births of Boys, 1008; Girls, 1015; Total, 2023.
Average of 10 corresponding weeks, 1856-65, 1735 2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	908	890	1798
Average of the ten years 1856-65	648·5	596·6	1245·1
Average corrected to increased population ..	..	..	1370
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	2	9	2	—	3	6	37	11
North ..	618,210	5	16	4	6	13	13	54	6
Central	378,058	2	7	5	—	5	6	31	1
East ..	571,158	13	18	8	—	11	11	60	308
South ..	773,175	13	12	3	2	16	13	39	20
Total ..	2,803,989	35	62	22	8	48	49	221	346

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·894 in.
Mean temperature	62·2
Highest point of thermometer	83·3
Lowest point of thermometer	47·2
Mean dew-point temperature	54·1
General direction of wind	N.E., E.N.E
Whole amount of rain in the week	0·00

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 14, 1866, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending July 21.	Deaths. Corrected Average Weekly Number.*	Deaths. Registered during the week ending July 21.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3067536	39·3	2023	1400	1798	83·3	47·2	62·2	0·00	0
Bristol (City) . .	163680	34·9	111	73	‡170	79·8	50·8	63·9	0·00	0
Birmingham (Boro')	335798	42·9	230	163	106	79·0	45·4	63·0	0·00	0
Liverpool (Borough)	484337	94·8	343	281	398	74·1	56·2	64·4	0·00	0
Manchester (City) ..	358855	80·0	208	203	‡214	79·0	46·3	60·9	0·00	0
Salford (Borough) .	112904	21·8	76	57	65	75·9	45·6	60·3	0·00	0
Sheffield (Borough) .	218257	9·6	182	115	111	75·6	45·0	58·7	0·00	0
Leeds (Borough) .	228187	10·6	134	116	144	82·0	40·5	60·5	0·00	0
Hull (Borough) .	105233	29·5	89	49	43	..	..	..	..	..
Nwcastl-on-Tyne, do.	122277	22·9	72	65	63	65·0	45·0	56·8	0·00	0
Edinburgh (City) .	175128	39·6	98	84	68	74·7	46·0	61·0	0·00	0
Glasgow (City) . .	432265	85·4	418	252	250	75·8	47·3	61·3	0·00	0
Dublin (City and some suburbs) .	318437	32·7	157	†156	103	77·1	53·8	61·7	0·00	0
Total of 13 large Towns . . .	6122894	34·4	4132	3014	3433	83·3	40·5	61·2	0·00	0
Vienna (City) . .	(1863) 560000	..	..	..	Week ending July 7. 317	Week ending July 7. ..	..	§ 66·4	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·894 in. The barometrical reading decreased from 30·01 in. on Sunday to 29·74 in. on Thursday.

The general direction of the wind was N.E. and E N.E.

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* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 56·3°.

APPOINTMENTS FOR THE WEEK.

July 28. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p.m.

30. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

31. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

August 1. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

2. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

3. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

ORIGINAL LECTURES.

LECTURES ON SOME MEDICAL SUBJECTS.

By F. C. SKEY, F.R.S.,
Consulting Surgeon to St. Bartholomew's Hospital.

Lecture III.

On Hysteria, or General and Local Nervous Irritation.

In the whole range of practical Surgery there is, perhaps, no one subject that claims your earnest study more important than that which I have selected for this and the following lectures. It is not a question of diagnosis between two diseases more or less resembling each other. It is a question of disease or no disease, of reality or imitation, of true or false—of whether your purgatives, your bleedings, sweatings, irritants and counter-irritants, and your whole battery of antiphlogistics, shall be launched against a true disease in the flesh, or its ghost—whether you are to contend with a reality or a shadow. This absence of discrimination between two conditions of disease and no disease are painfully frequent among Medical men, especially among those to whose charge is assigned the care of local and Surgical diseases. "In one shape or another," observes the greatest of modern Surgeons, "you will meet with them at every turn of your future practice." It may be asserted with truth that every part of the human body supplied with nerves, be they cerebral, spinal, or ganglionic, may become under provocation the seat of local symptoms so closely resembling those of the real disease to which that part of the body is liable, as to appear identical with it, and the resemblance to which is so perfect as to deceive the best of us. They are not cases of occasional or rare occurrence. They come before us in the daily and hourly walks of professional life. They monopolise a share, and not a small one, of all cases under treatment, whether Medical or Surgical, but the latter predominate. The closer you scrutinise them, the more penetrating your inquiry—looking into, and not at them—the more perfect will be your diagnosis, and the more will you be astonished that a form of disease so remarkable and so common should have hitherto occupied so little of your thoughts. It is well to call your attention to this description of malady at the early stage of your professional career. Many men pass through life, engaged in active warfare against disease, on whose convictions this variety has scarcely dawned. And this is a truly remarkable fact, which owes its existence to the predominating influence which the heart and the arterial system exercise over the judgment of the profession at the expense of a system yet higher in the scale of organisation, more sensitive, and more liable to morbid impressions—viz., the cerebro-spinal nervous system.

Whenever a new case of disease presents itself to us, we jump to the old doctrines of inflammation, we talk of congestion and of capillary action and of deposits of lymph, and we refer the attendant pain and heat to an inflammatory condition of which the local nervous derangement is an ordinary symptom. We should endeavour to assign to each system its proper place in the pathological scale, and to discriminate more accurately than is generally done the indications which belong to the morbid conditions of each, whether existing in combination or separately. For be assured they do exist, both separately and in combination with each other. You may have varieties of inflammation in which the local pain is trivial when compared with its severity in other cases; while, on the other hand, examples daily occur in which local as well as general derangement of the nerves, whether of the part or of the whole body, exists as a condition entirely independent of the vascular system. Nor is this derangement confined to the sensory nerves. If we have local pain as the indication of excessive activity of the nerves of sensation, we have spasm and convulsions indicating derangement of the nerves of motion, each of which, or both, may prevail without heat, or redness, or swelling. We daily see severe forms of nervous exacerbation without the slightest corresponding increase of action of the vascular system. There is this important difference between the morbid states of the vascular and nervous systems, that while local inflammations are dependent on local causes, aggravated only by the impaired condition of the general health, local nervous diseases for the most part originate in the centres of nervous power, the effects of which are exhibited in remote parts of the body—it may be in a pain localised in a given spot, whether on the surface or in deeply-seated parts, which to our senses holds no especial relation to its nervous centre; it may be in a temporary, or spasmodic, or permanent contraction of the voluntary muscles bending the joints of the extremities in permanent flexion, or obliquely drawing the head upon the trunk, or involving the whole motor system, as in tetanus. No known nerve that conveys sensibility from its centre to its periphery—no motor nerve that carries volition from the brain or spinal cord to a voluntary muscle—is exempt from this morbid tendency.

The vascular system, consisting of arteries, capillaries, and veins, has its own special diseases peculiar to the structures engaged in the circulation of the blood. The attendant symptoms are heat, redness, pain, and swelling, the latter symptom being due to a separation from the capillary system of some constituents of the blood, whether in a fluid or solid form, while the morbid conditions of the nerves and the structures in which they originate are characterised by simple aggravation or excess of the functions of the nerves affected, the natural sensibility of the sensory nerves running into pain, and the moving power of motor nerves into convulsions, or spasm, or permanent contraction. In diseases of the vascular system we have changes of structure; in the latter not. It is necessary to make very clear the line which separates the two classes of disease, lest we fall into the common error of applying to both the remedial agents which are applicable to one only. The diseases originating in or involving the vascular system we treat locally by various agents—leeches, blisters, etc.; in diseases confined to the nervous system these local remedies are useless and even injurious, and we treat them through the constitution. In cases of tic do we derive benefit from leeches, or blisters, or from other form of depletive agents? Assuredly not.

Now the disease which forms the subject we have to consider belongs to the nervous and not to the vascular class; and I select from this variety that occasionally known under the term "Hysteria," than which no name can be more inappropriate or objectionable. It may well be doubted whether, except under very occasional circumstances, such a relation holds between the womb and this remarkable train of symptoms as to justify the employment of the term Hysteria. In the large majority of cases there is no connexion between them beyond that which the disease holds with the other organs of the body. In the name of a disease we are supposed to recognise its form and nature, whereas the term I have quoted conveys to the mind no distinct idea of either one or the other. And there is a positive objection to the resort to it in the fact that the word carries with it the association of a malady of small and insignificant dimensions, while the malady itself is of great magnitude. We associate with it the idea of "hysterics" and "vapours," as they were formerly called. I wish to raise your attention to the level of a great malady, and not of a trivial derangement of the hour. I remember a law case in which the counsel challenged a Medical witness as to the name of the disease, and he replied, Hysteria. "Hysteria!" said the learned counsel, addressing the jury; "we all know what Hysteria means. My client has come into court to obtain compensation from a jury of his country for a permanent injury, by which all his prospects are blighted, etc., etc., and the gentleman in the witness-box, with no sympathy for his misfortune, proclaims the disease to be a case of trumpery hysterics;" and the jury, with rod in hand, let it fall heavily on the defendant's back. But there is a more solid objection than these, viz., that it is founded on a false pathology, in the employment of a term that conveys an impression of its source and nature founded in error. The disease consists in the local evidence of some irritation or derangement of one or the other of the nervous centres of the body, viz., the brain or the spinal cord—at least, such is the received pathology. But the subject is a very obscure one. We have no very definite idea of what we mean by "irritation." We all employ it, and so general is its use that I don't know how we can get on without it. "Irritation of the nervous centres" is a useful and not ill-sounding phrase, though somewhat mysterious, but it is no reflection on Medical science that we can't explain all the phenomena of life; and as the term is somewhat wide in its application, and does not commit its employer to any very defined opinion on obscure matters, on which it is very difficult to form any opinion at all, I presume we shall retain it. One good reason that may be assigned for the persistent employment of the term Hysteria—a term we all know to be objectionable—is the difficulty of finding a substitute for it. We call the disease "local nervous irritation." It is "exalted nervous sensibility," but in naming a disease so definite as this we require a term equally pointed and definite with the thing itself. That we have not got. Sir B. Brodie says, "I employ the term Hysteria because it is in common use, but the etymology is calculated to lead to great misapprehension."

Failing the name, let us look to the thing, and if it be so critical as I have assured you, let us attach to it the grave importance its frequency and its magnitude demand.

It may be asserted with truth that every part of the body may become, under provocation, the seat of an apparent disease that in reality does not exist—that it may and often does assume all the attributes of reality with an exactness of imitation which nothing short of careful and accurate diagnosis can distinguish from the real disease. You think this impossible. Surely you know a diseased knee-joint when you see it. You find severe pain, aggravated by the slightest movement. The temperature of the joint may be raised, and it is slightly swelled. You leech, you blister, you employ an iodine liniment (few cases escape it), you may even resort to issues, but the evil remains in spite of all your remedies, which have been applied to the wrong "system." It is the nervous, not the vascular, that is involved, but the nervous has imitated the vascular and deluded you, and led to the employment of false remedies, which have failed to reduce the pain or give mobility to the joint, and the general influence of which on the health of the patient cannot be said to have proved eminently serviceable.

The case, on more perfect investigation, proves to be one of local nervous irritation, or Hysteria. You think you will not be again deceived, but you are mistaken. A single error, corrected by the experience of another, will not teach you Hysteria. You are consulted by a lady in reference to a daughter of 18 or 20 years of age, who has exhibited failing health for some time and now complains of her inability to walk in consequence of a pain in her back. You examine her, and discover that she suffers extremely on pressure over two or three of the lower dorsal vertebræ, or on any other of the twenty-four. You repeat the examination with the same result, and you make a report to the mother that her daughter has "spinal disease." The result of your opinion is two or more years' confinement to her couch, coupled with the usual allowance of restricted diet, alterative and other depletive medicines, leeches, blisters, and issues. Suppose these structures which you have declared to be the seat of organic disease to be examined under a microscope, what would you discover? Nothing. There is no disease whatever. As the nature of this malady dawns upon you, now awakening to a conviction of its frequency, you resolve to be more wary in your future diagnosis. You are now consulted by another young female patient on account of a tendency in one or more fingers to close in flexion. In the attempt to straighten them you cause intense pain, and if persisted in the consequences may be serious. Your patient appears in fair average health, and all her functions are regular and healthy; while the hand, for all ordinary purposes, is useless. Under the idea that she may have some chronic inflammation of the theca or of the palmar fascia, you treat it with the usual remedies. But your remedies produce no impression on the finger, which continues obstinately flexed as before; you adopt another principle of treatment founded upon a more correct diagnosis, and your patient recovers. These cases sound strange to your limited experience. You think they are rare, and brought forward from a distance and with an effort. By no means. They are cases of daily occurrence. If you could suddenly throw off that nebulous vision of vascular disease which years of bad pathology have impressed upon your judgment, you would see them in their true light. You may deem them to be exceptional. I assure you they constitute the rule of disease, and not the exception. *Real disease is the exception.* Speaking of one variety, and they have all characters in common, Sir B. Brodie, a man who rarely committed an error in diagnosis, says: "I do not hesitate to declare that, among the higher classes of society, at least four-fifths of the female patients who are commonly supposed to labour under diseases of the joints, labour under Hysteria and nothing else." I would venture to enlarge this statement as regards the "upper classes," by including a large proportion of the lower; for much of my own experience of Hysteria has been obtained from the wards of St. Bartholomew's Hospital, and in reference to spinal affections in young persons, I unhesitatingly assert that real disease is not found in a greater proportion than one case in twenty, and even this is a liberal allotment. Have you never experienced the difficulty of discovering an object floating in the air, such as a bird singing overhead, or an early star in the evening? When once the object becomes visible, the eye is readily adjusted to it, and when you look again in the right direction, it is the first object that strikes the eye.

And so with this class of diseases. They are not seen, because they are not looked for. If you will so focus your mental vision and endeavour to distinguish the minute texture of your cases, and look into and not at them, you will acknowledge the truth of the description, and you will adopt a sound principle of treatment that meets disease face to face with a direct instead of an oblique force, which far too generally claims the credit of a success for which Nature alone is responsible.

I have selected above three varieties of this local hysteric affection. Let us consider them a little more in detail with a view to detect the fallacy which classes them under diseases of the first or vascular division, by which I mean an abnormal condition of the blood-vessels leading to changes of structure or altered relations, whether by suppuration, or ulceration, or fibrinous deposit, or local death of the tissues involved. In the first case the knee is the seat of pain. The subject is a young female. What evidence do we commonly look for when the joint is really diseased? We look first for a cause. Diseased joints don't occur without a palpable one, and particularly in young persons. There has been no violence, no fall or blow, to which to attribute it. Had there been, the nature of the disease is obvious enough. There is no considerable increase of heat, and if inflammation is present perceptible increase of heat is constant. There is no effusion into the joint; the form of the articulation is unchanged. The pain and the immobility or stiffness of the joint remain, notwithstanding your remedies. Local depletion relieves the pain of inflammation, but not of Hysteria. But you persist in your principle, and the depletive treatment is continued, and thus months elapse—yes, even years. I was once told by a young lady that she had applied twenty-seven blisters to her knee-joint, from which she could not say she had derived any benefit. Now, it ought to be obvious that, if a painful joint occurring in a young female without local cause is unaltered in form or size, and is free from heat or redness, and that the chief and almost the only symptom, that of pain, varies in degree at different times and is fluctuating in character, the disease is not of the inflammatory class; and if not it must be nervous, and you can't cure pain with leeches. You know that pain alone, which consists in an exalted nervous sensibility, does not constitute what we strictly understand by the term *disease*, although we apply it generally to any deviation from health, whether local or constitutional. At length the truth is brought home to you. You change your treatment by the substitution of local sedatives and general tonics, and your patient at once moves forward in the direction of recovery.

Take the second case. You have declared your opinion that this girl is the subject of disease of the spine upon the evidence of local pain produced by pressure of the fingers on the spinous processes of the vertebræ. It has escaped your observation that this pain is equally severe whether pressure is slight or not, that, in fact, the degree of pain indicated by either writhing or exclamation holds no relation to the force of the pressure made. The slightest touch creates as much suffering as the greatest pressure of the hand, and *often more.* It is on this evidence alone you have founded your opinion of disease of the bony structure of the spinal column. It is on this evidence you have consigned this young lady to two years' confinement to her couch, to the loss of education, to restricted social and domestic intercourse with her family and friends, and to much moral and physical suffering. Now when you talk of disease of the spine, what do you mean? What *structure* is diseased, and what form of disease is present? Is it seated in the body, or in the processes of the vertebra, or in the entire bone? and what description of disease has invaded the particular vertebra of the twenty-four? Is it inflammation, or caries, or necrosis? Caries, you will say; and you select this form because, and only because, you know the spinal column is the subject of carious disease under conditions favouring it. But there is this remarkable feature in carious disease of bone well worthy of notice—viz. that it is almost destitute of pain, that there exists no relation between the extent of the disease, which may be great, and the pain attendant on it. It is not like inflammation of bone, whether simple or severe, or necrosis. Presuming this statement true, can you in reason feel satisfied with the evidence of disease obtained by manual pressure? Then, again, where is the disease situated? If in the body of the vertebra, is it not almost absurd to suppose you can detect it by the slight pressure of the finger *on the summit of the spinous processes*, which are themselves rarely involved?

Fifty or sixty years ago a provincial Surgeon of some note recommended the application of a hot sponge to the spine, with a view to detect disease of the bodies of the vertebræ. There was some excuse for ignorance on this subject at that time; there is none now. Of all the fallacies that cling to Professional practice, of all the false doctrines which the pardonable ignorance of a former generation has entailed on modern Surgery, none can surpass that which affects to detect carious disease of the body of a vertebra by drawing the fingers down the spine. It is only not ludicrous because the consequences are so serious to the victim. It would be a bold assertion that such morbid changes in the spinal column cannot occur; but I do think humanity would be a gainer if all teachers concurred in asserting that they *could not*, so rare is the real disease, and so palpable to the eye when present. Suppose a young person in moderately good health, and occupied in daily exercise, complained of a pain in the condyle of the femur, without any other indication, should you be warranted in declaring she had serious disease of the bone? Look to the functions of this important column; how is it possible it can support the body in the upright posture if one or more of the component bones of the pillar are destroyed? And yet I have known many examples in which the subject of this imaginary disease has joined a party and danced for the whole evening. One wonders that such a person did not drop into pieces! For myself, I candidly declare that I have scarcely ever seen a case of true disease of this form. I can bear testimony to spinal affections and destruction of bone to any amount in psoas or lumbar abscess, or in angular curvature, or of damage done to the column by local injury; but to these suppositititious cases, which exist only in the brain of the Surgeon, I am a stranger, and if they exist otherwise than as rare examples of spinal disease I have much to learn. Have you ever seen a person recover from actual disease of the spine? I do not mean to infer that death inevitably follows, though that result is by no means uncommon; but I allude to recovery without some distortion or some permanent evidence of past disease. And yet you may be surprised when I assure you that all these young people recover sooner or later—sooner if the Surgeon in attendance is familiar with hysteric affections, later if he is not. Thirty or forty years since these cases were, happily for our time, far more common than at present. At that date, and for how many years anterior I know not, all the sea-side towns were crowded with young ladies between 17 and 25 years of age and beyond it who were confined to the horizontal posture, and were wheeled about on the shore in Bath chairs, on the supposition that they were the subjects of spinal disease. They were placed under much medical and dietetic discipline, not of the most invigorating character, and the large majority carried a pair of handsome issues in the back! Brighton, Worthing, Hastings, and other places on the South Coast were largely tenanted by these unfortunate females, to which a moderate sprinkling of young gentlemen was added. What has become of all these cases? They appear to have vanished just in proportion as the eyes of the Surgeon have opened to the absurdity of inferring that pain alone which locates itself with remarkable precision in Hysteria on a given vertebra can indicate the presence of organic disease of the body of the bone without collateral evidence in its favour. When the spinal column is really diseased the case is obvious at a glance; the health is degenerate, and the whole system proclaims to the eye of the Surgeon the presence of a great evil. These examples are but a miserable mockery of the reality and a fraud on the judgment of the ignorant.

With regard to the third example, that of permanent flexion of the fingers, it is apparently so truly local an affection that there is some excuse for error, but only because hysteric affections are not half studied. When one or more of the fingers is permanently flexed from local causes, the seat of disease will be found in the fascial structures of the hand or in the finger itself, or a joint may have been diseased or dislocated; but here there is no thickening, nor hardness, or other morbid change of structure. The finger is simply bent, and the attempt to straighten it is painful. The cause of this morbid condition of the flexor muscle is referred to its nervous centre placed in the cervical portion of the spinal cord. There are some curious phenomena connected with this form of Hysteria to which I shall call your attention in the next lecture.

ORIGINAL COMMUNICATIONS.

MICROSCOPICAL RESEARCHES ON THE CHOLERA.

By LIONEL S. BEALE, M.B., F.R.S.,
Fellow of the Royal College of Physicians, etc.

I propose to commence a series of observations upon the morbid changes which have occurred in cholera, with the aid of the highest powers and new methods of investigation. I shall enter upon this inquiry as a scientific observer who has neither formed nor adopted any views whatever concerning the nature or treatment of the disease, but who feels that he has everything to learn concerning it. Should any suggestions arise in the course of my researches regarding the objects to be fulfilled in the management of a case, they will of course be adduced; but the main object I have in view is to try to find an answer to the question "What is cholera?"

There is, I fear, very little prospect of this question being answered clearly and definitely, but it is quite certain that the facts we shall learn in the course of any detailed carefully conducted Medical inquiry will be worth the labour spent. I hope to be able to publish some of the results of my investigations very shortly, and to illustrate them with drawings of the preparations which I have already made.

In this inquiry it seems to me desirable to start from the alimentary canal. Every one who has seen cholera has been struck by the remarkable characters of the matter discharged from the intestinal tube, and those who have made post-mortems are familiar with the fact that the small intestines almost always contain a considerable quantity of pale, almost colourless gruel-, rice-, or cream-like matter. This has been proved to consist almost entirely of columnar epithelium, and in very many cases large flakes can be found, consisting of several uninjured epithelial sheaths of the villi. I have often found such sheaths in the stools in previous epidemics, and probably every one who has carefully observed the disease will have inclined towards the opinion that in bad cases it is probable that almost every villus, from the pylorus to the ileo-cæcal valve, has been stripped of its epithelial coating during life.

This alteration in the apparatus concerned in the absorption of all nutrient matters from the intestinal canal, and the changes accompanying it and preceding it, are probably sufficient to account for death by collapse. Most important, therefore, is it to ascertain, if possible, the several phenomena of which this denudation of epithelium is the climax, and the order in which they occur. These important organs, the villi, are, in a very bad case, all, or nearly all, left bare, and a very essential part of what constitutes the absorbing apparatus is completely destroyed. If only a considerable portion of a villus was denuded, reparation might doubtless occur by new growth from the cells which remained, but if the villus was entirely stripped, it is more probable that it would waste, and its place be at length occupied by a new one, which would grow from its base, than that epithelium would grow anew from its bare surface. It is probable that the extent of this process of denudation determines the severity or mildness of the attack. If the great majority of the villi have suffered, it is scarcely reasonable to consider recovery more probable than it would be after a very extensive burn or scald. We shall have to inquire what is the proximate cause of the denuding process? Why does the epithelium drop off? What circumstances cause it to become detached? The process may be due to violent contraction of the muscular fibres of the villi and the retraction of the villus within its sheath; but although, no doubt, contraction occurs, it is scarcely probable that the villi would be so generally and completely stripped as they are in severe cases. It seems more probable that the epithelium may become detached in consequence of the almost complete cessation of the circulation in the capillaries beneath, but the death of the cells may occur in consequence of their being exposed to the influence of certain matters in the intestine or in the blood, in which case they would simply fall off. These and many more hypotheses will have to be considered in the hope of finding the true explanation of the fact.

It ought not, I think, to be too hastily concluded that this abundant removal of epithelium is an indication of the occurrence of active *elimination* from the intestinal surface. For, in the first place, it must be remembered that the villi are not, in their normal state, organs of *secretion* or *elimination*, but active organs of *absorption ;* while, on the other hand, Lieberkuhn's follicles, which open in the intervals between the bases of the villi, are secreting organs. Now these follicles, so far from being denuded, are choked with epithelium. It is possible, however, that there may have been a tendency upon the part of these cells to separate matter from the blood, but it seems improbable that the columnar cells which form the bulk of the cellular elements of the contents of the small intestine, and which unquestionably come from the villi, should have been engaged in such an office. Secondly, I would remark that the pabulum passes through the columnar cell in a direction *from* its free towards its attached surface, or *from the intestine towards the blood.* If, therefore, it eliminates or separates anything from the blood, the flow must take place through it in a direction the very opposite of that which is constant during its life. Is it not improbable that this should be the case? In short, it seems to me that evidence in favour of the view that the removal of the epithelium from the villi is an eliminative act is still wanting By the denudation a raw surface becomes exposed, just as in the case of the cutaneous surface after a burn or scald, except that the villi are completely bared, which is not the case with the skin. No one would argue that the elevation of the superficial layers of the cuticle and the effusion of serum beneath consequent upon a burn resulted from elimination. We are to some extent acquainted with the several steps of the latter process, but we have not as yet learned much concerning the former.

The removal of the columnar epithelium from the villi, and the consequent destruction of the mechanism connected with absorption, are broad facts in cholera which deserve the most minute and careful study. We might well consider how this denudation may be prevented or retarded, and, having taken place, what fluids should be brought into contact with the naked surface—oily fluids, fluids containing salt syrup or glycerine, so as to make them of about the specific gravity of the serum, or ordinary serum itself, which last would probably be most efficacious—or whether it would not be better, until we know more of the matter, to let the denuded villi remain perfectly quiet, and allow the small intestine to rest, in the hope that the damage may be repaired. But is it not reasonable to hope that a thoroughly minute investigation into the circumstances which probably immediately precede this denudation of epithelium would enable us to form a notion of its nature, and to adopt means which were likely to restrain it? A knowledge of the changes occurring after the denudation and destruction of many villi will probably teach us much concerning the nature of "secondary fever," and enable us to place the patient under conditions most favourable to his recovery. The consideration of the mere fact of there being a raw denuded surface throughout a considerable extent of the alimentary canal suggests the propriety of not introducing anything into the intestines. The question concerning the alteration in the villi is a most interesting one, and it is worth while to spend time in searching for new facts, and in trying new experiments which may help us to answer it. But the subject is a very extensive one, and has many ramifications, each of which must be carefully considered in detail.

Remarkable changes have occurred in the smaller vessels, especially in the capillaries and small veins of the villi and submucous tissue, and these changes can be readily demonstrated. The blood-corpuscles appear to have in great measure been destroyed in the smaller vessels, and in their place are seen clots containing blood-colouring matter, minute granules, and small masses of germinal matter evidently undergoing active multiplication, but the nature of which has yet to be studied. Some of the arteries are contracted, but here and there small clots destitute of blood-corpuscles may be seen at intervals. Drawings of these will be published.

On the other hand, the nerves and the ganglia, so numerous between the muscular and mucous coats of the small intestine, exhibit a natural appearance, so that I should not be able to distinguish a ganglion taken from a cholera victim from one taken from a perfectly healthy person of the same age whose life was destroyed by accident. The nerves and ganglia, and the tissues for a short distance around the smaller vessels, are, in many situations, stained with altered and dissolved blood-colouring matter.

I propose to give an account of what I have observed in the villi in cholera, and institute a careful comparison between these and perfectly healthy villi. I shall have illustrations made, and these will be published as soon as they can be engraved. The results of the examination of the liver, lungs, and other organs will follow as soon as the investigation can be completed.

ON THE

PHYSIOLOGICAL FORMULA OF CHOLERA AND OF THE TREATMENT.

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In this short memoir it is my purpose to call attention to the physiological formula of the disease cholera. I look upon it that this is the only way in which we can ever hope to learn the nature of the malady or the science of its treatment. If what I shall say excite new thought, some good will be the result; if with the production of new thought we may enter on the natural study, the result will be great good, the ultimate a positive advancement. To make the subject-matter short and decisive, I cannot do better than place each point first to be discussed in the character of a theorem.

Theorem I.—The symptoms of cholera are due to the separation of water from the albumen of the blood and of the tissues.

This theorem, which the symptoms themselves suggest as true, and which has been accepted by considerable numbers of Medical men, is demonstrated by the following synthesis:—

If into a serous cavity of an inferior animal a given quantity of fluid of a specific gravity 100 degrees above that of the blood of the animal be slowly injected, there is an immediate transference of watery fluid from the blood to the injected fluid, the osmotic current being specially rapid towards the denser liquid that has been injected. The serous cavity thus fills rapidly with fluid, and if the fluid exuded be drawn off the drain will be sufficient to cause death by mere loss of water. The symptoms consequent on this proceeding are identical with those of cholera; there is coldness of surface, coldness of breath, convulsive movement, shrinking of tissue, and general collapse. After death the morbid conditions found are the same as in cholera—viz., viscidity of blood, dryness of tissue, and shrunken condition of the vascular organs.

Modifications of detail, according to the animal, are essential for this experiment; but all animals are susceptible of the symptoms. Common sugar, chloride of ammonium, and chloride of sodium are the three crystalloids most ready for the operator. For an animal weighing 1 lb., from one to two ounces of a solution of one of these salts, having a specific gravity of 1100, is sufficient. Symptoms precisely analogous to those of the collapse of cholera may be induced in frogs by injecting a fluid drachm of a crystalloid solution into the dorsal sac of the animal, or even by immersing the animal in a solution containing saline matter of a proper specific gravity.

Theorem II.—The separation of water in the blood in cholera is due either to a local osmotic change in the alimentary canal, or to a general osmotic change in the blood itself.

By excluding all other possible causes of the separation, there remain none other but the two causes named above. The evidence in favour of each of these is very evenly balanced. The early symptoms of the disorder, and the fact that there is an unmistakable disposition towards exudation from the alimentary surface rather than from any other surface, strongly support the view that the cause of the disease—in the early stages at all events—is exclusively local in its action. On the other side, we find distinctive evidence of changes in the condition of the albumen of choleraic blood. This blood is deficient in hydrating power—in the capacity, that is to say, for taking up water—and hence it may be argued that the primary change is in the blood; that the water separates, and that, so separated, being deficient in plastic quality, it finds in the enormous vascular surface of the alimentary canal its readiest point of exit from the body.

Physiological experiment again favours this view. If into the aorta of an animal just dead ordinary water be abundantly injected, the alimentary system is invariably the part that is first distended; nor is there ever anasarca of any tissue nor serous exudation until the alimentary system is saturated. If, therefore, the watery matter of the blood during life were separated so that the homogeneousness of the blood were destroyed, the first point through which the watery matter would exude under the influence of the *vis a tergo* would be the surface of the alimentary canal; and further, as this is an open surface, from which the exuded fluid can freely escape, the exudation would naturally continue through that surface until the *vis a tergo* were exhausted.

The view most consonant with all the facts is that the choleraic poison finds its way primarily into the alimentary canal; that in the albuminous secretions of the canal it sets up catalytic change leading to its own further production; that it is absorbed at first from this canal, and is carried, as alimentary substances are carried, into the blood; that in the blood it continues to exert its specific action on albuminous matter, leading to separation of water and after exudation of water in the manner above described. The disease thus becomes general from a local point.

On the view as here stated, and on no other, we have an explanation of the variety of character of the malady in regard to duration of symptoms and degree of exudation. In cases where the poison, as first introduced, is small in quantity or comparatively inactive, the infection of the albuminous secretion of the mucous surface and the absorption into the blood would be prolonged, the separation of water would be gradual, and the exudation, an early symptom, would be progressive and determinately marked. In cases, again, where the choleraic poison produces rapid change of albuminous secretion, with quick absorption into the blood, the homogeneousness of the blood would be destroyed with such rapidity as to leave no time for exudation prior to death.

Theorem III.—The collapse of cholera is due not only to the elimination of water from the system, but to the removal by the water of the heat of fluidity or latent heat of the tissues.

This argument, which has an important bearing on the question of treatment of cholera, is based on a series of new researches I have recently conducted, and to which, in future papers on the heat of fluidity of the animal body, I shall invite the attention of the readers of this Journal. *In limine*, I may say here that each part of the body that has the property of being transferred from the solid to the liquid, and conversely from the liquid to the solid condition, possesses a given capacity for latent heat, or heat of fluidity, and that the process by which the body is heated from the combustion going on in the lungs is mainly carried on by the agency of heat rendered latent. Thus fatty matter taken in the liquid form into the stomach, and conveyed unconsumed into the extreme parts of the circulation, in being deposited there yields up an equivalent of not less than 162° of heat. Thus water, which, as the grand menstruum of the solids, must be protected from losing its heat of fluidity, is so protected by the saline substances and the albumen that it cannot be solidified even locally at any temperature above 16° Fahrenheit. Thus, and lastly for the present occasion, by their capacity for taking up the heat of fluidity and for yielding that heat up again, the blood corpuscles become the great carriers of that caloric of the body by which all the soft parts hold and maintain their mobility and physical activity.

But in order that the blood corpuscles should be subjected to the influence of living combustion in the lungs, they must be brought over the pulmonic circuit in proper mechanical suspension—in other words, in a state of proper distribution; and this obtains so long as they are borne in the fibrine of the liquor sanguinis, the fibrine itself being diffused equally through the homogeneous fluid of water, saline matter, and albumen, which we call serum. The moment, therefore, there is separation of water from albumen, the moment the balance of water, albumen, fibrine, and blood corpuscles is disturbed by the separation and abstraction of water, that moment the blood corpuscles cease to be brought correctly to the lungs to fix caloric. As a result, there is a reduction in the amount of the caloric of fluidity that should be conveyed to the tissues, and then every ounce of water, beyond what is natural, that is conveyed from the organism carries away so much caloric at the expense of so much tissue. In fact, if it were not for the capacity of the water to abstract caloric from the tissues so as to maintain its own fluidity, the water of the tissues of the cholera patient would fall so rapidly that death would almost be instantaneous on the destruction of the homogeneousness of the blood.

Physiological Treatment of Cholera.

The inadequacy of all the forms of empirical treatment of cholera is so manifest that there is no need for apology in offering what seems to be the most reasonable line of treatment on a physiological basis. I only hope the simplicity of the suggestions which physiology at present offers may not be prejudicial to its teachings.

According to our lights, on the basis stated, there are three lines of practice open in cholera:—

1. To arrest elimination.
2. To supply the caloric of fluidity.
3. To restore the homogeneousness of the blood.

If we could see a certain and simple way of restoring the homogeneousness of blood, we should have in our hands an immediate antidote to cholera, and the third suggestion would become the first and only suggestion. Unfortunately, we have yet, by continued experiment, to learn this antidote, and we must, as a consequence, reserve the trial of it for the extreme stages of the disease—a last resource.

To fulfil the first of these indications—viz., to arrest exudative discharge—there are only two sets of remedies known: opium, which acts, when it can be absorbed, on the involuntary nervous system, producing contraction of the capillary vessels of the alimentary surface (in the same manner as it produces contraction of the pupil); and direct local astringents, which act on the secretions of the canal—viz., creasote, tannin, the mineral acids, and some metallic salts. It must be clear that none of these are curative remedies in the extreme sense of the term—that is to say, they are not direct remedies or antidotes for the primary derangement. But by their astringent action they prevent the water of the body from being conveyed away, and in this sense they conserve the animal caloric represented in the water, and which is absolutely lost when the water actually flows from the organism. Remedies of the class named are, consequently, of the utmost service, especially in the earlier stages of the malady. From a good experience of the disease in the two last epidemics, I infer that the combination of opium with one or other of the local astringents named is the best practice, and I should place the following combinations in the order in which they are most effective:—Opium and creasote: opium and a mineral acid: especially sulphuric or nitrous acid: opium and tannin.

To fulfil the second indication, to sustain the caloric, there are two methods open. One of these is to prevent as far as is possible, the radiation of sensible heat from the body. The cholera patient should be treated in the same manner as a man who is exposed to extreme coldness of the air. His animal fire low, and the conveyance of caloric in his system interfered with, the choleraic sufferer is the parallel of an Esquimaux exposed without shelter to polar air and deficiency of food. To expose a man reduced in temperature to any process that shall remove from him caloric, is contrary to all reason; to give him the advantage of the hot bath and to maintain his temperature by efficient clothing is the most natural, as it is the most obviously useful procedure. One has only to see a few times how the physical forces of life improve when the patient, collapsed and cold, temporarily rallies in the hot bath, to be assured of the soundness of the practice. This, however, is not again a curative process in the direct sense, but conservative only; for the body, by its external surface, cannot absorb caloric unless there be actual destruction of its surface.

It has been suggested to attempt the introduction of heat by subjecting the patient to heated air for inhalation. In this way, in health, there is no doubt a large proportion of heat can be introduced; but in cholera, where the homogeneousness of the blood is lost, the conditions for the absorption of heat are absent, and while a low temperature of air would be mischievous, a very high temperature would, I fear, do no more than tend to cause dryness of surface from further loss of water by the pulmonic textures.

It is still a desideratum to supply animal caloric, and this, I would point out, may be accomplished to a marked degree by attention to the fluids which are given as drinks to choleraic patients. I am bound to denounce as utter folly, and almost worse, the practice of charging such patients with cold and iced drinks. Presuming that a choleraic sufferer is just sustaining his natural caloric at 96° Fahr., he does this by the gradual consolidation of his tissues and the giving up from them of their heat of fluidity. At this stage let there be given to him a pint of fluid at 40° Fahr., and straightway from an equal weight of his body, there is extracted by equalisation 28° Fahr. of caloric, which, as he is placed, will never again be applied for the production of force.

This plan of cooling down a cooling body is, according to my estimate, adding evil upon evil. To treat the disease rationally, the reverse principle ought to be invariably carried out; that is to say, foods and drinks should be made the means for introducing heat abundantly. It seemed to me, on this reasoning, to be an important point to produce a substance which shall, as a liquid food, supply tissue material and with that heat.

Taking advantage of the fact that crystallisable fat when mixed with albumen can be dissolved by the heat of water, which heat it fixes in becoming soluble, and gives up again on solidifying,—I set to work to produce a food having the properties named. After numerous attempts the following proves most successful:—

Take of pure stearine two ounces by weight; of best fresh butter, two ounces; of whites and yelks of eggs, well beaten up, eight ounces; of carbonate of soda, twenty grains; of chloride of sodium (common salt), eighty grains; of water, two ounces.

As to mode of preparation for food. First dissolve, with heat, the stearine and the butter until they are both melted: then add the carbonate of soda and common salt to the eggs, and when these salts are dissolved in the egg stuff, mix it with the oily fluid, taking care that the latter is not of a temperature above 140° Farh.: let the whole cool to a soft consistency, and finally on a slab or a board, rub in the water with a broad spatula. The compound may now be placed in a wide-mouthed jar; in a little time it settles into a moderately hard mass, and is ready for use.

In administering this compound to the sick, take one ounce, or a tablespoonful; place it in a large breakfast cup, and rub it up equally with a teaspoonful of glycerine, or a teaspoonful of ordinary water, or a teaspoonful of fine sugar and water, or a teaspoonful of honey and water. Next pour upon the mass three ounces of water, *actually boiling*, and incorporate well. The solid substance will now briskly and evenly dissolve, and will be at once so cool that it can be drunken. The thermometer plunged in it will only register from 130° to 135° Fahr. In this process the heat of the boiling water has been mainly (allowance must be made for conduction and radiation) expended in rendering fluid the solid matter. We may estimate safely, that in addition to the sensible heat, 44° have been rendered latent for every ounce of fluid at least, which heat will be yielded up to the tissues if the fluid make its way into them.

Contrasted with the supply of a pint (pound) of ordinary water at 40°, a pint of this fluid would effect a difference equal to 204° of added heat to a pound weight of the substance of the organism.

I may add, that the fluid food prepared as proposed above is very agreeable to the taste, and that it may be made the vehicle for conveying either solution of opium, creasote, or dilute sulphuric acid, in proper doses. I found after taking nine ounces of the fluid no sensation of nausea or uneasiness, but in the course of half an hour, the surface of my body became very hot, and the heat increasing remained unpleasantly high for several hours. For patients who would object to drink the fluid while heated, it might be allowed to cool ten or even twenty degrees. A glass of port wine is easily miscible with four ounces of the fluid.

The last indication of treatment is to endeavour to restore the homogeneousness of the blood, and to bring the red corpuscles into proper circulatory action. This can only be effected by injection direct into the veins, and we know from experience that in the last stages of collapse the injection of certain fluids into the veins has been attended by remarkable results: the collapse has, for the time, ceased, and, in some instances, the appearances of recovery have been so decided that the most sanguine but delusive hopes have been raised. In a case which I attended with the late Mr. Ancell, of Norfolk-terrace, during the epidemic of 1853-4, we injected into the veins of a collapsed woman two pints of warm saline water four successive times, and each time with the effect of restoring her to consciousness and power of movement, thus evidently extending her life over a space of thirty hours.

Facts such as these have been recorded by many other authors, and the effect of the experience has been to render the idea of "transfusion," as it is called, very popular with members of the profession, who, seeing its promise, have hoped for it more than they have positively realised. The great question to be settled is:—What fluid shall be injected? Blood has been injected and has failed; milk has been injected, and has usually failed; saline solutions have been injected, and have, as a general rule, failed; simple warm water has been injected, and has, in its turn, failed. In short, none of these solutions have been potent in saving life, but one and all of them have, for a time, averted death.

The reason why certain immediate but not lasting benefits have followed these various injections is, that they have always been injected after being heated up to blood heat; the caloric thus supplied has been the underlying basis of the transient success. Any experimentalist can prove this by injecting the solutions into the systems of animals recently killed; he will find himself able to reproduce muscular contraction with the solutions named, equally well with each, if they are heated to the same degree, *i. e.* from 106° to 115° Fahr.; he will find them all equally negative, if they are not thus raised in temperature. Hence we must consider the question of transfusion in a new light, or success from it will continue to be only temporary.

In respect to transfusion in the collapse of cholera, there is as little difficulty in accounting for the ultimate failure of the proceeding, as for the temporary success. The success depends on the infusion of caloric, the failure on the inability of the fluids injected to sustain the calorific activity.

Blood is not the proper fluid, however neatly it may be defibrinated, because, in the system of the choleraic patient, there is no deficiency of corpuscles nor of hæmatin, neither of which have escaped from the body; in addition, no sufficient quantity of human blood could be obtained for the purposes of injection; the mere injection of a pint or a quart of fluid is a bagatelle: what is wanted to inject is many quarts of fluid; what is wanted to be done is, to *feed* by the veins, not to fill them once and no more, with a limited change of material.

Milk is indifferent because it does not combine readily with the blood in the tissues, and because it coagulates and speedily decomposes.

Saline solutions combine with the blood remaining in the tissues, but they do not sustain, and they cause great shrinking of the corpuscles.

Water simply conveys sensible caloric, it does not sustain; it dilutes the residual blood too freely, and ultimately, as it cools, it removes caloric from the structures with which it comes in contact.

What then do we want in the way of a fluid? I have thought that the fluid should contain digested and easily hydrating albumen; fatty substance that would solidify at a low temperature a small quantity of saline matter, and a substance that will easily pick up the blood corpuscles, when they have been partially deprived of fluid, and restore them to their natural form and character. I have set myself to work upon drying blood to test for such a fluid, and at last have arrived at the following formula, which, on blood out of the body at all events, answers the purpose well. I give the proportions for a pint of fluid.

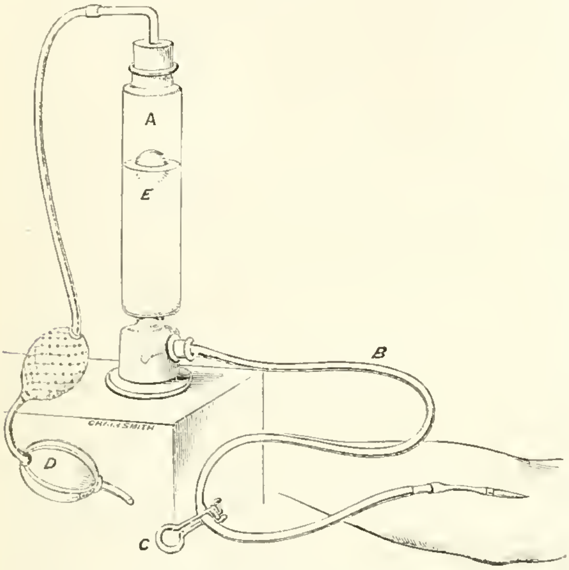
Of white of egg take 4 ounces by weight; of common salt, 1 drachm; of carbonate of soda, 1 scruple; of clarified animal fat, 1 ounce; of pure glycerine, 2 ounces; of water, sufficient to make 1 pint. In preparing dissolve the common salt and carbonate of soda in the water, and having well whipped the albumen, add that also to the water. Place the mixture on a water bath, and raise the temperature to 135°; keep the mixture steadily stirred and digest at this temperature for one hour. This constitutes an artificial serum, the albumen of which hydrates freely. Having taken the artificial serum off the bath, place the fat and the glycerine together in a crucible, and melt the fat in the glycerine. When the process of solution of fat is complete, pour the solution into the artificial serum at or about 120°, and stir in carefully: set aside that the fluid may cool to 80° Fahr., at which point all the fat that is insoluble at 80° will float on the surface, take this off and filter through coarse paper or closely woven cloth.

The fluid thus obtained is of pinkish colour, of alkaline reaction, of saline sweetish taste, and of specific gravity, 1038. It picks up semi-fluid blood with instant readiness, and diffuses it most equally. Heated, it takes up one third more caloric than does water in the same time, and in cooling it restores nearly one third more.

From my experience with mere saline injections I infer that the fluid might be injected, at a temperature of 106°, into the veins of a collapsed adult, in the proportion of two pints at one time.

I have one word to say in reference to the mode of injecting the veins. The greatest mischief has arisen in transfusion, from errors in the operation. The operator should ever remember that in this process he is feeding, not forcing: he should keep in mind how gradually nature feeds the veins by the thoracic duct, and he should imitate her; there is no necessity for force, none for hurry.

Above all things, in feeding by the veins the syringe should be thrown aside: it is a dangerous, bad instrument for the purpose. To replace it I have constructed a simple instrument, which I have used with great success. This instrument, described best in the subjoined sketch consists of a glass cylinder (A), with a flexible tube (B) running from its lower part or chamber for insertion, by means of a quill, or hollow probe, into the vein to be injected: the upper part of the cylinder is provided with a stopper, through which a tube passes, connected with a small pair of hand-bellows (D). Within the cylinder is a small hollow ball (E), or safety valve regulator, which floats if there be fluid in the cylinder until the fluid allows it to descend to the constricted lower part of the cylinder, when all further passage of fluid is prevented. The flow of fluid along the escape tube can be checked, or set at liberty at pleasure by the clip (C).



In using this instrument, first place the warmed fluid to be injected in the cylinder (A) and let a little run through the escape tube (B) to displace all the air; next close the escape tube by means of the clip (C); then, having opened the vein while it is being pressed upon from above, insert and fix the quill or hollow probe at the end of the escape tube, and, when all is ready for the fluid to flow, remove the clip and raise the cylinder two or three feet above the patient. The ordinary fluid pressure will now usually suffice to carry the fluid into the body equably and gently; but if there be any obstruction, the merest pressure of the lower ball of the hand bellows will remove it. As the fluid descends, the hollow ball goes down with it to within three inches of the bottom of the cylinder, where it is opposed by the constricted neck, and where it effectually closes in all that is below it, so that no air can possibly get into the vein.

This instrument works so easily and effectively, that with it Mr. Gay and I injected the whole body of a dead subject, with blood, by the femoral artery until the fluid escaped from the nostrils; it acts equally well on large living animals.(a)

HOMICIDAL INSANITY.—At Stafford, on Friday, before Mr. Justice Shee, John Cooper was arraigned for the wilful murder of Ellen Buckley, on April 20 last, at Coppenhall. The circumstances of the case were such as to suggest the insanity of the prisoner; and his state of mind was now placed in issue before the jury. They found that he was not in a fit state to be tried, and he was then remanded in custody.

(a) I have instructed Messrs. Krohne and Sesemann to manufacture the instrument, with all the details shown in the diagram.

REMARKS ON THE PATHOLOGY OF CHOLERA(a).

By G. H. BARLOW, M.D.,
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(Continued from page 85.)

I NOW proceed to consider the effects produced by derangement of those organs by which the principal part of the water is finally removed from the system, and which, when healthy, eliminate with the water the soluble excrementitious matters which it holds in solution, but which, without a due supply of that fluid, would act as poisons as certainly as would carbonic acid if there were not free access of air to the lungs. It is a fact which pathologists hardly seem fully to appreciate that water is as much a depurating agent as is air, and one the want of which is as certainly, though not quite so speedily, fatal. In several of the different forms of Bright's disease, then, we have not necessarily any obstruction to the passage of fluid into the system, neither is there in many cases any impediment to its exit from it. The quantity of water in the blood may be as great in proportion to the normal solid contents as in health; in the majority of instances it is greater, but, owing to disease of the excretory organs, the water passes away, leaving in the system the very substances which it was intended to eliminate (namely, the urea, urates, etc.); and what symptoms do these cases present in common with those which have just been mentioned, or in common with cholera? As regards the former the urine may or may not be scanty, there may or may not be dropsy, but there is almost always thirst, especially in those cases in which the deficiency in the normal solid contents of the urine is greatest, and in those cases there are commonly cramps. Now, if in nearly all the cases in which there is a suspension of the elimination of these soluble excretory matters from the system, whether that suspension arise from the obstruction to the admission of water (the solvent) into the system, from obstruction to its transmission and distribution to the eliminating organs, or from its rapid withdrawal by another and unusual source, as in cholera, or from its passing out of the system without performing its office of elimination, as in Bright's disease—if, I say, in all these instances we have thirst and cramps, and the only condition which they present in common is the defective elimination of these excretory matters, we cannot, I think, be far wrong in assuming that retained secretion or uræmic poisoning is the cause of the thirst in all these cases, and that it is a potential agent, though not the only one, in the production of cramps.

I have now traced the course of the liquid taken into the stomach to its elimination from the system, and have found that when its admission into the system is cut off at the very commencement, there are all or nearly all the symptoms of cholera, with the exception of the diarrhœa—the cramps, it is true, being of somewhat less intensity.

It is remarkable too that in the course of this inquiry we have had occasion to notice the effects of obstruction in the pulmonic circulation, whether arising in the lungs themselves or produced by disease of the heart, and we have observed that although we had some effects common also to cholera, they were precisely those which we had been led to expect would ensue from obstruction to the passage of fluid from the portal system to the general circulation, but that those choleraic symptoms which ought to have presented themselves upon the hypothesis of the origin of cholera from pulmonic obstruction were precisely those which were wanting. We see, then, that the pulmonic obstruction is not a *vera causa*, since it is not one of the existence of which we have any evidence antecedently to the other choleraic symptoms or independently of them. Neither is it capable of accounting for the phenomena of the disease, since when present as a primary affection or in the course of other diseases it does not give rise to these phenomena.

There remains one other disease to be noticed as affording powerful evidence of the effect of a drain of fluid from the system in producing the thirst, cramps, collapse, suppression of urine, imperceptible pulse, and, in short, all the symptoms of cholera—I mean the English or summer cholera. Now in most summers we have this disease occurring to a greater or less extent, and in greater or less degrees of intensity. In some cases it is a matter of very little moment; in others the diarrhœa goes on to an extent that is exhausting to the patient; and in some few cases we meet with the thirst, suppression of urine, cramps, lividity, and collapse, and, in short, the condition of the patient so closely resembles that of one passing into the collapse of true Asiatic cholera that it is impossible for any one by mere examination of the patient to distinguish it, the only guide being the character of the prevailing epidemic. I have more than once seen cases of this kind, of which I have said, if Asiatic cholera were now prevalent I should say that there was hardly a chance of the recovery of this patient, but, as it is not, I hope, and even expect, that he will do well; and such has been the case in every instance which I have seen, with the exception of the aged and of diseased persons—the collapse not having been so profound as in the epidemic form of the disease, and the rice-water dejections not quite so copious.

(a) Read to the Hunterian Society.

It may, indeed, be urged on the one hand that these cases are not English cholera at all, but sporadic cases of true cholera, and on the other that if they are rarely fatal, though they present nearly the same drain of fluid from the system, there must be some other cause in operation in the true cholera to produce a more generally fatal result.

Now to the first of these objections I would reply that these cases of English (or non-epidemic) cholera had been known to experienced Practitioners long before the appearance of the Asiatic disease in this country, certainly as far back as the time of Sydenham. A similar disease, too, has long been known in other parts of Europe, and was described by Celsus.

In reply to the second objection, although I am by no means certain that the drain of fluid in these cases is as perfect as in the true cholera, yet it is not here meant to assert that the sickness and diarrhœa constitute the whole of cholera, but merely that the drain of fluid is the cause of its most prominent or dangerous symptoms. There are no doubt other morbific agencies in operation, of which I shall presently take occasion to speak.

Having now shown that when in the course of other diseases we have a great defect in the quantity of fluid in the circulation, whether that deficiency arises from obstruction to the entrance of the fluid or from its very rapid abstraction, we have symptoms more or less resembling those of cholera, according to the completeness of the obstruction or the amount of the abstraction, I think that we are justified in concluding that in cholera, where we have the same result and the same agency in operation, we are bound to accept that agency as the cause in this case as in the former.

I now proceed to notice some of the objections which have been made to the doctrine that the sickness and diarrhœa, or in other words the drain of fluid, is a potential agent in the production of the most characteristic symptoms of cholera. Now, first of all it has been objected that "a copious hæmorrhage, a profuse and long-continued leucorrhœa, prolonged lactation, and excessive purging, whether the effect of disease or medicine," do not produce effects similar to those ascribed to the choleraic drain. It is difficult to suppress admiration of the ingenuity which should have colligated conditions so different as a drain of blood or albuminous fluid and a drain of serosity. I have already commented upon the inconsistency of comparing the abstraction of a portion of the whole blood, which for a time diminishes the volume of the circulation without interfering with the relative proportion of its ingredients, with the withdrawal of a large proportion of one of those ingredients; which, in addition to diminishing the volume of the circulation, absolutely destroys that relative proportion which is essential to its integrity and to its power of supporting vital action. But we may even go further than this, and compare the physiological effects of hæmorrhage with those of the abstraction of serosity only. When a large quantity of blood escapes, whether from a wound or from morbid hæmorrhage, the first effect, no doubt, is a tendency to syncope, with some coldness and clamminess of the extremities. If the hæmorrhage is not fatal, a reaction speedily ensues; the heart's action becomes excited, the pulse sharp and very compressible, the countenance and lips pale; there is no difficulty in the maintenance of the circulation, although its volume is diminished, and the functions of different organs are liable to be impaired or suspended from a defective supply. One of the earliest symptoms after reaction is thirst, and generally the patient drinks freely. The fluid thus taken is rapidly absorbed, and the volume of the circulation is restored, or nearly so, but not its constitution, nor the proportion of its ingredients, the blood which has been abstracted being replaced by water only, and so it happens, as is well known, that the state which used to be generally known by the term anæmia, but which is now more correctly termed spanæmia, is brought about. This spanæmia, or poorness of the blood, consists in a defect of solid contents with an excess of water, and being the very opposite of that which is induced by the drain of cholera or diarrhœa, in which the solid contents are in excess owing to the abstraction of the fluid, we need not stop to inquire why the symptoms are so different in the one case and in the other: their very difference presents us with as strong evidence as contrast can afford us.

The same remarks apply to leucorrhœa and to other albuminous discharges, as well as to over-lactation, in which, as is well known, a spanæmic condition of the blood is induced. In this state of spanæmia there is not only a deficiency of red corpuscles, but also of albumen, so that comparatively to them the water is greatly in excess, or, in other words, is the very opposite condition to that induced by cholera. There remains diarrhœa, whether from disease or medicine: this is indeed a most legitimate subject of comparison, and if I am compelled to differ on matters of fact with those who have advanced an opposite theory to my own, I beg to say that I do this without arrogating to myself greater candour or more accurate observation than those from whom I differ, knowing, as I well do, the different aspects in which the same facts present themselves to different minds.

As regards diarrhœa pure and simple, the most perfect form in which it presents itself to our notice is that of the English cholera. Now this disease in its very severest form is not a common one; still I believe that few who have enjoyed great opportunities of witnessing disease can have missed seeing one or more such cases, and in them there can be little doubt that more or less collapse, cramps, and suppression of urine are the consequences of the diarrhœa. I was within the last few days talking to an old Practitioner of great experience whom I attended two years ago (in the summer of 1864) for English cholera, and he observed that in his case the effect of the purging could not be questioned, for that after a very copious watery evacuation he felt suddenly prostrate and "drawn into a ball" with cramps. As regards sudden attacks of diarrhœa which now and then occur in disease of the heart, lungs, liver, or kidneys, it is very true that they rarely, if ever, go to the extent of producing cramps and collapse—in the first place, because they generally are induced by obstructed circulation or excess of serous fluid, and being the result of a conservative effort on the part of Nature, they rarely, if ever, go on to such an extent as to become destructive; and I think, if it were admissible to introduce an argument for final causes into a question of this kind, that the very fact of choleraic diarrhœa being often fatal is an argument against its beginning in a conservative effort. Indeed, to suppose that the diarrhœa of cholera originates in a conservative effort of Nature is to compare Nature to an unskilful Physician administering an excessive or uncalled-for dose of elaterium or other hydragogue cathartic. As regards excessive diarrhœa from medicine, I cannot speak much from my own experience. We have all of us, no doubt, seen cases in which an aperient has acted beyond our expectations and beyond our wishes, and in some of these cases the extremities have become cold, the skin clammy, and the pulse feeble; but it is, and ought to be, rare for cases to occur with any great severity. It does, indeed, sometimes happen that there is a peculiar susceptibility arising from the constitution of the individual, or from some tendency to disease prevailing at the time—from what, in short, Sydenham has termed the "epidemic temperament"—under which circumstances an aperient may act violently, producing exhaustion, very feeble pulse, coldness of the extremities, in fact, the milder symptoms of cholera.

There remains one other fact in support of the view which has been taken of the consequences of the withdrawal of fluid from the circulation, and it is the effect which is known to have resulted from injecting it into the veins after the system has been emptied by such a drain. Now, it is well known that in some instances the circulation has been restored and the patient has recovered by transfusion. In other cases the pulse has returned, and the patient has expressed himself as feeling quite restored, but vomiting or diarrhœa, more frequently the former, have again drained off the fluid, and the collapse has recurred. The late Dr. Babington mentioned to me the case of a gentleman in whom transfusion was employed in the collapse of cholera. He rallied and sat up, and seized the Doctor's hand and said: "Dr. Babington, you have restored my life;" but in a few minutes diarrhœa came on, and he again sank. What is remarkable as showing the effect of the injection is that in some of these cases bright fluid venous blood has flowed from the vein after the operation.

The facts may now thus be summed up. Obstruction to the admission of fluid into the circulation causes collapse, with tendency to asphyxia, suppression of urine, and, as a consequence of this suppression, some of the symptoms of uræmic poisoning. Obstruction further on in the course of the circulation, as in the liver, causes scanty urine, and in extreme cases there may be some of the symptoms of uræmic poisoning. Still further on, there will be lividity and scanty urine, with, in severe cases, the pulse of impending asphyxia, the circulation relieving itself by effusion of serum into the peritoneum, and in some rare instances partially by diarrhœa. But if the fluid pass freely through the system to the kidneys, and find a free exit from the system, it may nevertheless, if those organs are diseased, pass out, leaving behind it the excretory matter which the kidneys should eliminate, and the symptoms of uræmic poisoning are the result. If, however, there be a rapid drain of fluid from the system, as in the instances of diarrhœa which have been cited, we have not only uræmic poisoning, but collapse and other consequences of the defect of fluid in the circulation—the effects being the same, whether the defect arise from obstruction to the access of fluid, as in disease of the duodenum, or from excessive and severe diarrhœa.

(To be continued.)

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

CHOLERA IN THE LONDON HOSPITALS.

We report this week cases of cholera from the Westminster, King's College, and the German Hospitals. Eighteen cases had been admitted up to Wednesday night into St. Bartholomew's Hospital, including those we have previously noticed, and of these six had died. Four of the deaths occurred in the last six patients admitted, and this possibly points to an increased severity in the cases. Dr. Andrew tells us that in the autopsies on two of these patients he found pretty much the same appearance as in the case we reported.

The drug treatment hitherto adopted at this Hospital is by calomel. Each patient is put in a warm bath, and sometimes this is repeated.

No case of cholera had been admitted into University College Hospital or St. George's Hospital on Wednesday afternoon.

THE LONDON HOSPITAL.

The cholera wards of the London Hospital are fuller than ever. On Thursday morning (July 26) there were 73 patients in the Hospital for cholera and diarrhœa. On Thursday morning (August 2) there were 110. The following table, supplied to us by Mr. Walter Cappe, Clerk to the London Hospital, gives the number of admissions for the week ending August 2. Besides this, 2749 patients have applied for medicine for diarrhœa :—

Cases admitted into the Cholera Wards of the London Hospital for the week ending August 2, 1866.

	Cholera.		Diarrhœa.	
	Males.	Females.	Males.	Females.
July 27, 17th day	5	12	4	3
,, 28, 18th ,,	17	8	4	1
,, 29, 19th ,,	7	8	3	1
,, 30, 20th ,,	7	13	3	1
,, 31, 21st ,,	12	12	3	2
Aug. 1, 22nd ,,	16	15	—	2
,, 2, 10 a.m.	17	9	—	1
	81	77	17	11

Ages.	Cholera.		Diarrhœa.	
	Males.	Females.	Males.	Females.
1 to 10	24	20	2	2
11 ,, 20	15	14	5	3
21 ,, 30	18	14	5	1
31 ,, 40	9	17	2	1
41 ,, 50	9	7	2	3
51 ,, 60	3	3	—	1
Upwards	2	2	1	—
99	1	—	—	—
	81	77	17	11

	Cholera.	Diarrhœa.	Total.
Recoveries	31	38	69
Deaths	73	8	81
Remain	104	6	110

From the Outbreak.

	Cholera.	Diarrhœa.	Total.
Admissions.	275	61	336
Recoveries	35	47	82
Deaths	136	8	144
Remain	104	6	110

Total out-patients treated since the outbreak, 5725.

It will be observed that the mortality is still very great, but it is believed that the cases are not of so severe a charater, and that many of the patients now in the Hospital are likely to do well.

Since our last report other plans of treatment have been tried. Dr. Andrew Clark has treated a great number without drugs of any kind, and his clinical assistant, Mr. George Mackenzie, thinks the results are favourable. This gentleman, with the assistance of Mr. MacCarthy, has kept careful notes of the cases, and we hope to be able to state the results precisely.

Dr. Davis has ordered for his patients during the last week small doses of a mixture of sulphuric and hydrocyanic acid every quarter of an hour.

Dr. Fraser has tried Dr. Johnson's plan of treatment by castor oil. These cases were only placed under treatment on Tuesday afternoon and Wednesday morning, and therefore we can say nothing definite as to the results. Many have died under each of the varieties. In one case under the care of Dr. Davies, saline injections were tried. The operation was performed by Mr. Little. We shall give a brief report of this case next week.

KING'S COLLEGE HOSPITAL.

FIVE CASES OF CHOLERA.—CASTOR OIL TREATMENT.

(Under the care of Dr. JOHNSON.)

Five cases of cholera have been admitted into this Hospital up to nine o'clock on Wednesday. All of them have been under Dr. Johnson's care. The first case was admitted on Monday. Two have died. It will be observed that a mother and daughter were the first two patients admitted. The father died of cholera on July 27, after forty-eight hours' illness. He had been working at Mile-end, which is now the chief cholera district. The patient whose case we report last, although he lived in the neighbourhood of the Hospital, had been a labourer at the London Docks. We give particulars of the five cases, and shall give the further results next week. It will be observed that, so far as drugs are concerned, the treatment is by castor oil, but hot bottles are applied to the feet, and cold, not iced, water (which had been boiled) is freely given.

It will be observed—a fact to which Dr. Johnson has drawn especial attention recently—that in the case of one patient, a suckling woman, the secretion of milk continued.

For the particulars of the cases we are indebted to Mr. Philpott and Mr. Willcox.

Case 1.—Mary P., aged 15 months, from 5, Holly-street, Clare-market. She was taken ill at 10 a.m. on the day of admission, viz. 11.30 p.m. on Monday. Face and extremities feel cold, but the temperature in the axilla is 99° (*sic*). Eyes sunken, clammy sweat on the face. No marked blueness of nails nor lips, but slight areola round the eyes. Pulse 160; respiration 32. No vomiting nor purging at present, but had had much purging and vomiting before admission, and cramp in the belly and legs. Belly distended, and on succussion distinct evidence of fluid in the bowels. Two drachms of castor oil were given in water. The oil was not vomited.

July 31, 1 a.m.—Extremities slightly blue; temperature 96$\frac{3}{5}$. Pulse weaker and more thready. 2.30 a.m.—Another dose of oil. 5.30.—A third dose.

10 a.m.—Purged three times during the night, motions being greenish.

12 m.—The child lies in a sleepy state; the eyes partially opened, the white part only being exposed; mouth partially open; breathing easy; temperature 99.

10 p.m.—Purged twice and vomited twice in nine hours; a fourth dose of castor oil, only a drachm, was now given; the stools and vomit consist of curds of undigested milk, which (the milk) had been added to the water she drank; the

stools were greenish-yellow; the child's countenance has a more natural appearance, and the extremities, although still cold, are slightly warmer than this morning; respiration easy, 32; pulse 144; temperature $97\frac{3}{5}$.

The patient died at 10 a.m. August 1, being convulsed before death; the purging continued during the night, and the nurse said the child passed much water during the night and the previous day.

Autopsy by Mr. Philpott.—Both sides of the heart contained dark fluid blood; lungs were engorged posteriorly, non-crepitant, slightly anæmic in front of upper lobes; the gall-bladder full of dark treacly bile; the urinary bladder empty; the intestines full of greenish-yellow semi-fluid matter.

Case 2.—Elizabeth P., aged 33, a suckling woman, the mother of the last patient. She was admitted about an hour after her daughter, On July 29, at 9 a.m., she had been seized with excessive purging, and it continued the whole day. For this she received a draught. The purging continued next day, and for this a Doctor gave her what she believed was chalk mixture. After this she vomited, and continued to do so during the day. The vomited matter was either clear and transparent or consisted of the food taken, and the stools were of a brown colour. She had had violent cramps.

On admission (July 31, 12.30 a.m.), eyes sunken; no coldness of body; no blueness of face; pulse 120, fairly strong; respiration 20; temperature $98\frac{2}{5}$; voice weak, but not altered in character. She lies in a drowsy state; abdomen sunken, tympanitis; great thirst; no vomiting and purging at present; half an ounce of castor-oil—this she retained; it was repeated at 3 a.m., the first one not having operated, but it was rejected. A third dose was given at 3.30 a.m., and this was retained. At 8.30 a.m., there being still no motion, a fourth dose was given.

10 a.m.—She has vomited three times during the night, throwing up clear water. She appears much in the same condition as last night; very drowsy, but answers questions readily. Tongue clean, but dry; temperature normal.

The breasts are now distended with milk.

5 p.m.—Purged an hour ago, passing some very fluid, dirty coloured stools. She has now just been purged again. The motions contain a number of flocculi, and are of a greenish tinge.

10 p.m.—Brandy was ordered.

Aug. 1, noon.—She has been purged four times and vomited once since last night. She still lies in a drowsy state. The aspect and countenance is more natural. Pulse 100; respiration 24.

When we heard of this patient, at 9 a.m. on Wednesday, she was doing well.

For the notes of this case we are indebted to Mr. Wilcox.

Case 3.—Joseph B., aged 46, from 4, Old Boswell-court, Strand, admitted 4.30 p.m. Wednesday, August 1. He was taken ill at 12.30 a.m. (*i.e.*, in the night). He was first seized with cramp in the legs, and a quarter of an hour after he vomited clear water. He was purged three times and vomited four times before morning; but neither of these excretions were examined. 8 a.m.—His face had become blue, eyes sunken, and fingers shrivelled.

On admission, 4.30 p.m.—Face blue and cold; features pinched; eyes sunken, and surrounded by a dark areola. He can only speak in a whisper; extremities cold; no pulse; temperature 92; respiration 44; quick and shallow; tongue brown; no vomiting nor purging; great thirst; abdomen flaccid; no secretion of fluid in the bowels; heart sounds inaudible.

One dose of castor-oil was given, and was not vomited.

At 5.20, his breathing became difficult and slow; he appeared to be moribund. Dr. Fenn, the Assistant House-Physician, opened a vein in both arms, and about half an ounce of blood escaped from both sides. He died a few minutes later.

Autopsy by Mr. Philpott and Dr. Fenn Two Hours after Death.—Body warm; lungs collapsed. The right ventricle was flaccid, and the pulmonary artery did not appear to be at all distended. On opening this ventricle, very little blood was found in it, and the pulmonary artery was but half full of fluid blood; the left ventricle contained a little dark fluid blood. The lungs were everywhere of a pale pink, and at the extreme edges the sections were nearly white; the left weighed 8 oz., and the right 9 oz. The liver was congested; the gall-bladder was full of treacly bile; the kidneys were a little congested; the intestines contained a large quantity of a dirty, buff-coloured, flocculent matter; the large intestines were distended; the urinary bladder empty.

Case 4.—Caroline M., 39, from 3, Holles-street, Clare-market, admitted August 1, 4.30 p.m.; had diarrhœa on the morning of the 29th, which has continued up to the time of admission. Cramps and sickness began on the evening of the 31st. The vomit was of a dirty brownish colour, and no smell. Stools offensive and coloured.

August 1, 4.30 p.m.—She is a thin, feeble-looking woman, much prostrated and pale; eyes somewhat sunken; voice unaltered; extremities cold; occasional cramps; abdomen quite flaccid, but, on succussion, evidence of fluid; no tenderness; tongue moist, coated with dirty brownish fur. Temperature 98°; pulse 132, small and feeble; respiration 30, regular. Since admission has vomited, first a little rice-water fluid, and then some dirty flocculent matter. She was doing well on the morning of Aug. 2.

For the notes of this case we are indebted to Mr. Willcox.

Case 5.—Joseph T., aged 21, a labourer at the London Docks, but lives at 3, Yates-court, Carey-street.

On July 27 (Friday) he was taken with vomiting and purging. On this day he had two draughts from this Hospital, but whether castor oil or astringent mixture is not to be ascertained. After the draughts the symptoms ceased, and he went to work on Monday, the 30th, still feeling poorly.

31st.—He was taken ill in the night with excessive vomiting and purging, but the motions were not examined. The vomit consisted of clear water or of the food taken.

August 1, 6 a.m.—He took a dose of castor oil, which was repeated at 10 a.m. He had incessant vomiting and considerable purging during the day, and great thirst. His eyes became sunken and surrounded with a dark purple areola, and his breathing became difficult. He had passed no water since the previous morning.

8.20 p.m. admitted. Face and extremities cold; eyes sunken; features pinched; voice weak, but otherwise natural; vomit ricewater-like; pulse fairly strong, 104; respiration 20; temperature $96\frac{1}{5}$; slight cramps; respiration easy; no purging at present. Half an ounce of castor oil was given on admission, but he vomited it. He vomited three times, and was purged twice, and the castor oil was repeated at 12.40 a.m. August 2.

Aug. 2.—At 4 a.m., August 2, the motions, which had been rice-water, became tinged with bile. He had vomited ten times and had been purged four times since 12.40 and 4 a.m. when the change in the motions took place. A dose of castor oil was taken at 4 and at 4.40, and both these he retained. At 6 a.m. he passed urine.

9 a.m.—His countenance has resumed its natural appearance; temperature $97\frac{3}{5}$, and body feels warm; respiration 20; pulse 100; no vomiting since 7.45.

THE MIDDLESEX HOSPITAL.

FURTHER REPORT OF A CASE OF CHOLERA.

Up to Wednesday evening no fresh cases of cholera were admitted into this Hospital.

The patient under the care of Dr. Greenhow, whose case was reported last week, is now (Wednesday) convalescent. Occasional retchings and sickness had continued until Thursday morning, when the liquid vomited became of a grass-green colour. On Thursday afternoon the patient passed two small loose feculent stools, and several loose but more consistent ones of an olive-brown colour during the following two days. On the afternoon of Thursday, and thirty-six hours from the commencement of his illness, he passed six ounces of deep amber-coloured highly acid urine of sp. gr. 1025, which deposited as it cooled a large quantity of greyish-white urates. It was free from sugar, but contained a small quantity of albumen. On being treated with nitric acid it turned in a few seconds of a dark purple, almost black colour. Two ounces of the urine mixed with one ounce of pure hydrochloric acid almost immediately became of an inky black colour, and being set aside for twenty-four hours deposited a mixture of dark blue colouring matter and of crystals of uric acid, many of which were seen under the microscope to be coloured blue. The supernatant liquor remained of a purplish-black colour. The blue colour in the sediment was entirely discharged on the addition of chlorine water. On exposing some dried filtering paper covered with a thin layer of the deposit to a gentle heat in a test tube, a very small quantity of bright blue colouring matter was sublimed and deposited on the cool part of the tube. A second portion of urine, consisting of eight ounces passed some hours after the first, was free from albumen, but had in other respects similar reactions with the first, but in a slighter degree. A third portion, passed on Friday morning, was nearly normal, and only turned of a dusky purplish-brown colour on being treated with hydrochloric acid and allowed to stand for some hours.

GERMAN HOSPITAL, DALSTON.

TWELVE CASES OF CHOLERA.

(Under the care of Dr. SUTRO and Dr. HERMANN WEBER.)

We report this week twelve cases of cholera from the German Hospital. Two (1 and 2) of them have been already partially reported in our last impression. It will be seen that the treatment is various; in two cases castor-oil was given. We hope next week to give a general outline of the different plans of treatment adopted in cases of diarrhœa and cholera at this Hospital.

We have great pleasure in adding to our Medical report from this Hospital that the two resident Medical officers, Dr. Burger and Dr. Hirsch, have assisted in the observation and treatment of the cases in the most energetic and praiseworthy manner. We cannot speak too highly of the zeal and devotion of these two Physicians.

1. F. M., the patient mentioned in the last report (at p. 88), has progressed favourably; had two motions daily since July 27, according to his habit; had abundant secretion of clear, pale, slightly acid, and slightly albuminous urine (70 to 100 oz., with sp. gr. 1019 to 1024) from July 25 to 29, *i. e.*, the eighth to twelfth day of disease; had during several days slight indications of mercurial affection of the mouth; was rather drowsy from the seventh to the twelfth day of the disease, but had otherwise only slight symptoms of the so-called typhoid stage, the temperature varying from 97·2° to 100·5°, the pulse from 62 to 115. Has had quinine from the tenth day, and a small amount of solid food from the eleventh.

2. J. M., the patient mentioned in last report (at p. 89), progressed favourably, had only on July 27, *i. e.*, the sixth day of disease, increased diarrhœa, probably in consequence of some solid food (toast and rice); had slight soreness of the mouth from the fifth to the eighth day; has taken no calomel after the fourth day. The urine of this patient is up to this time rather abundant (60 to 80 oz., with sp. gr. 1020 to 1025), alkaline, with phosphatic sediment, but free from albumen. The temperature was from the fifth to the ninth day rather above the standard (98·5° to 100°); the tongue was occasionally inclined to be dry and red, but otherwise scarcely any typhoid symptoms.

3. S. Z., a female, aged 34, had first diarrhœa on July 23, vomiting on the 24th; admitted into the Hospital on July 25 in a state of moderate collapse, with alkaline rice-water purging and vomiting; suppression of urine, and cyanotic appearance. Calomel gr. $\frac{1}{2}$; opii gr. $\frac{1}{12}$; every hour.

Decided improvement from July 27, *i.e.*, the fifth day from the commencement of diarrhœa. Calomel only every three hours. The secretion of urine became abundant on the 29th and 30th, being free from albumen, but turning dark violet by boiling with nitric acid. Calomel was left off on the 30th, and a small quantity of solid food allowed on the 31st. Two or three rather thin motions continue. There is a slight tendency to drowsiness, but the temperature is scarcely above the standard, and there is no real typhoid stage.

4. C. F., a female, aged 20, had first diarrhœa on July 22, vomiting on July 25 in the morning; admitted into the Hospital soon afterwards, when there was, as yet, no collapse. Received several doses of catechu with opium and chalk mixture; but the excretions increased, and collapse supervened towards the evening, when she was treated with small, frequently repeated doses of calomel

Marked improvement on July 26th; the motions were tinged with bile, and a small quantity of albuminous urine was secreted. Calomel given at greater intervals.

Further improvement on the 27th; almost entire disappearance of cyanosis, but sudden relapse in the evening, with violent rice-water vomiting on July 28 (more than ten pints in twenty hours). Calomel again every hour.

On the 29th, while the collapse lasted, in addition to the calomel treatment, several subcutaneous injections were made of two grains of camphor dissolved in oil of turpentine. Severe singultus, checked by hot turpentine stupes; cessation of vomiting and purging after 10 p.m.; in ten first hours after midnight two convulsive paroxysms (epileptic form); afterwards maniacal delirium, with development of unexpected strength.

On July 30 and 31 the cyanotic symptoms and the coldness of the body had entirely disappeared; sleeps much; is delirious, but calm.

August 1.—Sleeps much; is conscious when addressed; passes little urine; had a thin feculent yellow motion; temperature normal; pulse stronger; has a slight indication of a dark purple eruption on the forearms and hands; erysipelatous inflammation on the chest around the punctures for the subcutaneous injections.

5. J. L., male, aged 19, admitted on July 24 with diarrhœa, treated with catechu, opium, and chalk mixture; was almost well on 26th; had a well-shaped motion on 27th; was attacked with severe rice-water vomiting and purging, followed by collapse, on 28th; received one grain of calomel every hour; on 29th, in addition, five subcutaneous injections were made, four of them consisting of three grains of camphor dissolved in ol. terebinth., one of six grains of camphor in the same vehicle.

July 30.—Collapse continued with much vomiting and purging of thin, slightly greenish fluid. Calomel given every three hours.

31.—Continued collapse; vomiting diminished in quantity, with more bile; two motions greenish-grey, viscous in appearance, somewhat resembling the spawn of frogs. Singultus. Calomel as before; and in the evening a tablespoonful of castor oil.

August 1, 9 a.m.—Abundant vomiting of greenish-yellow, not quite thin fluid, and several thin feculent motions well tinged with bile. Erysipelatous redness over chest and stomach, spreading apparently from the punctures of the subcutaneous injections. Extremities still rather cold; tongue furred. Calomel continued; three drachms of castor oil in the morning. 7 p.m.: No vomiting, several feculent dark brown motions; collapse rather diminished.

6. C. B., male, aged 23, attacked with diarrhœa on July 26, at 3 p.m.; vomiting and cramps soon followed. Admitted into the Hospital on July 27, in the afternoon; collapse but moderate; vomited matter and motions not quite deprived of bile. Suppression of urine during twenty-six hours. Pill of calomel gr. $\frac{1}{2}$, and opium gr. $\frac{1}{12}$ every hour. Ice, cold beef-tea.

On July 29 disappearance of cyanosis, cessation of vomiting; motions thin, but more tinged. Pill every two hours.

On July 30 and 31 abundant secretion of urine of a neutral reaction, free from albumen. Gums slightly affected; omit pills.

August 1.—Favourable progress continues.

7. E. L., male, aged 30, perfectly well up to July 28; violent diarrhœa suddenly commenced at 8.30; vomiting and cramps at noon; admitted into the Hospital in the afternoon, in complete collapse, voiceless, and rather deaf (hearing good before the attack); temperature in axillæ 97·2° Fahr. Calomel gr. $\frac{1}{2}$, camphor gr. j., every hour. Ice *ad libitum*.

July 29.—Increased collapse; profuse rice water motions; diminished vomiting; temperature in axillæ at 10 a.m. 98·8°, in spite of perfect coldness of the arms and legs. Death at 11.30 a m. No muscular twitchings, no increase of temperature after death, according to Dr. Burger's observation.

Post-mortem Examination twenty-six hours after Death.—Intense rigor mortis; no smell of decomposition; strong smell of camphor, with some sweetish, sickening admixture; lungs dark red, not quite deprived of blood; right lung 17 oz., left 14$\frac{1}{2}$ oz.; both cavities of heart contained blood; in pulmonary artery a fibrinous coagulum, with some semi-fluid blood; pulmonary vein quite filled with thick, dark, semi-fluid blood, the blood being of neutral reaction, and containing, according to the analysis of Mr. Evan Lewis, much urea; the muscular fibres of the heart entirely deprived of transverse striæ, filled with granular substance, without oil globules; abundant sub-pericardial capillary effusion of blood, especially near the basis; liver 51 oz.; gall-bladder filled with healthy bile; kidneys congested; spleen very small; stomach filled with thin greenish fluid; duodenum with almost normal-looking, yellowish, semi-fluid chyme; the lower part of the small intestines with thin pale pink fluid; the mucous membrane congested.

8. G. F., male, aged 23, had diarrhœa since July 20. Vomiting and moderate collapse followed on July 28, when he was admitted into the Hospital, and received $\frac{1}{2}$ grain of calomel with $\frac{1}{12}$ opium every hour.

On July 29, increased rice-water vomiting and purging; greater collapse.

On July 30, marked improvement.

On August 1, continued favourable progress; abundant secretion of urine since July 31; a pill only every four hours.

9. C. E., male, aged 26, took the place of the preceding patient in a bakehouse on July 27, was attacked with diarrhœa on July 30 in the afternoon, continued to work till July 31 in the morning, when vomiting and severe cramps supervened, which in this case were unusually painful and extended, and were not relieved by frictions with turpentine. Had the calomel and camphor pill every half-hour from 9.30 a.m., but the collapse had rather increased at 6 p.m. He was perfectly cyanotic, cold, and pulseless, and had scarcely any vomiting and diarrhœa. Took ½ oz. of castor oil without immediate effect; was placed two hours later into a hot mustard bath (104° F.) during half an hour, after which the cramps disappeared for an hour, but then returned. Early on August 1 he had several motions, slightly tinged with bile, and was rather less collapsed at 9 a.m. Continued to take the pills during the day; had again several motions; no return of cramps; is very sleepy, but much less cold.

10. F. B., male, aged 29, had diarrhœa since July 26; vomiting supervened on the 28th; moderate collapse on July 31, when he was admitted, and received a calomel and camphor pill every hour. On August 1, at 7 p.m., the motions were well tinged with bile; the vomiting had ceased, and the collapse was much diminished.

11. G. M., male, aged 44, felt uneasy on July 29, without any diarrhœa; took much brandy; had first diarrhœa, and soon afterwards vomiting, on July 30; collapse on July 31, with profuse rice-water vomiting and purging. Calomel and camphor pill every half-hour.

Scarcely any change on August 1 at 9 a.m., but after a hot mustard bath during half an hour the cramps in the arms were diminished, and he felt more easy. At 7 p.m. the extremities and tongue were rather less cold, but vomiting and diarrhœa had not yet ceased.

12. C. H., a female in-patient of the German Hospital since June 18 for pulmonary and intestinal tuberculosis, had not left her bed, and had not come in contact with the cholera wards; had often suffered from diarrhœa, which was always checked by the astringent mixture of catechu, opium, and chalk, but it became increased during the last days in spite of the mixture.

Rice-water motions, vomiting, and collapse suddenly supervened on August 1, when she was removed to the female cholera ward and treated with the calomel and camphor pills.

WESTMINSTER HOSPITAL.

CASE OF CHOLERA—DEATH—AUTOPSY.

(Under the care of Dr. BASHAM.)

THE following is the second case of cholera admitted into the Hospital. The first was a man who came in under Dr. Fincham on July 19 at noon. This patient was convalescent on the 28th, and a few days after left the Hospital. The case, however, was not so severe as in the one we now relate.

Mr. Horridge, the House-Physician, tells us that there have been a very great number of cases of diarrhœa irrespective of those treated as ordinary out-patients—on the 20th, 18 cases; 21st, 20 cases; 22nd, 20 cases; 23rd, 22 cases; 24th, 19 cases; 25th, 22 cases; 26th, 31 cases; 27th, 32 cases; 28th, 74 cases; 29th, 74 cases; 30th, 109 cases; 31st, 90 cases. Many of these cases were very severe, and would have been admitted into the wards had there been room. The patients receive a dose at the Hospital, and they are allowed to take several away with them. The mixture consists of aromatic confection, chalk, and tincture of opium. The dose administered at the Hospital contains ten minims of tincture of opium, and the subsequent doses five. If, however, the patients have been already treated, and if vomiting has come on, sulphuric acid and opium is given instead. A great many of the cases, some of them severe, are in children.

Emma H., aged 25, admitted July 29. 3 p.m.—She had had painless diarrhœa since the 26th; vomiting rice-water, purging, and cramps came on this morning; she was collapsed, pulseless, face contracted, eyes sunken, arms and legs blue and cold; constant vomiting and purging; no urine passed to-day. ℞ Acid. sulph. dil. ♏v., tinct. opii ♏ijss., omni horâ; iced water, with small quantities of gin, ad libitum; hot bottles to the feet.

30th.—Reaction has set in; countenance natural; no lividity of skin; pulse 72; moderately strong; tongue clean, red, and dry in the centre; temperature 97; skin moist and perspiring; vomiting and purging ceased during the night; the bowels had acted eight times altogether; she had taken ℥ij. of gin, and probably seven pints of water.

31st.—Bowels have acted twice, motions becoming fæcal; no vomiting; she is very drowsy and difficult to rouse; skin warm; is able to take some food; pulse 80; pupils contracted; urine suppressed.

She became gradually more and more comatose and died during the night, having passed little or no water. Mr. Horridge passed a catheter at 8 p.m., and drew off a tablespoonful of urine for examination, but it was unfortunately thrown away by the nurse.

The above notes were obtained from the report of the case by Dr. Maclure, the registrar.

The autopsy was made eleven hours after death by Dr. Willis. We gathered the following particulars:—The right side of the heart contained a large quantity of dark blood. There was a large decolorised firm clot, which extended into the pulmonary artery. The left side of the heart contained scarcely any blood, but there were a few shreddy dark clots entangled in the chordæ tendineæ. The lower lobes of both lungs were much congested and but slightly crepitant; they exuded much serum on section. The anterior margins were not so much congested. The gall-bladder contained a considerable quantity of dark green bile. The liver was loaded with blood. The spleen large and firm. The bladder was empty (see Report of case). The large intestines contained a large quantity of ochre-yellow thin fluid. In the upper part of the small intestines there was much semi-fluid greenish matter.

WHITECHAPEL WORKHOUSE INFIRMARY.

RESULT OF THE TREATMENT OF NINETEEN CASES OF CHOLERA BY CAMPHOR.

WE are indebted for the following particulars to Mr. Widdas, who, with Mr. Richardson, has charge of the cholera patients in this Workhouse. The disease has been so fatal in this neighbourhood that we gladly record so favourable an experience of the remedy used. The following is Mr. Widdas's report.

During the last twelve days nineteen of the cholera cases admitted into this union have been treated with camphor; of this number, six have recovered, nine have died, and the remainder are at present under treatment.

We administer the camphor by dissolving it in an equal weight of chloric ether, giving fifteen or twenty drops of the solution on sugar in the first instance, and ten drops every quarter or half-hour afterwards, according to the urgency of the symptoms. In about half the cases in which this treatment has been adopted the patients have appeared to receive benefit in periods varying from six to eighteen hours. The extremities have gradually become warmer and lost their lividity, bile has reappeared in the evacuations, and the patient has passed into a state of reaction. During this second stage two died—one, a girl aged 18 (who was suffering from severe gonorrhœa), with symptoms of congestion of the brain, and the other of pneumonia. Six have gradually recovered, without any bad symptoms.

Of the remaining half which died some were almost in a dying state when admitted, and one was suffering severely from secondary syphilis. And in some cases, even when the treatment was begun early, the camphor did not seem to have the slightest good effect, and the patients died collapsed in a very few hours.

Brandy has been freely administered to each, and ice has been given to suck, also effervescing mixtures and astringents incidentally.

All have been well-marked cases of Asiatic cholera, having the rice-water evacuations, coldness and lividity of the extremities, and in most cases the patients were pulseless when the treatment was commenced. In one woman, aged 57 years, after recovering from a state of collapse, and about four days from the commencement of the attack, a rash was observed all over the body, and most resembling that of measles, but on the following day the rash assumed a bright rosy red colour, strongly contrasting with the dusky red in measles. The rash remained about three days, and gradually disappeared. The woman is fast recovering. I may mention that all these cases have been adult women, varying in age from 18 to 70 years.

Mr. Widdas adds to his report the following remarks, to which we gladly give insertion:—"As there has heen so much said in the newspapers lately about pauper nursing, I may mention that in this instance the nurses, both paid and pauper, have done their work in an energetic and praiseworthy manner, carrying out fully the directions of the Medical officers, and doing all they can for the relief of the sufferers."

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Medical Times and Gazette.

SATURDAY, AUGUST 4.

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THE PRESENT CHOLERA EPIDEMIC.

Whoever would understand the present cholera epidemic in London, should get a good map of the district; then tracing the Thames from west to east, he will observe that serpentine course of the river which is a sure sign of a flat country, and will especially notice that southward bend, which is divided into Limehouse Reach, Greenwich Reach, and Blackwall Reach, within the concavity of which are situate the East and West India Docks, and Isle of Dogs. Then he may notice the River Lea, running into the Thames by means of a stagnant, sinuous channel, known as Bow Creek, but communicating also with the river higher up by means of a channel known as the Limehouse Cut. Tracing the River Lea upwards, he will see that it communicates with a network of canals, such as Pudding-mill River, Three-mills River, City-mill River, Waterworks River, Channel Sea River, etc., in close proximity to which are the reservoir and waterworks of the East London Water Company. Further west we have the Regent's Canal, coming down from the City-road, and encircling the Bethnal-green and Whitechapel districts, and falling (if such a term be applicable where there is no fall) into the Thames by the Limehouse Basin. This canal is connected with the River Lea and its system by a branch called Sir George Duckett's Canal. Draw then a line from the Tower of London northward to the Regent's Canal; follow the Regent's and Sir G. Duckett's Canals eastward to the River Lea, and this last to the Thames, and you have the district so well described in the Registrar-General's weekly Report, in which between nine hundred and a thousand deaths from cholera and diarrhœa took place last week.

Now, why has the epidemic raged so savagely in this district? If we can find out any circumstance peculiar to it, we may take comfort and hope that the hitherto untouched districts may be spared. But can we? Great were the hopes that the water would be proved unwholesome. Alas! the East London water, so far as chemical analysis is a guide, was never more pure. Moreover, the cholera field does not extend to the full breadth of the East London water supply, and there is as yet no proof that the water is at fault.

We simply find the conditions always and notoriously favourable to development of cholera—a low swampy site intersected by impure streams, and inhabited by a poor population. Into such a place the cholera has been introduced, there it has been allowed to develope, and once in full play it has generated a something which causes it to spread. But we really see no reason why it should not pass over the whole metropolis. Levels may vary, yet if malaria be essential to the spread of cholera, it must be remembered that the best and well-watered thoroughfares are but so many beds of putrid mud, and poor people abound everywhere.

Meanwhile, steps are taken to meet the enemy. Medical Visitors, Assistants, and Dispensaries are provided; and a preventive *corps* is organised in the best parishes to go about with Condy's fluid and carbolic acid, and to disinfect the closets, sinks, and dustbins, whitewash the areas, and cleanse the water-butts of the poor and idle part of the population.

Now for one word on what we conceive to be the real danger of the time. The Registrar-General's Report vividly sets before us the squalor of a large part of the East London population; we have seen the same with our own eyes this week in a Bethnal-green street where a patient had died in almost every house. In one such house the yard was a pool of dirty soapy water, *in which* the water-butt was standing; the butt itself uncovered, dirty, green with mould, containing a host of "foreign bodies" at the bottom—the privy foul and stinking—the yard strewed with rubbish. Now this is a state of things common amongst the poor from East to West; but why? It is of no use to blame vestries, or Medical Officers of Health, or landlords; granting that they may fail in their duty, why do not the people—the victims—help themselves? Surely any man might in ten minutes raise a water-butt out of a puddle of filth and put it on a few bricks; he might contrive a cover for it; he might sweep up a yard, and pour a bucket of water down a closet and brush it out, and in the present panic he might get gratis from any vestry enough carbolic acid or chloride of lime to disinfect a street! But the poor will not stir a finger to help themselves. They may be on the look-out for district visitors with money, soup, and tracts, or they may trust to luck or to Providence, or may console themselves by saying that they can't die till their time is come—but they won't stir a finger to help themselves. This cholera is a severe test of our sanitary and hygienic arrangements; it is a still severer one of our social and moral condition.

METROPOLITAN WORKHOUSE INFIRMARY REFORM.

We have already in few words expressed our verdict on this question. There are grave faults in many or most of the existing Workhouses; the promoters of the Workhouse Infirmary movement are therefore justified and deserve to be praised for having brought the matter under discussion. If not formally and *totidem verbis*, yet substantially, their allegations are confirmed by the Report of Dr. Edward Smith, of which we have given copious abstracts in our last two numbers. And here we feel that it is impossible too strongly to recommend Dr. Smith's Report to the attention of the Profession as a singular model of exactitude, of the gravest caution, and of a comprehensiveness which stoops to details even the most petty and seemingly insignificant; besides which its tone of justice and liberality towards the Poor-law Medical officers, its vindication of them from charges of neglect and of parsimony in expensive drugs, and its proposal for an enlarged and more adequate scale of payment, make us regret that during all the long years of the existence of the Poor-law Board, that public office had not earlier secured the services of such a skilled, minute, and conscientious observer as Dr. Smith.

When space allows us to go more fully into it, we will invite the attention of our readers to the several points involved in this very large and momentous question. In the first place may be considered the nature of the supreme controlling and inspecting staff *ab extra;* in other words, who ought to be inspectors employed by the Poor-law Board, and what their functions and powers. In the next place, the staff charged with the duty of superintending and executing the various functions within the Workhouse and its Infirmaries, including not only Master and lay Officials, but the Medical staff; and in considering the Medical staff, it is worth while to see to what extent their wards should be made schools of clinical instruction, and thus gain the benefit of publicity, and of the services of junior members of our profession. Then might be considered the nature of the patients—how many are merely bed-ridden, aged, imbecile, and worn out, for whom warmth, food, shelter, and religious consolation are expedient, but for whom it would be absurd to provide the same cubical space and the same clinical apparatus as would be necessary for younger persons affected with acute disease. The proper isolation of infectious maladies, the seclusion of the noisy and mentally affected, or brutal, from the quiet and respectable sick poor, are also to be considered. And at the same time that the existing buildings, or such of them as are fit for it, are improved and ventilated and put under proper organisation, there should be really no delay whatever in providing a reasonable increase of Hospital accommodation for the sick poor of London. In the first place, it is wanted for the poor wretches whom the framers of that most imbecile Homeless Poor Act have attracted to London, and with them the typhus and small-pox, which in London are due to the influx of vagrant poor and of the Irish. It is positively a crime to introduce patients with small-pox, scarlet fever, typhus, or cholera into any general Hospital or Infirmary whatever; or, to reverse the proposition, it is a scandal that a patient who goes into any Hospital for the relief of disease or injury should be there exposed to the chance of dying from another malady, known to be communicable, and imported by a patient in the same ward. Whatever relation a general Hospital bears to a regimental one when armies are in the field, this general pauper Hospital or Hospitals ought to have to the local Workhouse Infirmary; and the Poor-law Medical Inspector ought to have power at his discretion to order the removal of any patient to the general pauper Hospital whose case may either be dangerous to the other inmates, or who may require seclusion or specific treatment, or who has been long under treatment without adequate benefit.

No one believes that the *mere* erection of Hospitals is all that is needed; it is the organisation and inspection. If, as is stated by one of the earliest and most energetic movers in this matter, "gross mismanagement and excessive abuses have been discovered by Medical Inspectors in a few hours," in places where the "Visiting Committees have been most regular in their attendance and systematic in their reports;" and if such "abuses," to quote the words of the same writer, "had largely escaped the attention of the able Poor-law Inspector of the Metropolitan District, whilst they were so quickly discovered by Medical observers;" and if "the infusion of a Medical element into the inspection of Poor-law Union Houses is essential to their efficiency;" if, without this Medical inspection, a palatial Hospital will soon become a pandemonium, and, with it, the poorest hovel might be at least managed with cleanliness and decency,—would it not be a wise economy to begin by relieving barristers of the duty, and appointing Physicians or Surgeons to inspect and organise to the utmost the existing Infirmaries?

THE NEW REGULATIONS FOR NAVAL MEDICAL OFFICERS.

We have received a copy of the new regulations which the Lords Commissioners of the Admiralty, under the authority of her Majesty's order in Council of 6th July last, have been pleased to establish for the Medical Officers of the Navy. The document consists of 17 separate regulations. Taken collectively, they are framed in a liberal spirit, and the Department will be decidedly benefited.

We propose to analyse the document and make such comments as occur to us. Let us, first of all, point out what our Naval brethren have gained—what fruits the labours of the late Committee at the Admiralty have produced. As to the honesty, ability, and care displayed by the president and members of that Committee, there cannot be two opinions.

The new regulations, as expressed in paragraphs 1, 2, 3, 5, 6, 7, 10, 11, and 13, are real concessions, and will prove perfectly satisfactory. Some exception has been taken to the 13th Regulation, but we think improperly so—"Officers in command of her Majesty's ships must on *all* occasions, whether on *shore* or afloat, be considered senior in rank and precedence to officers placed under their command." Practically, we do not see how any other plan could work.

So far, then, the members of the Naval Medical Department may congratulate themselves. They have been fairly—nay, liberally dealt with. The remaning clauses are the debateable ones. These have not escaped severe criticism, and we will lay before our readers the reasons which are assigned for the discontent which seems still to exist, and which the concessions will be insufficient to overcome.

The 4th Regulation grants certain allowances to the Naval Medical Officers "with the view of placing them on the same footing as Army Medical Officers." An inspector of Hospitals ranks relatively with a rear-admiral; but the latter receives allowances—if employed at home in one of her Majesty's dockyards, for example—which amount to £300 per annum, while the inspector only gets an allowance of £54 at home, and £130 abroad!

By Regulation 8, Staff Surgeons are appointed to all flag-ships bearing the flag of a commander-in-chief on a foreign station, with an allowance of 5s. a day in addition to the established pay. We think deputy-inspectors might have been appointed, as the only employment open for them.

According to the regulation fixing the period of retirement by age, the inspectors are compelled to go at 65 years of age. There are three inspectors-general, and these will be "hard hit" by this. They entered on their present duties upon the understanding, we believe, that they were to be employed until 70. It would have been only fair to have respected existing rights, particularly as the Admiralty Committee recommended this to be done, instead of compelling the *present* men to retire at 65. The retiring allowances are too small to induce any inspector to go, and as there are only three inspectors, the chances are dead against a Medical officer ever attaining that rank.

A word as to the scale of pay. The Committee recommended 12s. 6d. as the daily pay for Assistant-Surgeons on entrance. The new regulations fix it at 10s., and we think rightly. 12s. 6d. would only have acted as a bait to induce young men to enter the Navy, and when they afterwards found their pay not rising commensurately with length of service, they would either resign or be discontented with the service. It is only right that the State should not pay men more than they are really worth, and 10s. per diem is a good remuneration for a young man just commencing his Profession; but the extra 2s. 6d. might have been credited to the account of the Senior-Assistants and junior Surgeons with much advantage. The pay of these grades is relatively small and inadequate.

These are minor things, however, compared with the remaining regulations.

By the 15th Regulation Naval Medical Officers can retire after twenty years' full pay service on 5-10ths of their daily pay. The Medical officers want to retire at that time on their ordinary rate of half-pay instead. Army Naval Medical Officers alike concur in this desire. But it must be remembered that there is another point of view from which to consider the matter—viz., the State. It would never do for the State to be paying large sums for nothing to men who were still in every respect well qualified to do her good service. We now come to a *real* grievance, in our eyes.

By Regulation 16, such Medical officers as are compelled to retire after twenty-five years' service on *account of age* (60) *or ill-health*, will be entitled to the half-pay of £1 per diem. Under existing regulations a Medical officer may retire on 18s. 6d. on the completion of twenty-five years' full pay service, *irrespective of his age or state of health*. This is an excellent rule, and its abrogation by the present regulations will be a cause of great discontent. A man is thoroughly sick of a sea life, and longs for retirement, after twenty-five years' service. He has in all probability a family to educate, and the old rule was only a reasonable and good one. The system of giving officers or soldiers a shilling or two more on quitting the service if they pass a Medical Board is radically wrong—wrong in principle and bad in practice. We have not space to enter into this, but we fancy most men of experience will agree with us.

To conclude: these regulations were framed by the late Ministry, not the present one. Sir John Pakington is such a well-wisher and warm friend of the Naval Medical Service that we would fain hope he will reconsider some of these points. It appears to us that a very little is required to restore confidence to the Department. We feel on this subject what most people feel about a Reform Bill. Whatever is done, let it be something like a permanent measure. We heartily desire to see an end of all that discontent and antagonism of classes which have sprung up of late, and we have no wish to see a renewal of the dissatisfaction and discussions which are unseemly features in our public servants.

GEMS OF RELIGIOUS MENDICANCY.

We have all respect for the persons who establish new dispensaries, and who undertake to give a portion of their time and skill to the sick and suffering poor. Still, a certain decent moderation should be observed by themselves and their trumpeters, inasmuch as, glad though they be to relieve the poor, they will confess, if honest, that they also desire to benefit themselves by getting experience and bringing their names before the public. They should recollect, too, that there are hundreds of Practitioners in private life, who by the skill and care they lavish on cases where no earthly reward is to be expected, and by the moderate rate of payment which they accept for their services, show really much more self-respect and more regard for the dignity and interests of the Profession, and are really greater public benefactors than are some of the persons who have the opportunity of advertising their benevolent exertions as Medical officers of dispensaries. They should rebuke any injudicious friends who use Biblical texts for begging purposes, for these, even if absolutely justified by the circumstances, are sure to have an unpleasant odour about them. The following extracts are certainly gems in their way, but we are sure that the amiable and philanthropic persons whose friends have done them the ill service of publishing their names in such a manner will only be too ready to disclaim all participation in the deed.

"Woman's Work.—St. Mary's Dispensary for Women and Children.

"(Reprinted from the *London Mirror*, No. 168, July 21, 1866.)

"In the establishment of 'St. Mary's Dispensary for Women and Children' we find another outlet for that stream of philanthropy to which womankind so largely contributes. *Eve, it is true, compassed the fall of man, but her daughters have, ever since the world's creation, been making great atonement in redemption of the sin of the mother of the human race (!!!)* Tell us of works of love and mercy in which the hearts and souls of women are not engaged. Tell us of such works towards which the sympathies of the sex cannot be drawn, and you at once stamp them with failure. Look through the *imposing list (!!!)* of England's charities, and, as you scan the lists of donors and subscribers, see the honoured part which women take," etc., etc.

Out of respect to persons whose names are introduced, we will spare our readers any more of this "imposing" document.

"The Pimlico and Westminster Institute for Diseases of Women and Children.

"(Reprinted from the *London Mirror*, No. 165, June 30, 1866.)

"'Thou knowest that the women and children are tender,' is a plea that was urged long, long ago, by Jacob to his brother Esau, when the latter came to meet the former with four hundred men; and the plea was not made in vain. Changes, out of number, have taken place since, but the old plea is as true to-day as it was in the days of the patriarch. The women and children are still tender, and need as gentle care as they did in the days of old. We cannot, therefore, but hail with satisfaction the foundation of an institute which has for its object the relief of those who so emphatically and expressly stand in need of it, viz., sick poor women and children.

"The institute, whose name we have placed at the head of this article, is introduced to our readers by a letter from Dr. ———, and which will be found in another column. The learned Doctor states that the charity is the only one of its kind in the S.W. end of London, that it has been working 'silently, but not ineffectually,' and that, within the short space of ten months, it has been instrumental in affording Medical and Surgical relief to nearly 1000 sick poor women and children. Really this is a glorious beginning. What would have been the fate of these 1000 women and children, had not this institution been established?" etc., etc.

We will also in mercy cut short our extract from this equally "imposing" document. But as our quotation ends with a question, we will answer it. A good many of these 1000 women and children are wives and daughters of artisans who earn thirty shillings a week or more by working a very limited time, and who could earn more if their absurd trades' unions allowed them. If there were no "Institute," these persons would have gone to the nearest General Practitioner, would have paid him his reasonable charges, would have been one degree less pauperised, and would have had less to spend on Sunday excursions by railway and in gin. Others would have gone to some of the numerous Dispensaries already existing in the quarter, or even to St. George's Hospital or the Westminster; or, peradventure, might have sent to the Parish Surgeon. We are quite sure that the respectable Physician to the "Institute" does not sanction such an appeal as that of which we unwillingly print the commencement.

THE RICHARDSON FUND.

Our readers will have learned with satisfaction, that a plan which was set on foot by Mr. Day, of Stafford, for raising a Richardson Fund, has been received very warmly by the Profession. At the time of our going to press a public meeting is being held, under the presidency of Mr. Paget, for the purpose of organising and promoting the scheme. The promoters will, we know, avoid all that is associated with the *Tea Pot* system. The Richardson Fund will be, not a mere obsequious piece of flunkeyism, but a tribute from honourable independent members of the Profession to an honourable independent *confrère*, whose fertile ingenuity and restless appetite for work have furnished them during many years with food for thought and with practical means for the alleviation of suffering. From long before the date of Dr. Richardson's Prize Essay on the Coagulation of the Blood, down to his brilliant essays on the Synthesis of Disease and the artificial production of endocarditis and of cataract by imitating the conditions on which he believes them to depend—to his most effective plan for producing local anæsthesia—nay, we say, to his plan of treating cholera, propounded in this day's *Medical Times and Gazette*—he has been known as supplying the practical workers of the Profession with new channels for thought and fresh scope for usefulness. It will then be creditable to the Profession to put into his hands the means of vigorously carrying on those experimental researches in Physiology and Therapeutics of which we all share the fruit.

THE WEEK.

DEATH OF SIR CHARLES HASTINGS, M.D., D.C.L., OF WORCESTER.

The annual meeting of the British Medical Association, to be holden next week at Chester, will lose much of the cheerfulness that has characterised all the meetings which have preceded it. The members may be as industrious as of yore, as courteous, as earnest, but they meet without their founder, friend, and first councillor. Sir Charles Hastings sleeps for the first time in thirty-five long years, while his brethren who came together at his call still watch and work and recall the past.

Sir Charles died on Monday last. He had been long ailing—two years at least—and even last year it was feared by many of his friends that he would not be able to attend at Leamington at the annual meeting held there. But as the time arrived he brightened in health and in spirits, and took a most active part in the proceedings. Afterwards he again gradually declined, and this year was unable to attend the committees of the Association. His symptoms were those of chronic disease of the alimentary system. He was fully alive to their importance, and he told us that at times he suffered considerable physical pain. But he bore up bravely, and his intellect remained undimmed. A letter addressed by him a few weeks ago to the Executive of the Association was as firm, as judicial, as careful as it could have been in his best days.

We reserve for another number a memoir of Sir Charles Hastings. Next week many tongues will tell of him, and those who were often opposed to him in policy will bear witness that in friendship they were always the same. This was the great secret of his success, in fact—that he held to his own but gave offence to none, and that he made men amalgamate, through himself, whose natures, unchecked, would have been one continued repulsion.

CHOLERA IN THE CITY.

There is very little real cholera in the City proper; yet choleraic diarrhœa is frequent. One fatal case, nevertheless, has occurred this week at an hotel in Cheapside, the victim of which was a young Irishman who had been indulging too freely in whisky; two aged women also have died. At the City Union Workhouse at Bow, where twenty-five persons died last week, whose ages averaged 70, no death has occurred this week. Between the previous Monday, the 23rd, and Thursday, the 26th July, eighteen persons died out of thirty-six attacked, all of whom were inmates of the Infirmary, a building which is unimpeachable in its sanitary condition and arrangements. Dr. Saunders, of Queen-street, Cheapside, has been appointed Medical Officer to the Sanitary Committee of the City of London Guardians, at ten guineas per week. In Marylebone and Bloomsbury a complete corps of Medical visitors and assistants has been organised: but the rate of payment is more liberal. Two guineas a day for Medical visitors, and half-a-guinea for assistants, should be a minimum.

DR. LIONEL BEALE'S "MICROSCOPICAL RESEARCHES ON CHOLERA."

Our readers will be glad to see in our present number the first of Dr. Beale's communications on the results of his researches into the nature of cholera. Common observation, as it is called—nay, such microscopical and chemical researches as were available twelve years ago, together with the suggestions derivable from the action of remedies, have hitherto not given us any clear insight into the nature of algide cholera or any substantial grounds for treatment. It will be a great thing if the more powerful modern means of research which Dr. Beale possesses are employed to demonstrate the real pathological conditions of the disease. His observations on the loss of the epithelium of the small intestines, on the functions of that epithelium, on the time and probable steps of recovery, and on the analogy with severe burns, have a certain thrilling kind of interest, inasmuch as they explain the hopelessness of Medical treatment in severe cases. No less do they give practical hints as to what should be avoided. We have heard rumours about a "Government Commission" to investigate the cholera, but commissions seldom work smoothly. It really is more consistent with the genius of the English to leave such inquiries to the spontaneous action of competent observers, each of whom follows the bent of his own genius, works in his own way, and gains the precise degree of merit which may be his due. The better plan would be for the Treasury to subsidise individual pathologists of eminence, allowing each to work and bring out his researches in his own way and as soon as possible. The *Medical Times and Gazette* gives Dr. Beale's researches and Dr. Richardson's *this week*: if they had to be presented to a "Commission," and to be approved, and abstracted, and prefaced with a "Report" or "memorandum" (drawn up by perhaps seven Commissioners and cut to suit the taste of each), when would our readers see them? It might not be "etiquette," perhaps, to allow them to see daylight till they had been "presented to both Houses of Parliament by command of her Majesty." Really English science in the 19th century, though it may be glad of a subsidy, may shake off the trammels of patronage and the genius of Red Tape.

NEW PLAN FOR SUPPLYING LONDON WITH WATER.

Mr. W. Austin, of 14, Dorset-place, Wellington-road, Hackney, has shown us the details of a scheme for supplying London with water by means of wells, which are to go down full 1800 feet, not merely into the chalk, but into the greensand which underlies the chalk. His system of masonry, by means of which he proposes to construct and sink his wells, and, in fact, the whole engineering details, appear to us to be in the highest degree ingenious, and well calculated to answer their purpose. The want of a new water supply for London is now admitted. We must have it sooner or later. Then the question is, Shall we get it at once from the Welsh lakes, as it falls from the skies into granite basins, or shall we take the soakage of the earth? Will Mr. Austin show that the quantity of water attainable by his plan is sufficient, and that its quality is good? We must bear in mind that the water obtained from the existing deep artesian wells contains about 60·5 grains per gallon of soluble matter, especially soda, including about 1·5 grain of organic matter. It is, in fact, rather a medicinal than a drinkable water.

THE ROYAL FREE HOSPITAL.

There is no class of men more entitled to the confidence and thanks of the public than the House-Surgeons of the Metropolitan Hospitals. Their abilities are fully recognised by the Profession, who know full well that, called upon to undertake prompt action in all cases of emergency in Medical practice, where their diagnostic skill is often most severely tested, under most disadvantageous circumstances, they acquit themselves with singular credit. They have constantly to unravel some of the most difficult points in practice, and it is astonishing that mistakes do not more frequently occur, for even House-Surgeons cannot be expected to be infallible. An inquest was held last Friday upon the body of a Mr. John Burton, a solicitor of Clement's Inn, who was run over by a cab while pursuing a woman who had robbed him of his watch and chain. It appears that he was taken to the Royal Free Hospital, where he was carefully examined by the House-Surgeon, and was supposed to be under the influence of liquor. He remained there about an hour and a-half, and as he was perfectly sensible, and without any serious symptom, he was ordered to be taken home. The policeman, however, went with him to the station to report the case, and very shortly afterwards symptoms of collapse set in, and the man died. The friends at once expressed their belief that the deceased had not been fairly treated at the Hospital. After death a fracture of the ribs was found and a rupture of the liver. Neither of these lesions was detected till after death. The House-Surgeon in his evidence showed that he was in attendance upon the deceased for an hour and a half, that he carefully examined him, that there was no appearance of collapse; and in the absence of all grave symptoms, and as the policeman said he knew the place where the deceased lived, he thought he was justified in letting him go. The Coroner said, of course Mr. Fagge could have no object in sending the deceased away. If he did it only amounted to an error of judgment; but if the jury wished to say anything about the conduct of Mr. Fagge they could make any comment, which need not of necessity be appended to the verdict. After a consultation between the jurymen, the following verdict was recorded:—"The jury find a verdict of 'Accidental Death,' and are of opinion that it would have been more judicious if the deceased had been detained at the Hospital, and not sent to the police-station." Fracture of the ribs is no easy matter to diagnose at times, and we understand it was not detected in the present instance by the Police-Surgeon. Mr. Fagge is the victim of circumstances. No doubt grave symptoms set in after the man left the Hospital. Had the deceased been a poor man he would have been detained, according to the usual rule adopted by House-Surgeons.

PROPOSED ETHNOLOGICAL CONGRESS.

THE Asiatic Society of Calcutta, under the inspiration of a distinguished Surgeon of that city, have given the world a new idea. Cattle shows, flower shows, poultry shows, even baby shows, are known in Europe, but a live man show is certainly a novelty. It is proposed that one shall be held in the neighbourhood of Calcutta in the year 1869-70. Australians, Negroes, Negritoes, Bushmen, Mincopies, Dravidians, Mongolians, Indo-Europeans, Parthians, Medes, Elamites, and the dwellers in Mesopotamia, are all to be there. The prospectus we have seen, published by the Asiatic Society, sets forth the advantages of Calcutta for holding such an exhibition, and the advantages to science of the exhibition when held. The various "specimens" of Man, when assembled, are to be measured, photographed, and cast in plaster of Paris, and the leading Ethnologists and Anthropologists of Europe are to be invited—whether also for exhibition we are not informed. The Anthropological Society and Exeter-hall will, we suppose, charter special steamers for the journey; but as "accurate comparisons of external peculiarities" are to be made, we think that some of our friends the *savants* ought to consult their wives before they subject their visages to such an ordeal. Who are to be the judges? Are there to be prizes as at the cattle show? Will a ladies' committee sit on the specimens? What about cannibalism? Are Fans and other interesting specimens with peculiar epicurean views of human nature to be chained whilst they are being measured? Will the women be allowed to ogle and flirt? Can the leading ethnologists and anthropologists of Europe be taken as favourable specimens of the Caucasian variety of *homo sapiens?* These are some of the doubts and queries which rise to the surface. But the idea is magnificent.

FEVER WARDS IN CONNEXION WITH THE RADCLIFFE INFIRMARY.

PEOPLE whose ideas of Oxford have been obtained during the festivities of Commemoration Week or in a holiday visit will perhaps scarcely believe that the glorious old city, with its colleges, gardens, and libraries, is not the healthiest as well as the most charming place in her Majesty's dominions. It is too true, however, that this is the fact. In a mean population of about 20,000, 200 cases of typhus, typhoid, and scarlet fevers annually occur. We are glad, therefore, to be able to state that a scheme is afloat of erecting in the garden of the Radcliffe Infirmary a couple of fever blocks to contain twenty-four beds in four wards A committee of gentlemen, amongst whom are Dr. Acland, Dr. Tuckwell, and Dr. Rolleston, have drawn up a report in favour of thus complementing the usefulness of the Infirmary. The surplus of the Lancashire Relief Fund, amounting to £1000, has been offered to the governors of the Infirmary for the purpose, and the Committee look with confidence to the University, the Oxford corporations, and to public benevolence, for the remainder of the necessary funds. It is intended that free admission shall be given to fever patients, but it is not intended that the benefit of these wards should be confined to the poor. Patients of a better class who can defray their own expenses might, when stricken down with fever, find a welcome refuge in the airy, well ventilated block Hospital, and avail themselves of the careful nursing and attendance they would meet with there. A bachelor's room in a college and the tender mercies of a scout are, we should think, not the best helps to recovery. Again, as the Committee argue, the early removal of a case of fever from a college would in most instances prevent its spread and the necessity which sometimes arises of sending all the inmates home before the end of a term. On the whole, the plan of the Committee seems a very good one, and from what we know of the excellent arrangements of the wards of the Radcliffe Infirmary, we should augur well for the usefulness of the proposed new wards to the University and city.

FROM ABROAD.—PERSONAL PRESERVATION IN THUNDERSTORMS.

IN a recent exhaustive work on Lightning and its Effects, M. Sestier gives some rules as to the precautions to be observed during thunderstorms, which may be noted here. 1. Wherever you may be, whether in a house, in the street, in the open country, or on ship-board, avoid the currents of air from doors or windows, keep away from walls and metallic objects, and do not make part of crowds or assemblages of persons. Do not approach any spot which has been struck by lightning, for on many occasions the same place has been struck *coup sur coup* at the interval of a few minutes. Wet clothes are better preservers than dry; and as, in individuals struck by lightning, metallic objects, as watches, money, etc., are almost always attacked, it is prudent, on seeking for shelter, to deposit such objects at a distance. 2. In a house, you should choose a room in the opposite direction to the point whence the storm approaches, for it is highly probable that the lightning will be projected on the side of the house which the thundercloud first passes over. You must not rely too much on the safety of cellars and underground places, for, according to Guden and others, it is in vaulted and subterraneous places that the ascending stream of electricity does so much mischief. The neighbourhood of curtain rods and bell-pulls should be avoided, and you should not place yourself between the fire-place and a window, or remain on the door-sill. 3. In the street, avoid seeking shelter under doorways or shop-sheds, walking by the sides of houses or walls, and especially by water-pipes. 4. In the open country, avoid elevations, such as hills and the like, seeking shelter in preference in a flat or hollow way, or endeavour to keep between stormy clouds and a very high object or a house. Never take refuge under a tree, or if that be done, leave it the instant you experience the feeling of uneasiness, which is the first effect of the electrical influence. An excellent precaution, when surprised in a plain, is to lie, or at least to sit down, with the head bent forwards, diminishing as far as possible the projection caused by the body.

PARLIAMENTARY.—THE CARLOW LUNATIC ASYLUM—THE BRITISH MUSEUM—ESTIMATES—GRANTS TO THE UNIVERSITIES FOR SCIENTIFIC EXPERIMENTS, FOR VACCINATION, TO THE PUBLIC MEDICAL SERVICES—PROPOSAL FOR PRODUCING CHEAP DOCTORS FOR THE PUBLIC SERVICES BY MR. CHILDERS—INDIAN MEDICAL SERVICE—PUBLIC HEALTH BILL—ARTISANS' DWELLING BILL.

In the House of Commons on Thursday, July 26,

In reply to Captain Pack-Beresford,

Lord Naas said he had made inquiries with regard to the qualifications of Mr. Howlett, who had been appointed Resident Medical Superintendent of the Carlow Lunatic Asylum, and the best answer to the question would be to read a letter which he had received from Dr. Hatchell, one of the inspectors of lunatic asylums in Ireland. The noble lord then read the letter, which stated that the diploma of Licentiate of the Royal College of Physicians, Edinburgh, did constitute Dr. Howlett a Physician in the sense required by the Act, and though no other Medical officer of lunatic asylums held the same qualification, that circumstance did not invalidate the appointment, inasmuch as Dr. Howlett was duly qualified for the service, having both a Medical and Surgical degree.

Mr. Lowe moved the British Museum estimate, amounting to £102,704, being an increase of £4580 on last year's estimate. After a brief conversation, embracing the topics usually discussed on these occasions—the necessity of enlarging the Museum, the separation of the collections, and the expediency of opening the Museum in the evening, etc.—the vote was agreed to.

The following votes were agreed to:—

£5793 to complete the grant of £8793 for the University of London.

£14,857 to complete the grant of £19,857 for Universities in Scotland.

£1452 to complete the grant of £2452 for the Queen's University in Ireland.

£2250 to complete the grant of £4250 for the Queen's Colleges in Ireland.

£5059 to complete the grant of £7059 for scientific works and experiments.

£5000 for additional Inspectors of Vaccination.

On the vote of £5926 for increased pay and allowances to the Medical officers of the Army and Navy,

Mr. Childers observed that the Medical officers of the Army and Navy appeared to be taken out of the body of young Medical men in this country, no provision being made for educating them for the services with the exception of a few months' training. He had felt it his duty to read very carefully the evidence taken by the Committee appointed to consider the case of those officers; and it appeared to him that they did not complain so much of the inadequate amount of the pay given to them as of the inconvenience to which their status in the services put them. They also looked forward to retirement on pensions after fifteen or twenty years. Now, it could not be satisfactory to the body of combatant officers that the Medical officers, who entered the service at about the same age as they themselves became lieutenants, should receive so much higher pay, and should be able to retire at an early age on so much better terms. He would suggest to the right hon. gentleman the Secretary of State for War, and his right hon. friend the First Lord of the Admiralty, that during the recess they might consider whether, instead of taking their chance of selecting from a body whose ideas of remuneration and early retirement were pitched so much higher than those of the combatant officers, it would not be wiser by early education to train up a body of Medical officers who would look to the Army or the Navy as their profession for life.

General Peel thought that if there was one thing more desirable than another in connexion with this subject it was to obtain for the Army and Navy the best Medical men they could procure. In 1858 a warrant was issued, and very soon after it underwent an alteration in consequence of the dissatisfaction which was expressed with it. The hon. gentleman (Mr. Childers) now appeared to be dissatisfied with the amended warrant; but he would ask the hon. gentleman how could they possibly expect Medical gentlemen to enter the Army or the Navy if it was announced to them that their status was going to be altered?

Mr. Childers begged to say that his suggestion did not apply to gentlemen who had entered. It was entirely prospective.

General Peel would remind the hon. gentleman that under the existing warrant direct inducements had been and were still held out to Medical students to qualify themselves for the Army and Navy. The result of the alteration made in the terms of the minute had not been to attract the number of candidates anticipated, for at the present moment there were actually more offices to fill, he believed, than candidates for those positions. The effect of the proposal now put forward he understood to be that instead of inviting the services of members of the Profession generally, a set of young men were to be sought out from some special Government establishment. He had not enjoyed the opportunity of considering the proposal as it might affect the Navy. But it certainly ought to be the object of the House of Commons to secure for the Army and Navy the best men that could possibly be got.

Mr. Henley said, as far as he could gather from the statement of the hon. gentleman opposite, it was proposed that young men should be attracted to the service by some scheme of early retirement. In that case young men would learn their business in the Army or Navy, and, as soon as they knew it, would be enabled to retire and earn more money elsewhere.

Mr. Childers said the right hon. gentleman exactly reversed the effect of his proposition. The vote was then agreed to.

On Friday, in reply to Mr. Bazley,

Sir J. Fergusson said that for fifty vacancies in the Medical service in India only thirty-six candidates presented themselves. The rates of pension for three, five, and ten years respectively were less than for the corresponding periods in the British service; but the rates of pensions in the Indian service were much more favourable, because pensions could be granted for shorter periods of service; the pensions were permanent, and not temporary, and he begged to add that he believed the advantages of the Indian Medical service were not thoroughly understood, because Medical officers rose in a very short period, and some who had only served two or three years were now in receipt of £500 or £600 a year.

The Public Health Bill was considered in Committee. Clauses 14, 15, 16, and 17 were withdrawn. Clause 20, giving the police power with regard to nuisances, was amended as proposed by Mr. Walpole. The Secretary of State must be applied to, and proof of the existence of nuisances proved, before the chief of police can be put in motion.

The consideration of the Bill was continued at great length on Monday. The principal clauses were agreed to, and the Bill was ordered to be reported to the House.

On Tuesday the Artisans' Dwelling Bill was withdrawn.

THE CHOLERA AT SOUTHAMPTON.

(From a Correspondent.)

Cholera, I am sorry to say, is still hovering about the town of Southampton, selecting for its victims the ill-fed and uncleanly residents of our insalubrious courts, alleys, and pent-up, crowded little streets. There still exists a wide-spread field of abominations over which it threatens to exercise its direful influence, and unless the authorities urge on with increased energy their admirable and systematised suggestions and regulations for the suppression of the disease, there may yet remain to be chronicled a tale of dismal significance. Up to the 24th inst. there had occurred 66 deaths; since that date the mortality has reached 101. The total number of cases up to this date has been 158.

Diarrhœa has been most prevalent, and to-day it is evidently on the increase.

Taking the cases in chronological order, they stand thus—

To July	24	66	deaths
,,	25	11	,,
,,	26	6	,,
,,	27	2	,,
,,	28	6	,,
,,	29	4	,,
,,	30	2	,,
,,	31	4	,,
		101	,,

By these figures you will readily perceive that our mortality has been terribly great.

The number of patients admitted into the Hospital has been about thirty-five. Most of these on admission were either pulseless or collapsed, and, although at first sight this may appear somewhat contrary to the admitted rules of practice, the Medical men in attendance appear to have been influenced by a desire to remove their patients from localities of the worst possible insanitary condition, thus to lessen the foci of the disease.

Every Practitioner who has cases of cholera is at liberty to send his cases into Hospital for treatment under his own personal superintendence, or he delegates his authority to the Resident House-Surgeon, Mr. Winwood Reade.

The modes of treatment adopted appear to have been almost as various as the number of patients admitted. Every one, however, considers that in the stage of collapse every conceivable therapeutical agent is powerless. Many cases have passed through the stage of cyanotic prostration, but they have for the most part terminated fatally, either from consecutive fever, prolonged somnolency, hæmatoxic influences, or from the most painful and pathognomonic form of dyspnœa. The ice-bag applications to the spine are now considered as a thing of the past—indeed, unprejudiced observers think them worse than useless. Calomel, in Dr. Cheesman's hands, appears to have done more good than anything else; stimulants retain some warm and successful advocates; the castor-oil treatment is most repugnant to the patients: the hypodermic method of administering medicines is still thought and spoken of favourably, but the fearful mortality of the Southampton cases speaks for itself, and certainly no one here can lay great claim to improvement in the way of treating cholera cases.

Dr. Macormack, the Health Officer of the town, keeps a record of the cases admitted into the Hospital, and from his pen, when this epidemic shall have passed away, the Profession may expect, and will receive, some interesting and scientific details.

The *Bavaria*, from Hamburg, where cholera has broken out in a malignant form, put in here to-day with 350 emigrants on board. She was not allowed to enter the Southampton Docks, in consequence of having lost a man from cholera this morning. Some cases of diarrhœa are reported amongst the crew, which will be transhipped to the *Æolus*, the quarantine hulk in this river.

July 27.

THE CHOLERA AT LIVERPOOL.

(*From a Correspondent.*)

The official weekly returns of deaths from cholera in the borough of Liverpool are as follows:—

July 7th— 4 deaths.
,, 14th—19 ,,
,, 21st—45 ,,
,, 28th—87 ,,

It will be thus seen that this approaches a rate in which the multiplicator of the number of deaths in the first week is increased as 5·11·22, or nearly in geometrical proportion. But whether it be a merely curious coincidence, or whether it points to the existence of some general law of epidemic progression, must be left to further and more extended researches, or to the scientific investigations of the great statist, Dr. Farr. The numbers, however, serve to illustrate very clearly the working of that power which Physicians have, apart from all theory, designated as Zymosis. They show that week after week the periphery of the cholera circle has been enlarged and its extension been not *per saltum*, but in a comparative ratio to the accession of fresh active centres of infection. No sudden increase has been followed by an equally sudden wane in the number of deaths, as will occur when the cause is functional disease, or an epidemy dependent on vicissitudes of climate, as we constantly see exemplified in the records of bronchitis during the spring months of the year. Physicians may amuse themselves by squabbling in the schools respecting the nature of cholera infection, but the practical man soon sees that it obeys certain laws, has its affinities and preferences for certain localities, moves through them and from them step by step, grows as a ferment and continues thus to grow as long as it meets conditions which favour and support its growth. Its step by step onward course is evidenced in last week's returns, for of the 87 deaths, 71 occurred in the parish, 10 in Everton, the nearest out township to the infected district of the parish, 2 in Kirkdale, which is a little more remote, and 4 in the Toxteth, which border on the south side of the parish. No case was reported from West Derby, which is the most rural of the out townships.

In my last communication, I mentioned that the first decided case of contagious cholera among the inhabitants, unconnected with the *Helvetia*, was that of Mrs. Boyle, a resident in a wretchedly squalid and close court in Bispham-street, and that the infection was spread in the neighbourhood by the orgies of an Irish wake. It was an unfortunate locality for such an event. In the Medical Officer's Report, reference is thus made to the district of which Bispham-street is a bad constituent part:—"In order to form a correct opinion of the physical condition of a real fever centre, it will be necessary to restrict our inquiries to what I have termed the especially bad cluster of streets lying between G. Crosshall-street, Standish-street, and Marybone. The population of this block in the census of 1861 was 9,632 persons of 1,993 families in 1,051 houses, on an area of 63,609 superficial yards, which gives two families of 9·1 persons to each house, on an average area, including streets and open spaces, of 60 superficial yards. The houses are what are termed the straight up and down, containing a sitting-room average 900 cubical feet, a middle room 900, and an upper room between 700 to 800 feet. It is, therefore, not surprising to find that 116 or 1·2 per cent. of the whole population died from fever during the year in this block; the deaths from typhus in the whole borough being only equal to 0·5 per cent."

Now, though there can be no doubt that overcrowding on superficial space and in apartments, combined with want and starvation, play a much more important part in the promotion of typhus than do either personal filth or the emanations from manure heaps, cesspools and drains—a fact clearly proved by this, that typhus is more prevalent and more fatal in cold weather than during the heat of summer—yet, when all the evil conditions are present, we shall always find such places the favoured resorts of typhus fever, of typhoid fever, of diarrhœa and of cholera. Cholera has its affinities for such a place as Bispham-street. It so happens that in Dr. Simon's eighth report to the Privy Council (page 76) there is a diagram taken from Dr. Trench's presentment to the grand jury, which will enable the general reader to form some feeble conception of this selected spot. The diagram includes Bispham, Henry, Edward, Adlington, and Lace-streets, which will figure largely in the death records of this, as indeed they have done in those of every previous year. The grand jury ordered the demolition of whole lines of houses, which would have opened the remainder to a free circulation of air, and given the wretched inhabitants some chance of being freed from the gases of cesspools; but, unfortunately, no progress had been made in carrying out the order, before cholera took possession. I have said that cholera had its affinities and preferences; it also goes step by step through the localities of its choice. Let us take Bispham-street as an originating centre, and we shall see its concentrated and localised mode of action and progress. This street runs east and west, and is about 150 yards in length. The radius which we will include is 170 yards, continuous from its westward, and 100 yards from its eastern end, and thence extending 150 yards northward, and 120 yards southward, to streets running a parallel course to Bispham-street. Herein are twelve streets, in which upwards of 40 deaths had occurred to July 28, and in which the disease still rages with fatal intensity.

I also mentioned among the earliest deaths, that of a child in Raymond-street. Now, taking that as a centre, we find that upwards of 20 deaths have already occurred in it, or in contiguous streets.

Another centre of the disease is Gascoyne-street, near the canal, and the Muck Wharf of the Borough, and in this street alone, which is about 220 yards in length, there have already occurred 13 deaths.

The preparations which have been made by the vestry to meet the exigencies of the epidemic, are deserving of much commendation. They have opened three dispensaries in the crowded districts of the town, near to the places where the cholera is prevalent. The dispensaries are under the care of relays of medical men, some of whom work for eight hours, and others for four hours at a spell in visiting, as well as in prescribing for the patients. The public seem to appreciate their useful services, for I found that in the twenty-four hours there had been 232 applications at the Dispensary in Burlington-street, and 145 at that in Richmond-row. The medical gentlemen act cordially together, and have wisely determined on the following course of procedure, in order to prevent any contradictory or opposing measures of treatment in the same cases, while under the care of different physicians. The rules which are posted up in the Dispensary, are as follow:—

"1st. The medical man first called to a case, to be responsible for the treatment and result of that case.

"2nd. Gentlemen are requested on leaving duty to notify what hour or hours such case should be visited, during his absence, by the medical officer succeeding him.

"3rd. The medical men are requested to carry out, as nearly as possible, the mode of treatment adopted by the officer first called.

In addition to the three Dispensaries, the vestry purpose to erect several sheds. One in Sylvester-street is now finished. It has a centre building, consisting of a passage and two rooms, one for the dispensing of medicines, the other for a kitchen and for keeping a constant supply of hot water. Two large wooden apartments—one for males, the other for females—are situated on either side of the central building. Each of these hospital apartments is 66 feet in length by 25 feet in breadth; the height from the floor to the eaves is 11 feet, and from the eaves to the roof ridge is 4 feet 8½ inches. This will give a total cubical space of 22,035 feet, and as it is intended for 25 beds, a space of 881 cubical feet for each patient; which, on account of the nature of the ventilation and construction of the apartment, is probably equal to 1,000 feet in an ordinary house.

Hitherto, the only available receptacle for cholera patients has been a ward in the workhouse hospital.

Since the 10th of July, 92 admissions have taken place; of these, 61 have died, 14 have recovered, and the remaining 17 are under treatment. The resident surgeon who has the chief charge of the cholera patients is Dr. M'Cloy, a zealous and painstaking inquirer. He has successively tried every scheme of treatment; but expresses himself as most satisfied with the effects of castor-oil as advocated by Dr. Johnson. Dr. M'Cloy gives the oil in ounce doses; he says they frequently, generally vomit after taking it, but the oil is seldom expelled. He shows an heroic firmness in its use; having sometimes given as much as six ounces in eight hours.

There can be very little doubt that Dr. Johnson's formula of treatment will receive a full, fair, and candid trial from the profession; and I fervently hope that it may prove to be successful, though his arguments do not carry conviction to my mind.

In addition to the medical treatment and relief of the sufferers from cholera, the Orders in Council have delegated to the parochial boards the duty of disinfecting the houses, and of destroying when necessary, the soiled beds and bedding.

An officer and assistants have been specially appointed for this purpose. The disinfectants used are, firstly, "Chloride of lime and diluted muriatic acid," and after the rooms have been for two or three hours well fumigated with the gas, the windows are opened, and the furniture and floors washed or sprinkled with a solution of carbolic acid. Immediately after the disinfection of a house, the Council take steps for its cleansing and limewashing. The ordinary way is to oblige the tenant or owner to do so at his own cost; but considering the emergency of the occasion, and the desirability of there being no delay, the Council have authorised the Borough Engineer to employ workmen to do it gratuitously whenever it shall appear to be necessary to do so, on account of the poverty of the people.

The Health Committee have also authorised the Borough Engineer, upon the suggestion of the Medical Officer, to employ carbolic acid largely and frequently in disinfecting the middens, cesspools, and drains of courts and streets wherein cholera has shown itself, and also to water such streets with a slight solution of carbolic acid.

The preparation employed is that of Calvert (No. 5). The residents of the courts are grateful for the relief from the sickening stench of cesspools and privies.

August 1st, 1866.

REVIEWS.

Circular No. 6, relating to the Materials in the Surgeon-General's Office, Washington, for a Surgical History of the late War. 4to. Pp. 66. November 1, 1866. Philadelphia: Lippincott and Co.

(Continued from page 101.)

We now come to gunshot wounds of the arteries. Cases "in which the canal of a large vessel is primarily opened, and in which this is the principal accident, are to be sought for among the dead on the battle-field rather than in the field Hospitals. In the few cases of primary gunshot lesions of the arteries that came under treatment, it was usually found that only a portion of the calibre of that vessel had been carried away, and that retraction had been thus prevented. Forty-four cases are entered on the records. In most of them ligatures were placed above and below the seat of injury; but in a few instances the main trunk was tied at a distance, and amputation was practised when the bleeding recurred. Twenty of the 44 cases terminated fatally." "The dread of primary hæmorrhage on the battle-field is confined to the inexperienced;" in all reported cases of wounded veins the hæmorrhage could be controlled by pressure. Only a comparatively small number (105) of sabre and of bayonet wounds (143) have come under treatment during the first three years of the war. "Of these wounds two-thirds were received in action, and the remainder by sentinels or patrols;" but in the museum they can exhibit a preparation showing a bayonet thrust through the stomach, and after the first battle of Bull's Run the wounded were stabbed as they lay, one receiving fourteen stabs from the victorious chivalry of the South. The number of simple fractures and miscellaneous wounds is "*quite large.*" For the first two years of the war the monthly reports give of simple fractures alone 2864 cases, with 92 deaths. "The number of incised and punctured wounds received in broils and altercations is *quite* numerous;" but it is not fair to intrude on domestic differences, so we have only ten lines about them.

Tetanus occurred as the effect of wounds in only 363 cases during the war. In the Schleswig-Holstein war Stromeyer had 6 cases among 2000 wounded. In Napoleon's campaign in Egypt, in the Peninsular campaign, and in the revolt in India, the ratio appears to have been larger than this. Among 12,094 wounded the British in the Crimea had only 19 cases. Of the 363 cases reported, 336 terminated fatally. Of the 27 recoveries, the disease was of a chronic form in 23. In the four remaining cases the symptoms were very grave; in two recoveries took place under the use of opiates and stimulants, in two after amputation of the wounded part. All the usual forms of treatment seem to have been tried, but only further prove, as Romberg says, that wherever tetanus puts on the acute form nothing avails, while many remedies are followed by recovery in mild and chronic cases. The records abound with illustrations of the influence which sudden vicissitudes of temperature, unextracted balls, foreign bodies, and matter confined by fasciæ, have in inducing this fatal affection. On post-mortem examination, great congestion of the brain and spinal cord was observed, and, so far as naked-eye observations can go, corroborate the observations of Rokitansky and Demme in Schmidt's *Jahrbücher*, vol. cxii.

For secondary hæmorrhage, which is placed next in order, we find that in 1037 cases "the femoral artery was ligated 93 times for bleeding from stumps, and 45 times for bleeding from wounds" (*which* of the *three* femorals was tied is not stated). The common carotid was ligated 15 times for hæmorrhage from the *deep branches of the internal maxillary;* the subclavian 6 times for gunshot wounds of the axilla, 5 times for bleeding after amputation at the shoulder. "The results of Anel's method of tying the vessel above were very unfortunate." At p. 43 we read that "in the earlier part of the war" Surgeons frequently applied the Hunterian aneurism operation to wounds of arteries, but latterly preferred, even in very difficult cases, to cut down and tie the cut ends of the vessels, as recommended by Guthrie, and previously by John Bell. It is sad that Surgeons should have been entrusted with the lives of their fellow-men when so utterly ignorant of the simplest and most universally adopted axioms of Surgery. The American soldier must have had a poor chance between the enemy in front and the Surgeon ("*at the earlier part of the war*") at his bedside.

Pyæmia is not the subject of any extended notice, although "it has been one of the great sources of mortality after amputations, and its victims may be counted by thousands." "The conclusions from the statistical reports are adverse to the therapeutical utility of the sulphites and hyposulphites in this disease."

Surgical Operations form the second section of the Circular. The histories of 13,397 amputations for gunshot injuries have been recorded, and the final results have been ascertained in 9705 cases. A statistical table is given at page 45, which shows the regular increase in the rate of mortality after amputations as the trunk is approached. This is well exemplified by disarticulation at the wrist, being ten per cent. less fatal than amputation of the forearm. Amputation at the elbow-joint, so long in disfavour, has been performed successfully 19 times, and is to be preferred for the future when amputation of the forearm is impracticable. It is creditable to the Surgery of the war that the number of cases of *amputation* at the shoulder-joint reported is less than the number of cases of *excision* of the head of the humerus. Of the 237 terminated cases of amputation, 93 died, a ratio of 39·2, which is 6·7 per cent. greater than the mortality in excisions. At the ankle Pirogoff's operation was regarded with little favour. Amputation *at* the knee-joint was frequently performed, and found numerous advocates. Of amputations of the thigh 64·43 per cent. died. In the French Crimean army the percentage of mortality after similar operations was 91·89. Of the American primary cases 54·13 died and 74·75 of the intermediate or secondary. Excisions were largely practised. The reports of excision of the wrist-joint are unsatisfactory as regards the mobility left in the hand. Of excisions of the elbow the mortality was 21·67 per cent.—a fraction greater than from amputation of the arm. But we must take this *cum grano salis*, as "the returns for the earlier part of the war include quite a large proportion of partial excisions, which are far more hazardous than complete removal." Under the heading Excisions of the Ankle-Joint are 22 recorded cases: 8 are excisions of the tibio-tarsal articulation, and the remainder nearly all "ablations of portions of the tarsal bones." Now, we ask the classifier, is this fair? How can he expect a reader not to treat his records with suspicion, when he finds that out of 22 cases under a grandiloquent heading, 14 have no business there? The impression left after reading page 57 is that but little is known about the cases, except "that they *seem* to have been formal resections and not, etc., etc."—in short, guessed at. Excision of the knee-joint was performed 11 times; 8 cases were fatal, 1 recovered; so did another, operated upon by Acting-Assistant-Surgeon Joshua Thorne, U.S.A., "the success claimed for which is so extraordinary as to suggest some doubts as to its authenticity" (page 60)—it seems hardly generous to add this remark to a case officially recorded with the author's name attached. In our opinion the facts that suppuration had been established for a considerable time, and that the case had assumed a chronic character, render it all the more likely to be successful, and the recorder's remark suggests only to us the question, Do the Army Medical officials at Washington *ever* receive false reports of cases? They do *not* at the Horse Guards.

Except in Assistant-Surgeon Siebold's case, the illustrations of excised heads of femurs do not lead us to modify our remarks already made on meddling with the hip-joint cavity. Then follow reports and tables of excisions in the continuity of the long bones, and of ligations of the larger arteries. The common iliac was tied without success in three cases; in one for an aneurismal varix from a stab through the left femoral artery and vein, in the thigh! The patient died of peritonitis in five days. This case is just a *little* too bad. When Syme is tying the iliacs for false aneurisms "the size of a man's hat" at their *injured ends*, they are cutting into a man's abdomen at the Ward Hospital, New Jersey, because he has an aneurismal varix in his thigh, and he dies of peritonitis, the result of this absurdly bad Surgery. Two ligations of intercostals were performed by enclosing the rib in the ligature; one patient died. Acupressure was adopted in a few cases with favourable results. There are four other registers of other Surgical operations, one of which is reserved for cases "in which the primary sequestra of Dupuytren have been extracted" (that means, bits of detached bone). We are told that these "books contain cases of great interest—for example, fifteen cases of tracheotomy *or* laryngotomy, with *six* recoveries."

The next section, "On the Medical Staff and the Materia Chirurgica," to military Surgeons must be important and instructive. It is profusely and well illustrated with drawings and plans of the various means of transport for the wounded and the equipment of Medical officers. We find in the concluding observations that anæsthetics were employed in 23,260 Surgical operations in the field or in general Hospitals. Chloroform, not thought so safe in the general Hospitals as ether, was used almost exclusively in the field; there are returns of its use in 80,000 cases, and death has been attributed to its use in *seven*. It does seem rather hard on chloroform to administer *two drachms* before excising a digital phalanx, as in the case of Colonel McGilvry. In concluding this the Surgical portion of the Circular, Brevet Lieutenant-Colonel and Surgeon George A. Otis considers that it will be possible to include in one large quarto volume the statistics of the graver injuries, while a second quarto could comprise numerical tables of the less serious injuries, an historical summary, and a discussion of the lessons derived from the statistical records of the war.

The second part, by Assistant-Surgeon and Brevet-Major J. J. Woodward, commences by a letter from this gentleman "as to how far the labour of digesting" the data bearing on the health of the army during the war "has advanced," and this ostrichian meal has undergone that process sufficiently to fill the remaining seventy-six pages. The American armies were singularly free from epidemic diseases, but still the deaths from disease were far more numerous than all the slain in all the battles and all the wounded who have since died, or are likely yet to die, of the injuries received in the struggle. Judging from the statistics of the first two years which have been already compiled, the mortality from disease during the war, not counting deaths among prisoners of war or discharged soldiers, was more than five times as great as the mortality of men of the same ages in civil life, and it is not to be disguised that the diseases which produced most mortality were precisely those which are most under the control of hygienic measures. This important, interesting, and carefully arranged portion of the Circular does not present short passages adapted for extraction, but seems to us far more likely to be of permanent value to all military services generally than the Surgical section. The latter has evidently had great care and labour bestowed upon it, but the work of classification is still far from completion. The histories of the cases are, we have seen, tainted already with suspicions of their exactness, and as not only did the circumstances vary with each case, but the operators have evidently been in many instances mere tyros. Statistics of cases can only be valuable when the cases classed together are like to each other in all important respects. Writers of monographs may find valuable material among the records of the United States Medical Department, but the first part of Circular No. 6 will not increase their confidence in its numerical tables; and as to wonderful recoveries from mutilation, what may be termed "caravan cases," scientific Surgery is no more advanced by them than natural history is by the birth of a calf with five legs.

The Antidotal Treatment of the Epidemic Cholera; with Directions, General and Individual, for the Prevention of the Disease. By John Parkin, M.D., F.R.C.S., late Medical Inspector for Cholera in the West Indies. Third Edition. London: Churchill and Sons. 1866.

The first edition of this work was published in 1836, the second in 1846, and "has been long since exhausted." This gratifying testimony to the value of his book could not, however, induce Dr. Parkin to republish it; only the reappearance of epidemic cholera has been sufficient to spur him into again assuring the world that he has discovered a specific for Asiatic cholera, an "antidote to the poison productive of it." He considers it proved that epidemic cholera "is produced by a specific cause, and this cause, the introduction into the system of an extraneous, deleterious, and poisonous substance," the inspired air being the vehicle of introduction. Dr. Parkin examines all the different modes of treatment, all the various remedies, hitherto employed, and shows, alas! only too easily, that all have more or less signally failed. He then goes on to state that the cause of the disease being a specific poison, this must be either expelled from the system or chemically destroyed; that "the treatment by expulsion, although the best that can be adopted in the absence of a more specific method, can only be of very partial success when generally trusted to for the cure of this rebellious disease;" but that *carbon* combines with and renders innocuous the deleterious matter. "The different forms of carbon, more especially the gaseous form, may therefore be considered SPECIFICS in the Asiatic cholera, and ANTIDOTES to the poison productive of it."

He gives the antidote in the form of effervescing draughts, 30 grs. of bicarbonate of soda or potash with 20 grs. of citric or tartaric acid, to be taken in the state of effervescence; or soda or seltzer water may be given. This "dose of carbonic acid" is to be given every two hours, every hour, every half or quarter of an hour, according to the stage of the disease. Charcoal may also be given by the mouth, or by injection. "As far as my own experience and observation go," he writes, "the above treatment, if adopted at the *commencement* of the stage of collapse, is all that is required, the majority of the patients to whom the antidote has been given at this period having recovered, while the supervention of the next stage has been invariably prevented." Dr. Parkin has the most profound belief in his theory; in every means that has been of any service he finds carbon, and it was the carbon that was of benefit—carbonate of soda, prepared chalk, olive oil, naphtha, etc., all were vehicles of carbon; if the hot-air bath did good, it was because carbonic acid was absorbed through the skin. If Dr. Ayre's treatment or Dr. Stevens's was at all useful, it was because carbon was given with the salines, and effervescing draughts with the calomel. We fear, however, that it must be confessed that when we come to look for *proofs* of his success, they are sadly imperfect; of assertion there is plenty, of statistical evidence little that can be deemed satisfactory. His plan seems to have been most largely tried in Spain in 1832, and, according to the Spanish Physicians quoted, was absolutely and all but invariably successful; and we are informed by them that Dr. Parkin's "name already belongs to history, adorned with the most grateful remembrance of mankind." In England, however, the treatment does not seem to have been successful, or, as Dr. Parkin considers, has not been properly tried. He endeavoured to get it employed in St. Bartholomew's Hospital in 1849; but though the Physicians were very courteous, they seem to have been somewhat wanting in faith. Even the Apothecary "had prepossessions on the subject of treatment. One was that the effervescing draught increased the sickness;" and, altogether, we fear that no high idea of the value of the treatment was formed, as we have not heard of its being employed in the present epidemic. We do not gather that Dr. Parkin would give carbonic acid gas by inhalation as a remedy, though, as the poison enters through the lungs, one would suppose the *antidote* might be given by the same route. He does appear, however, to hold that an increased quantity of carbonic acid in the air is the best prophylactic. Apart from its theory, the book contains a large amount of information and observation; and we should be only too happy to hear of Dr. Parkin's treatment being found of real value in the present outbreak of the disease.

GENERAL CORRESPONDENCE.

TREATMENT OF CHOLERA.

LETTER FROM MR. T. J. DYKE.

[To the Editor of the Medical Times and Gazette.]

SIR,—Familiar with epidemic cholera from having been engaged in the treatment of, and having personally suffered from, the disease in 1832, 1849, and 1854, I am glad to find, from the experience of your able correspondent "R. D." of the malady now prevailing in France, that the same views which practical men formed of the treatment of the disease in former epidemics hold good with regard to the present.

Dr. George Johnson's views are so well put forward that one might be disposed to follow his lead, if one had no practical and personal experience of cholera. Both from personal and practical experience I agree with the opinions that you have enunciated.

I was an apprentice in 1832, and recollect being directed by Mr. Davies, the Surgeon of the Cyfarthfa Iron Works, to treat cholerine with astringents and small doses of laudanum, cholera with calomel.

In 1849 I had charge of a population of not less than 7000 people. I treated cholerine with camphor, capsicum, and opium (one-eighth of a grain), in pill, every two or three hours; cholera with calomel.

In 1854 (my *clientèle* being about 5000), at the commencement of the epidemic, I gave the camphor, capsicum, and opium for cholerine; but towards the end I became aware of the value, in this stage of the disease, of diluted sulphuric acid given in combination with capsicum and opium. Cholera was treated with calomel. I gave, and took, the calomel in three-grain doses every hour.

Nineteen out of every twenty cases of cholerine yielded to the remedies when given early. The mortality from "true blue" cholera was two out of five.

I noticed that the fever was greatest in those who had opium given to them in cholera. I did not use or order stimulants. I gave milk and water, as much as the patients would take.

I am, &c. T. J. DYKE,
Medical Officer of Health.

The Hollies, Merthyr-Tydfil, July 15.

DR. ANDREW CLARK'S TREATMENT OF CHOLERA.

[To the Editor of the Medical Times and Gazette.]

SIR,—I am sure the whole Profession is greatly indebted to you for keeping it well posted up in London Medical practice. But it is with great surprise that I read Dr. Andrew Clark's mode of treating cholera given in your last number.

Without mentioning the doubtful plan of prescribing acetate of lead in the form of pill, and so running the risk of its being changed into the carbonate, is it not certain that the said pill is neutralised by the sulphuric acid mixture? If the two are given alternately—and such, I suppose, is the case, as you do not say how often they are repeated—Dr. Clark might as well administer the inert sulphate of lead.

I have been greatly edified by your leading article on the Remedies for Diarrhœa, and I only wish that every other disease might receive its turn at your hands. Your remarks, however, to my thinking, have not done justice to the acetate of lead. I have long been in the habit of prescribing it in five-grain doses every three or four hours with dilute acetic acid, liquor opii sedativi, and sweet rain-water, which is an excellent substitute for *aqua destillata*. And I must say that of all the Pharmacopœial drugs for diarrhœa I consider it by very far the quickest and the most reliable, and, to use your expression, the "best universal."

July 31. I am, &c. M.D. ST. AND.

[M.D. will observe that we stated in our report of Dr. Clark's treatment, that "each patient gets *either* the lead pill *or* the astringent mixture." The pill and mixture were not both given to one patient.]

UNANSWERABLE ARGUMENT IN FAVOUR OF CHANGE OF TYPE.

LETTER FROM DR. FREDERICK J. BROWN.

[To the Editor of the Medical Times and Gazette.]

SIR,—You speak well of Dr. Markham's lectures against change in type of diseases. Yet let me say that country labourers that used to be bled every spring thirty years since found themselves a few years later fainting after four ounces, whilst they formerly would lose sixteen ounces and walk miles without any sign of faintness. These are cases of people in health: therefore, they are free from the fashions of sickness-treatment. The younger relatives and neighbours of these countrymen were similarly affected by bleedings: therefore it was not a case of men growing older and not tolerating bleeding from that cause. These facts are unanswerable evidence of a change. The phlogistic constitution is coming back again. The nervous type came in about 1831-2 with the cholera. The phlogistic type returned two or three years ago (in part). I am, &c.

Rochester, July 28. FREDERICK J. BROWN, M.D.

INTRA-CAPSULAR FRACTURE OF THE NECK OF THE FEMUR.

LETTER FROM DR. FREDERICK J. BROWN.

[To the Editor of the Medical Times and Gazette.]

SIR,—On March 22, 1861, I read a paper at Chatham (at a district meeting of the British Medical Association), "On the Curability of Intra-capsular Fracture of the Neck of the Femur."(a) I do not know for certain that the fracture is within the capsule in these cases, but crepitus is felt by the fingers pressed deeply into the anterior part of the thigh below Poupart's ligament when the limb is moved. The cases to which I refer are the ordinary fractures of the neck of the femur in elderly persons.

(a) See *British Medical Journal*, vol. for 1861.

Extreme age is not a bar to successful treatment, but it is necessary to carefully treat cephalic congestion by leeches, etc., induced or aggravated by the horizontal posture. Success uniformly attends the treatment, which is that advocated by Samuel Cooper and Dupuytren—viz., the long splint, and extension for 100 to 140 days. Lately I have found that extension need not be kept up for so long a period, but the extended horizontal posture must be retained for at least ninety days. The splint must be kept firm for at least two months. Where there is great irritation of the perineum or restlessness or obstinacy on the part of the patient, easy extension by the splint will suffice. In this case shortening to half an inch or one inch will occur, yet a good recovery will be made.

The conclusions arrived at in my paper are as follows:—

1. That treatment by easy posture with pillows is disastrous in its results, not being better than entire absence of treatment.

2. That œdema and pain of the limb continue for life in untreated cases.

3. That treatment by extension by the long splint for one hundred to one hundred and forty days is perfectly successful in obtaining firmness at the seat of fracture and a useful limb.

4. That similar treatment, if deferred for the first few weeks, will give a limp in the walk of the patient for its result.

My reason for bringing to your notice this subject is the continuance of the disastrous pillow treatment of hip-joint cases in elderly persons. Thousands of the aged live for years in misery for want of efficient treatment in cases of this description. I ask you to direct the attention of the Profession to the subject. I am, &c.

Frederick J. Brown, M.D., F.R.C.S.,
Consulting Surgeon to St. Bartholomew's Hospital
at Rochester.

Rochester, July 24.

ASSISTANT-SURGEONS FOR THE ROYAL NAVY.

[To the Editor of the Medical Times and Gazette.]

Sir,—The Admiralty warrant has appeared. The Medical officers view it with painful humiliation, and will not advise their brethren to give up a lifetime for the Navy. The warrant professes to put Naval Medical officers in Hospitals on allowances on the same footing with those of the Army Medical officers, which it does not do; and as for those serving afloat or on shore in the worst of climates, there is no allowance to rival Indian allowances. The remedy is simple, and it must come. The truth is too well known that, for twenty years of hard service, the Navy has no certain reward. Sir John Pakington has, for a trial, fathered the warrant, which is the offspring of his predecessors at the Board of Admiralty. Full pay and retirement at twenty years will be the inducement to enter the Navy.

Let Sir John Pakington remodel this warrant, and Medical men will be tempted to join the Navy. Four grades of full pay are proposed in all periods of service for assistant-surgeons, surgeons, deputy inspectors-general, inspectors-general, of 15s., 30s., 50s., 70s.; the half-pay to be half of the full pay at all periods of service—namely, 7s. 6d., 15s., 25s., 35s., and leave to surgeons to retire at twenty years' full-pay service on £1 per day.

Admiral Sir A. Milne's retirement is retained in full force. If Medical officers retire at twenty years' full-pay service, they give up about £100 a year half-pay; and, "as a special reward to officers of long and good service," . . . "officers of the rank of Staff-Surgeon who have served for twenty-five years on full pay to be allowed the half-pay of £1 per day on being compulsorily retired at sixty years of age, or on Medical survey."

Medical gentlemen are advised not to enter the Navy with the dreary prospects set forth in the Admiralty Circular of July 6, 1866, and signed "T. G. Baring." Competency and honour are not the rewards of Naval Medical officers.

I am, &c. P. P.

The Marquis of Westminster has, for the second time, presented £1000 to the British Home for Incurables.

MEDICAL NEWS.

University of London.—1866.—The following is a list of candidates who passed the recent Preliminary Scientific M.B. Examination:—

Pass Examination (Entire).

First Division.—Thomas Barlow, Owens College; Edgar George Barnes, St. George's and University; Ashley William Barrett, London Hospital; Evan Buchanan Baxter, King's College; George Birt, General Hospital, Birmingham; George Bradley, Guy's Hospital; Christopher William Calthrop, Charing-cross Hospital; John Curnow, King's College; Johannes De Liefde, Guy's Hospital; Frederic Durham, Guy's Hospital; William Smith Greenfield, University College; Charles Edward Hoar, King's College; Chas. Henry Joubert de la Ferté, St. Mary's Hospital; Richard Clement Lucas, Guy's Hospital; Arthur Fergusson McGill, King's College; Henry Newell Martin, University College; George Ridley Milles, King's College; George Henry Percival, Guy's Hospital; Frederick Pollard, St. Thomas's Hospital; Edward Cox Seaton, St. Thomas's Hospital; Alfred Shewen, University College; George Francis Kirby Smith, Guy's Hospital; Herbert Alder Smith, St. Bartholomew's Hospital; Edward Harry Steele, Royal School of Mines and Guy's Hospital; Charles Tanfield Vachell, King's College; Hugh Eccles Walker, Guy's Hospital; William Beach Whitmore, King's College.

Second Division.—Alfred Ashby, Guy's Hospital; Fletcher Beach, King's College; Hugh Walter Boddy, Owens College; Samuel Buckley, Owens College; Leonard Cane, Private study; Alfred John Henry Crespi, General Hospital, Birmingham; Alphonso Elkin Cumberbatch, St. Bartholomew's Hospital; John Henry Humphreys, Sydenham College, Birmingham; Wm. Louis King, University College; Frederick Marshall, King's College; Septimus Peché Moore, LL.B., New and University; Edmund Blackett Owen, St. Mary's Hospital; Rushton Parker, University College; Oliver Penfold, King's College; Frank Salter, University College; Richard Samuel, St. Bartholomew's Hospital; William Joseph Scott, University College; Richard Thomas Smith, University College; William Stanger, Guy's Hospital; John Taylor, Guy's Hospital; James Wardley, Owens College; Robert Arthur Henry Wood, Liverpool School of Medicine.

Chemistry and Botany only.

First Division.—Lewis James May, King's College; William Bezly Thorne, St. Bartholomew's Hospital; Isaac Burney Yeo, King's College.

Second Division.—Jabez Carter, University College; Richard Henry Milson, St. Mary's Hospital.

King and Queen's College of Physicians in Ireland.—Licences to practise Medicine were granted to the following gentlemen during the months of April, May, and June, 1866:—

William B. Peebles, B.A., M.B., Dublin; John B. Kelly, Drogheda; John O'Hanlon, Dublin; Robert F. Maunsell, Dublin; William Ireland Wheeler, Robertstown; Malachy J. Kilgarriff, Dublin; Patrick O'Neill, L.R.C.P. Edin., Castledermot; George C. Chesnaye, A.S.B.A., Allahabad; Francis Egan, R.N., H.M.S. *Cumberland*, Sheerness; Adam Clarke, Newtownbutler; Cornelius R. Enright, Rathkeale; Henry Dwyer, Dublin; William B. Auster, Dublin; J. Campbell, B.A., M.B., Dublin; William C. Roe, Army Medical Staff; Patrick T. Lyster, Athlone; Wm. P. O'Leary, Charleville; Chas. Payne Tomkins, Cork; Henry Nugent, Lismore; William James Martin, M.D. St. And., F.R.C.P. Edin.

The following gentlemen obtained the Midwifery Diploma during the same period:—

John B. Kelly; Edward J. Kelly, Elphin; Charles Fryer, Southport William I. Wheeler; M. J. Kilgarriff; Patrick O'Neill; Francis Egan; Adam Clarke; Henry Dwyer; Cornelius R. Enright; Patrick T. Lyster; Charles Payne Tomkins; Henry Nugent.

Royal College of Surgeons of England.—The following gentlemen having undergone the necessary Examinations for the Diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 26th inst., viz.:—

Messrs. Frederick William Young, Salisbury; Richard Matthews Pryce, L.S.A., Caersws, South Wales; John Waller, Tattingstone, near Ipswich; James Gurney Carruthers, Northampton; John Charles Chester, Redruth, Cornwall; Thomas Charles Marsh, Brixton, Surrey; Henry Shinglewood Taylor, Alton, Hants; Rowland Hill Coombs, Bedford; Henry Frederic Norris, Charmouth, Dorsetshire; Lyttleton Hallett, Bedford-place, Russell-square; William Harris, Carshalton, Surrey; Evan Williams, Llechylched, North Wales; Samuel Hignett Smith, L.S.A., Weaverham, Cheshire; John Henry Rumsey, Fulham; Joseph Moore, M.D., McGill College, Montreal, Canada; and Frederick Greaves Hayne, Northfleet, Kent.

At the same meeting of the Court, Mr. Thomas Roche, of the Royal Naval Hospital, Haslar, and Mr. William Shute Fisher, M.B. Dublin, of the Royal Marines' Infirmary, Woolwich, passed their Examinations for Naval Surgeons. These gentlemen had previously been admitted Members of the College, their diplomas bearing date respectively July 24, 1854, and June 12, 1857. It is stated that of the seventy-two candidates who presented themselves for examination fifteen failed to acquit themselves to the satisfaction of the Court, and were consequently referred back to their Hospital studies for six months.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to practise on Thursday, July 26, 1866:—

Rudolf Schuetté, Goettengen; Benjamin Dawson Beales, Queen's College, Birmingham; Charles James Connock, Mount-street, London; Thomas Michael Dolan, Cashel, Co. Tipperary; David Hawley Burn Anderson, Edinburgh; Frederick William Jackson, Broadstairs.

The following gentlemen also on the same day passed their First Examination:—

David King, King's College; John Guy, Guy's Hospital; Frederick Wallace, Guy's Hospital; William Wingate Saul, St. Bartholomew's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Coleman, A., M.R.C.S., L.D.S., has been appointed Lecturer on Dental Surgery at St. Bartholomew's Hospital.

Evans, T., M.D., has been appointed Assistant-House-Surgeon to the Royal Portsmouth Hospital.

Gibson, F. W., M.D., has been appointed Assistant Medical Officer to the Criminal Lunatic Asylum, Broadmoor, Berks.

Lowndes, F. W., M.R.C.S.E., has been appointed Resident Surgeon to the Birmingham and Midland Counties Lying-in Hospital and Dispensary for Diseases of Women and Children.

Mackenzie, Morell, M.D., has been appointed co-Lecturer on Physiology at the London Hospital.

Mackinlay, J. G., L.R.C.P.Lond., M.R.C.S.E., has been elected Medical Officer to the Brentford Union Infirmary.

Matterson, W., M.D., has been appointed Honorary Physician to the York County Hospital.

Parker, S. (Surgeon to the Sheffield Public Dispensary), has been appointed Surgeon to the Sheffield General Infirmary.

Shepherd, A. B., M.A., M.B., has been appointed Junior Assistant-Physician to the City of London Hospital for Diseases of the Chest.

BIRTHS.

Adams.—On July 10, at Green-street, near Sittingbourne, the wife of H. Adams, L.R.C.P., of a daughter.

Clapton.—On July 27, at 30, Queen-street, Cheapside, the wife of W Clapton, F.R.C.S., of a daughter.

Dudgeon.—On July 29, at 53, Montague-square, the wife of R. E. Dudgeon, M.D., of a daughter.

Franklyn.—On July 28, at Lenside, Maidstone, the wife of H. B. Franklyn, M.D. (Depôt Royal Horse Artillery), of a son.

Hayward.—On July 28, at 18, Harley-street, the wife of H. Howard Hayward, M.R.C.S., of a daughter.

Jepson.—On July 27, at Stone, near Dartford, the wife of O. Jepson, M.D., of a daughter.

Leadam.—On July 29, at Iver, the wife of W. W. Leadam, of a daughter.

Lichtenberg.—On August 1, at 47, Finsbury-square, the wife of G. Lichtenberg, M.D., of a daughter.

Mack.—On July 11, at St. Paul's-road, Islington, the wife of R. Mack, L.R.C S.I., of a son.

MacTier.—On July 21, at Falcon House, Blairgowrie, Perthshire, the wife of W. F. MacTier, M.D., Bengal Medical Service, of a son.

Wales.—On July 28, at Downham, the wife of T. Garneys Wales, jun., M.R.C.S., of a daughter.

Weber.—On July 30, at 49, Finsbury-square, the wife of Hermann Weber, M.D., of a daughter.

MARRIAGES.

Francis—Halliwell.—On August 1, at the Parish Church, Islington, A. O. Francis, M.R.C.S.E., of Derby, to Emily, youngest daughter of the late Joseph Halliwell, Esq., of Beverley.

Le Fanu—Moore.—On June 23, at Madras, Henry Le Fanu, Esq., B.A., of the Madras Civil Service, Scholar of Trinity College, Dublin, to Catherine Mary, daughter of W. D. Moore, M.D., of Dublin.

Reed—De Salignac.—On July 31, at St. George's, Hanover-square, F. G. Reed, M.D., of 46, Hertford-street, W., to Laura Ann, widow of the late M. de Salignac, of Cognac.

Walker—Atkinson.—On July 24, at Ilderton Church, Northumberland, R. Walker, M.D., of Wooler, to Jane, daughter of the late Christopher Atkinson, Esq., of Ewart.

DEATHS.

Cronin, D., M.D., at Crawford-villa, Spring-grove, on July 20, aged 59.

Hastings, Sir Charles, M.D., D.C.L., at Barnard's Green House, near Malvern, on July 31, in the 73rd year of his age.

Higgins, Charles, M.D. Edin. (Knight of the Legion of Honour), at 212, Rue de Rivoli, Paris, on July 27, in the 61st year of his age.

Langdon, J., M.R.C.S.E., of Chobham, on July 7, aged 38.

Skinner, G. W., M.R.C.S., at Mackenzie-crescent, Sheffield, on July 19, aged 25.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Bootle Union.—Mr. G. G. A. Sutcliffe has resigned the Muncaster District; area 45,200; population 1984; salary £20 per annum.

Isle of Wight Union.—Mr. J. E. Gibson has resigned the Cowes District; salary £70 per annum.

APPOINTMENTS.

Carmarthen Union.—Wm. Davies, M.R.C.S.E., to the Conwil District.

Cockermouth Union.—Mr. Henry Dodgson, M.D., University of Edin., L.R.C.S. Edin., L.S.A., to the Cockermouth District.

Horncastle Union.—John Hadden, M.D. Ire., L.R.C.P. Ire., L.S.A., to the Tetford District.

Newbury Union.—Mr. Frederic E. Ryott, M.R.C.S.E., L.S.A., to the Workhouse.

Sunderland Union.—Charles Nattrass, Graduate University of Aberdeen, M.R.C.S.E., L.S.A., Consulting Medical Officer to the Workhouse. Charles N. Foote, Graduate University of St. Andrews, M.R.C.S.E., L.S.A., Medical officer at the Workhouse.

Cholera.—The Registrar-General's Account.—The deaths registered in London during the week were 2600. It was the thirtieth week of the year, and the average number of deaths for that week is, with a correction for increase of population, 1387. The deaths in the present return exceed by 1213 the estimated number. The excess of deaths is caused entirely by cholera and diarrhœa. 904 deaths by cholera, 349 by diarrhœa, were registered in the week, making in the aggregate 1253 deaths. The deaths by cholera in the last five weeks have been 6, 14, 32, 346, and 904; by its allied disease diarrhœa 67, 102, 150, 221, and 349. The epidemic takes the form of diarrhœa chiefly in young children; thus 309 of the 349 deaths from diarrhœa last week were children under 5 years of age, including 244 infants. Of cholera 179 children of the same age died; 160 boys and girls of 5 and under 20 years of age; 455 men and women in the prime of life; and 110 people of ages above 60. It is a peculiarity of the case that the greater part of this slaughter in seven days of 1253 people of all ages took place within a limited portion of the London area. 924 of the deaths—811 by cholera and 113 by diarrhœa—were registered in the six districts of Bethnal-green, Whitechapel, St. George-in-the-East, Stepney, Mile-end Old Town, and Poplar, including Bow, among about a seventh part of the population of London and on one-fourteenth of its area. The attack extends all along the north side of the Thames, from the River Lea and the Isle of Dogs to the Tower of London. Limehouse Basin and the Regent's Canal are the central line of the attack, which stretches as far north as Victoria-park. This is essentially the port of London, inhabited by its maritime population. The canals and the basin are full of foul water, and are apparently connected with the Limehouse-cut, the Hackney-cut, and the River Lea. The East London Waterworks canal draws its supply from the river at Lea Bridge, where there is a reservoir, and runs for a couple of miles by the side of the Hackney-cut down to its other reservoirs north of Bow and near the Lea. The present cholera field derives its waters from these works. It is right to add, that the water has hitherto borne a comparison with the other London waters in Dr. Frankland's analyses. To-day at Poplar the water looks clear, and no complaints are made of its quality. The company will, no doubt, take exemplary pains to filter its waters; but it is not easy to guarantee the purity of water drawn from such a river as the Lea, in dangerous proximity to sewers, cuts, and canals. Whoever will take the trouble to go among the people now suffering in crowded dwellings will see the danger of the water-butt; poor women are washing the dirty linen of patients with water drawn from those vessels, which are often found close to the water-closets. It would be a source of additional safety to London if the tanks and butts were all abolished, and the pipes were filled on the system of constant supply. The time has come for this reform. The mortality is overwhelming in some of the districts. In Poplar alone 145, in Bow 188 people died last week, including Dr. Ansell, the meritorious health officer, and Mr. Ceeley, clerk to the Board of Works, whose name figures on the placards. The people are falling ill every hour; you see them of all ages, children and adults, lying about their beds like people under the influence of a deadly poison, some acutely suffering, nearly all conscious of their fate and of all that is going on around them. Here the doctor is drawn in by the husband to see the wife now attacked; there the husband lies in spasms; here is an old woman seated dead, with eyes wide open; there lies a fine four-year old child, his curly head drooping in death, but his mother says the pulse is strong, and he takes what she gives him. An older brother just recovered is running about. Several wards of the London Hospital are full of patients, many of them very young children in all stages of the disease; some dying, some well again and playing. The Medical men have no rest, and with the Health Officers are nobly doing their duty; brave men ready to lay down their lives for their patients. The people themselves are most patient; most willing to help each other, the women always in front, and none shirking danger.

There is no desertion of children, husbands, wives, fathers, or mothers from fear. In the midst of this scene the authorities have been to some extent paralysed. The nuisance inspectors are not sufficiently numerous, neither are the Medical Officers. The administrative work has not been organised with sufficient promptitude, and is not carried out with sufficient energy. Such a calamity as this may well call forth the whole resources of London, and what is especially wanted is executive power well organised in conjunction with the Medical Health Officers. The people of East London want help.

Cholera on the River Thames.—Eighteen cases of cholera have up to this date been received on board the *Belle-isle* Hospital ship, of which six have terminated fatally. Many cases have occurred in and about the Commercial Dock, Greenwich Reach, and off Millwall. Women and children living in sailing-barges and other small craft have no Hospital near at hand, and are, of course, totally destitute of good nursing or any kind of preventive inspection. The floating population is, in fact, left entirely to itself, and will probably continue to propagate the disease until an astounding bill of mortality rouses the Thames Conservancy Board to action in the matter. It is utterly absurd to suppose that the Health Officers of the districts through which the river flows can do water as well as land duty at this present time. The Thames should, of course, be well and thoroughly visited day by day by a Health Officer specially appointed for this purpose, and the work, if done well, would be by no means light.

Cholera in the West of England.—Cholera has carried off four victims at Sherborne. The disease made its appearance in a filthy locality, known as Cold Harbour, inhabited by very poor people, where the drainage is bad, and where the water supply is miserable. The first person attacked had lately come from Southampton. Two cases are also reported from Appledore, in Devon.

Cholera in Dublin. — The *Dublin Medical Press* informs us that three cases of cholera have occurred in a house in City-quay, and that two have proved fatal in fifteen hours. The disease was brought from Liverpool. The first patient, a young girl of 15, was attacked with diarrhœal symptoms on her way from the latter place to Dublin, and died the day after her arrival there. The niece of the deceased, 3 years old, was seized with symptoms of cholera two days subsequently, early in the morning, and died the same day. The father of this child early the next morning was next attacked, and up to the latest accounts was dangerously ill.

Cholera in France.—The correspondent of the *Times*, July 28, writes :—"The following is a correct statement of the deaths at Marseilles from ordinary causes or from cholera from the 15th to the 22nd of July, both days inclusive :—

		Cholera.	Ordinary.	Total.
Sunday,	July 15	3	20	23
Monday,	,, 16	4	26	30
Tuesday,	,, 17	22	34	56
Wednesday,	,, 18	27	29	56
Thursday,	,, 19	28	30	58
Friday,	,, 20	19	25	44
Saturday,	,, 21	18	32	50
Sunday,	,, 22	14	23	37
Total		135	219	354

In this mortality during eight days are to be counted 171 children of tender age. Of the 135 deaths from cholera, 15 occurred in the Hospitals; those of children were 35, giving for the adult population in private houses 85. On comparing the returns of deaths at Marseilles for the three years preceding, and during the same period of eight days, viz. from the 15th to the 22nd of July, there were in 1863, 296 deaths; in 1864, 264 deaths; in 1865, 253 deaths; or an average of 271 deaths, showing an excess in 1866 of 85, which divided by 8 gives an excess of 10 daily. In 1863, when the deaths from all causes were 296, the Marseilles population was less by 30,000 than it now is, so that there were but 40 less than in 1866. From Amiens the number of deaths from cholera on Tuesday is stated to be 22, and among them Dr. James, secretary and professor at the School of Medicine, and a member of the Sanitary Council of the place."

Cholera Bulletins.—The latest accounts we have seen of the deaths from cholera only come down to July 24, since which date the authorities have absolutely prohibited all returns, even to the Medical journals. According to these, which there is every reason to believe are still below the reality, from the 17th to the 24th there had occurred 679 deaths. Doubtless the French Government fears frightening away the crowd of visitors which at this season fills Paris, and which this year, on account of the state of Germany, is larger than usual. We certainly think that this is scarcely a favourable time to choose for visiting that city. At Marseilles there are said to occur from fifteen to twenty deaths from cholera per diem, while those met with at Amiens have again diminished to twenty-two a day. Many localities in the Département du Nord have been attacked. In Belgium, the epidemic still makes considerable progress, affecting not only the populations of large towns, but those of small localities. At Brussels the disease, which at first seemed disposed to remain stationary, has increased. The number of cases from July 4 to 18 at the two Hospitals St. Pierre and St. Jean amounted to 224 cases, with 107 deaths, besides between one and two hundred bodies brought to the *morgue* of the Hospitals, derived, we suppose, from civil practice. Of this last we have seen no particulars. The disease is still rife in Berlin (as well as in many other places in North Germany), though on the decrease, the number of cases having diminished from 200 to 139 daily. The whole number from the beginning of the epidemic to July 28 was 4401 cases, of which 2338 died, 523 recovered, and 1540 remained under treatment.

The Broad-street Pump.—Professor Miller of King's College, and Professor Frankland of the Royal College of Chemistry, have written a letter to the *Times* calling attention to the danger of drinking the water obtained from the various pumps in London, and particularly from that in Broad-street. Of the latter they say :—"One of us examined it as lately as July, 1865, and found it to be little else than filtered sewage, notwithstanding its brightness and freedom from offensive smell and taste. We have no hesitation in saying that the use of this and other similar pumps in the metropolis, supplied as they are by surface and sewer drainage, is at the present juncture fraught with extreme peril to the community. It is well known that the pump in Broad-street was, in the cholera visitation in 1854, the centre of a terrible outburst of the disease; while an isolated fatal case in Hampstead was clearly connected with the use of Broad-street pump water. During the autumn of last year a startling outbreak of cholera occurred on the borders of Epping Forest, to which attention has again recently been called in the daily papers. The disease appears to have been brought to the spot by a member of a family who had been travelling in the west of England, and in this case it rapidly attacked other members of the household with great severity. All these persons used water from a particular pump, and it was ascertained by one of us, from the chemical analysis of the water, that it was largely contaminated with drainage from the water-closet. Independently of this analysis, a leak from the closet into the well was discovered by the Medical officer sent down to examine and report upon the case."

Dr. Sieveking, Physician to H.R.H. the Prince of Wales, has accepted the office of Treasurer to the Medical Benevolent Fund, vacant by the death of the late Joseph Toynbee, Esq., F.R.S.

The College Library and Museum.—Both the Hunterian Museum and Library of the College of Surgeons will be closed during the ensuing month of September.

The River Lea.—The filthy state of the River Lea is believed to be one great cause of the cholera making such rapid progress in Bromley and Bow.

Staffordshire Infirmary.—The subscriptions towards the erection of a new Infirmary for North Staffordshire have nearly reached £15,000.

New Hospital.—In aid of a final effort to complete the Hospital for the Paralysed and Epileptic in Queen's-square, Bloomsbury, for which £600 is required, Mrs. La Roche has offered £100, provided fifty other contributors will give £10 each before the end of October next.

The Cattle Plague in South America.—A letter from Panama states that hundreds of cattle are dying daily along the route of the Aspinwall Railway. From New Granada to Peru and Chili the epidemic may speedily communicate itself to the Pampas unless guarded against in time.

The New York Board of Health report that the mean temperature for the last week in June, night and day, was nearly 78°. The thermometer reached 94°. The returns made to the Board showed twelve sudden deaths in the city from sunstroke, and twelve from congestion of the brain and effects of heat.

Epsom College.—Founders' Day.—The usual anniversary festival was held at the School of the Epsom College on Thursday, July 18. After service in the chapel, the prizes were distributed to the successful scholars. Earl Manvers occupied the chair, but having to leave before the close of the proceedings, his place was well supplied by Sir Charles Locock. Amongst the speakers were the Rev. Dr. Hessey, Archdeacon Utterton, Mr. Propert, Dr. Carr, Dr. Newnham, and Mr. Jonson.

Death of M. Jules-François James.—The Medical staff of Amiens, which has already suffered so severely, has given another victim to the epidemic which rages there. M. Jules-François James, Chevalier of the Legion of Honour, Secretary and joint-Professor at the School of Medicine, Member of the Council of Hygiene and Public Health, Surgeon-Major of the 2nd Battalion of the National Guard of Amiens, etc., succumbed last Tuesday to an attack of the terrible scourge which desolates that city. Like his two *confrères* so regretted, MM. Léger and Thuillier, he died in the devoted performance of his noble and at the same time, alas! dangerous mission.—*L'Union Médicale.*

Consumption Hospital, Brompton.—According to the report of the Medical Committee, the effect of the climate of Madeira upon the twenty patients who were sent out by this charity in November last to winter in that island may be briefly summed up as follows:—Five of the invalids left England in the first stage of the disease, four in the second, and eleven in the third stage. As regards their general health, two out of the twenty returned much improved, seven were slightly improved, four were not so well, and one died suddenly in Madeira from rupture of a blood-vessel (in April), though he had done well up to a certain point. In two cases the chest symptoms improved, in twelve they remained stationary, and in five they appeared to have advanced. Four patients increased in weight during their absence, thirteen lost weight, and two experienced no change in this respect. The committee of management do not consider that the result of the patients' residence in Madeira is sufficiently encouraging to justify them at present in repeating the experiment.

Hospital Nursing.—The Governors of the Middlesex Hospital have rejected the proposition of accepting the services of a lady to supervise the nursing of the Hospital, and have determined to employ "a resident paid superintendent." In the course of the debate to which the question gave rise, Mr. Hulke, in recommending the system of nursing by trained ladies, said:—"But, perhaps, the experience just obtained in the London Hospital afforded the most striking illustration of the influence of a lady's example on ordinary nurses. There the cholera at first almost scared the nurses away, but the courage of a young lady who volunteered to act had recalled them to a sense of their duty, and all fear had since vanished." The imputation of neglecting duty thus thrown on the regular nursing staff of the London Hospital has been indignantly repudiated in a letter to the *Times* by Messrs. Fowell Buxton and Andrew Johnston, members of the House Committee. They write:—"While feeling the deepest gratitude to the ladies who have devoted their services to the Hospital for some weeks both previously to and since the breaking out of cholera, we cannot allow such a statement in reference to the regular staff to pass unnoticed. We feel bound to take this opportunity of denying the charge thus brought against them, and to inform all who have noticed the statement that, in the midst of excessive and harrowing labours and some danger, they have shown a devotion and a courage that are beyond all praise."

M. Broca's Election into the Académie de Médecine.—This took place at the last meeting of the Academy. A more proper admission could scarcely have been made, and the only wonder is that M. Broca had not been chosen long since. But it is a little puzzling to those outside the Academy to learn that he has been elected into the section of Operative Surgery. We all know his merits as a learned anthropologist and pathologist, but as an operating Surgeon we suspect his laurels are yet to win. Nevertheless, he was chosen by the votes of thirty-six of the sixty-two members present, notwithstanding he had as competitors such accomplished Surgeons as MM. Demarquay, Legouest, Follin, and Alphonse Guérin.

A large Hospital for the treatment of infectious diseases is about to be erected in Liverpool; £8000 has been subscribed, and the Town Council have made a grant of £5000 towards the cost.

Medical Agents for Railway Companies.—Cooper *v.* London and North-Western Railway Company.—This was an action tried at Stafford, on July 27, before Mr. Justice Keating and a special jury, to recover compensation for injuries received by the plaintiff when a passenger on the defendants' line of railway by reason of the negligence of their servants. The defendants pleaded payment and acceptance of £20 in satisfaction of the claim. The plaintiff, a Miss Anna Maria Hooper, was a passenger by a train of the defendants from Birmingham to Warwick on September 29 last. At Coventry a truck and a guard's van had been left on the line, and the train ran into it. The plaintiff received some injuries to her face, and was taken to the Craven Arms at Coventry. Dr. Hughes was called in and attended her, and subsequently gave her £20 from the Company, for which she signed a receipt. The question for the jury was whether this was final, as she now claimed further compensation for injuries since discovered, and for the loss of a watch. His Lordship summed up, and animadverted upon the practice of Medical gentlemen called in to attend persons suffering from injuries attempting to settle the compensation with the patient. The jury found a verdict for the plaintiff, with damages £100, to include the £20 already paid, and expressed their concurrence in the remarks made in disapprobation of the practice above alluded to.

Owl's-light.—A grant of money has been made by the Treasury to the Department of Health for the purpose of conducting a special series of experiments and researches in connexion with the present outbreak of cholera. Mr. Simon will conduct the inquiry.—*The Owl.*

Official regulations for district boards and vestries of London and the rest of the country, in view of the prevalence of cholera, have been issued by the Privy Council under the powers given by Victoria 18 and 19, chap. 120. Every vestry or board is forthwith to hold a special meeting, and take such steps as will ensure any outbreak of cholera being brought to their notice if it should occur; making also at once such preliminary arrangements as will enable them, if sudden need shall arise, to carry the regulations into immediate effect when cholera is in a parish or district:—

Every vestry or board shall make arrangements for meeting daily, and the Medical Officer of Health is to attend the meetings. Parishes in which cholera is present are to be subdivided if necessary, and a legally qualified Medical Practitioner put in charge of each subdivision, with such assistants as the vestry see fit. Such Medical visitor, or one of his assistants, is at least once daily to "visit those places assigned to him which are inhabited by the poorer classes and wherein the disease is, and there inquire at every house as to the existence of diarrhœa or cholera, and enter in a book to be kept for the purpose the facts as to all cases he may meet with." The Medical visitor is to report daily to the Medical Officer of Health the result of his own and his assistants' inquiries, and also report any nuisances which he or they may find existing. The visitors are empowered to communicate to the relieving officer of the district any case of destitution requiring relief which is not entered in his relief list; and such officer is forthwith to visit the case and give relief. The vestry must provide a sufficient number of Dispensaries, to be open night and day, with an adequate supply of medicines, Medical appliances, and disinfectants, and a legally qualified Medical Practitioner or skilled assistant always in attendance at each; and such medicines, Medical appliances, and disinfectants are to be dispensed without charge to all persons bringing orders for the same from the Medical visitors, and to other persons who apply for immediate Medical treatment. The vestry is to provide competent nurses to aid every Medical visitor in his attendance upon the patients. When the Medical Officer of Health recommends, the vestry or board are to provide accommodation "for the reception of such patients as have no home or cannot properly be treated at home, and may with advantage to themselves be removed." If cholera or choleraic diarrhœa exist in any dwelling whereof the Medical Officer of Health reports that the sick and healthy cannot therein be properly separated, the vestry or board are forthwith to cause adequate accommodation to be procured for the reception of the healthy; "and when the Medical Officer of Health recommends that the sick person shall not be removed, but that the healthy shall be removed from the same room in which the sick person is lying, the vestry or board shall cause the other inmates of such room to be removed to some convenient place of reception." The vestry is to cause disinfectants to be used in sufficient quantities for the purpose of disinfecting bedding, clothing, etc., and is to cause every article incapable of being speedily disinfected to be destroyed, paying the reasonable value to the owner. If the drinking water is polluted, the vestry is to take measures for procuring wholesome water to be supplied in its stead: and every vestry or board owning waterworks is to cause the apparatus to be carefully examined, cleansed, and purified. The vestry or board is to make arrangements with undertakers, so that coffins may be ready, to be supplied immediately on demand, and is to cause the corpses to be buried with the earliest possible despatch. Where any death shall occur from cholera or choleraic diarrhœa, no collection of persons is to assemble in the room where the corpse is, and no "waking" of the dead is to be allowed. The vestry is to cause the immediate removal from any room which living persons inhabit, of the corpse of every person dying from cholera or choleraic diarrhœa. A ship is to be subject to inspection "in like manner as if it were an inhabited house on shore." The clerk of the vestry is every Monday to send by post to the Medical Officer of the Privy Council a return of the number of new cases of diarrhœa or cholera which have during the week ended on Saturday midnight last come under the cognisance of the vestry, and of the number of recoveries and the number of deaths, with such other particulars as such Medical Officer shall from time to time require.

QUEKETT MICROSCOPICAL SOCIETY. — The annual meeting of this Society was held in the library of University College on Friday last, Dr. Lankester, F.R.S., in the chair. The Society has been established just one year, and now numbers no less than 153 members. The Report of the treasurer gave a balance in hand of over £13; that of the committee showed that every facility had been given for the discussion of all suggestions that might tend to further the objects of the Society. In consequence of the increasing attendance of members, it became necessary some little time since to seek for a locality which would give more space, and the Council of University College most kindly placed their library at the disposal of the Society. It has been proposed to form a museum for the collection of natural history specimens; a cabinet had already been provided for the reception of the microscopical slides which had been kindly given from time to time by different members. The sub-committee formed to investigate the structure and characters of vegetable fibres had met frequently, and were still prosecuting their observations. Field excursions had been organised with much success. The committee had to regret the loss of their President elect, Joseph Toynbee, F.R.S., who had always taken a most active interest in the Society. The papers read during the session included a variety of topics of much general interest zoologically, botanically, and Medically. The President reviewed the doings of the Society for the past year, remarking especially that a vast supply of facts were at hand under our very eyes, but remained undiscovered simply on account of imperfect observation. The thanks of the meeting were then given to those who had held office during the last year, and the following were elected officers for the ensuing year:—*President*—E. Hart, Esq. *Vice-Presidents*—Mr. Durham, F.L.S.; Dr. Tilbury Fox, M.R.C.P.; Mr. Hislop, F.R.A.S.; Mr. Lord, F.Z.S. *Treasurer*—Mr. Hardwicke, F.L.S. *Secretary*—Mr. Bywater. *Committee*—The retiring members are Messrs. Hislop, Cresy, Jackson, and Captain Reid, in whose stead Messrs. P. Neve Foster, M.A., Breese, Hailes, and Smith were proposed and elected. The meetings of the Quekett Club, with the *conversazioni* with which they terminate (always very fully attended), afford an opportunity of discussing and examining the points of microscopic interest in the more common objects in natural history; their character is perhaps colloquial rather than critical, and they are equally adapted for the amateur and the *savant*.

THE mortality returns of England just issued for the year 1864 show that in that year 28 of the men who died and 70 of the women had reached 100 years of age or upwards, one woman dying at 108 and one man at 109. Of these 98 very aged people, London had 12.

THE following are the last week's Cattle Plague Returns.

Census Divisions.	1. Attacked.			Back cases reported in the week ended July 21, 1866.	2. Result of reported Cases from the Commencement of the disease.				
	Week ended July 7.	Week ended July 14.	Week ended July 21		Attacked.	Killed.	Died.	Recovered.	Unaccounted for.
Metropolitan Dist.	5	1	..	..	7909	3427	3714	318	450
South Eastern Co.	1	..	..	..	4880	1705	2539	465	171
South Midland Co.	58	25	17	..	20749	8752	10069	1541	387
Eastern Counties	12	19	26	..	11471	5432	4851	789	399
South Western Co.	..	17	32	..	1807	703	826	207	71
West Midland Co.	67	31	31	..	14853	6334	6095	1519	985
North Midland Co.	27	38	18	..	18989	10949	6270	1224	546
North Western Co.	123	144	61	3	71977	24961	35029	8468	3519
Yorkshire	14	20	10	..	34581	7925	18357	5937	2362
Northern Counties.	..	..	..	..	8636	4931	2613	974	118
Monmouthshire & Wales	5	7	11	..	8372	1174	5793	1102	303
Scotland	1	2	1	..	46861	6263	28088	10707	1803
Totals	313	304	207	3	251085	82556	124244	33251	11034

The Return shows that 207 attacks were reported to have occurred during the week ended July 21, being a decrease of 97 on the previous week.

Correcting the total by adding an estimated average of attacks commencing during the week, but which may be subsequently included under the heading "Back Cases," the number for the week will be 233.

Note.—3 Inspectors, who reported cases last week, have not reported in time for this return, viz., for the county of Buckingham 2, and for Lincoln 1. These Inspectors reported 8 cases last week.

UNCOVERED CHILDREN AT NIGHT.—Dr. Küttner, of Dresden, observes that when parents complain to him that they cannot keep their children covered at night, these urchins persisting in kicking off the bedclothes, he always recommends them to let them go uncovered. When these children are healthy and robust, as they possess great power of generating heat, we may always leave the matter of bed-covering to their own instincts, and we shall find that when they thus disembarrass themselves of needless clothing they do not take cold, while they sweat much less and sleep more profoundly than when too much covered up. In the case of weak, ill-nourished children, where power of generating heat is defective, we do not find that this disposition to lie uncovered exists, as they are well content to be warmly covered up. Even in sick children the same procedure is advisable, when abnormal heat is present, as in scarlatina, variola, etc., etc.; and it is much to be regretted that so many Practitioners sanction the keeping of the rooms and bed-coverings of such patients too hot. By such procedure a mild fever may easily be converted into one of dangerous violence.—*Journal für Kinder.* Mars.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. Ley, South Molton.—Thanks.

Mr. and Mrs. German Reed and Mr. John Parry are thanked. We can assure them that whenever we have a patient whose liver will not act, we always prescribe a ticket for the Royal Gallery of Illustration.

The lectures on Registration of Vaccination by Dr. S. Gibbon and Mr. R. Griffin are unavoidably postponed.

THE ARMSTRONG FUND.

The Treasurer has requested us to publish the following statements:—

Amount of subscriptions received from 223 contributors : .. £109 0s. 6d.

	£	s.	d.
Cash paid to defendant's solicitors	85	3	8
Advertisements, printing, stamps, and stationery	12	12	10
Dinner presented by the Committee to four guests	4	4	0
	102	0	6
Surplus ..	7	0	0
	109	0	6

The surplus has been paid (by vote of the Committee) to the funds of the Gravesend Infirmary and Dispensary.

6, Hinde-street, Manchester-square, July, 1866.

THOMAS HUNT,
Hon. Treasurer and Secretary.

JUNIOR F.R.S.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I possess a portrait of Robert Mylne (the architect), at the age of 24, on which it is stated that he was F.R.S at that age. He may have been a Fellow of that learned body before that age. Can any of your correspondents inform me whether any Medical man has been F.R.S. thus early?

I am, &c.

33, Mornington-road, N.W., July 27.

H. S. MAYSMOR, M.D.

TREATMENT OF CHOLERA.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Whatever the remote causes of cholera may be, there can be no question that its proximate cause consists in the presence in the blood of a specific poison, the effect of which is to weaken its affinity for oxygen, and which operates most powerfully in deranging the contractility of the muscular, and depressing the power of the nervous, systems, and whose natural exit appears to be through the lining membrane of the alimentary canal. Such being the case, does it not, in the treatment of this disease, point out a series of remedial measures which have not hitherto received that amount of prominence to which, I think, their applicability entitles them?—viz., 1st. The inhalation of oxygen, or other gases which may be supposed to possess antidotal properties. 2nd. The exhibition of those medicines whose action is especially exerted upon the contractility of the system—strychnia, nux vomica, etc 3rd The application of galvanism; and lastly, the elimination of the poison through the bowels by saline aperients.

I have had no opportunity of experiencing the efficacy of this plan, never having been called upon to treat a case of Asiatic cholera; but I trust that my remarks may be considered to possess sufficient weight to recommend them to the notice of those who are at the present moment engaged in the treatment of this inexplicable malady.

I am, &c.

July 26.

O.

MR. DIXON AND HIS REVIEWER.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Will you allow me space for a few words of explanation concerning a passage in the current number of the *British and Foreign Medico-Chirurgical Review?* I am not about to criticise my critic (usually a very profitless undertaking), nor do I seek to make one journal a medium for complaints against another. In fact, I have no complaint to make; nor, indeed, should I have troubled you at all on the present occasion, were it not that, inasmuch as the *British and Foreign Medico-Chirurgical Review* is published only once a quarter, any explanation addressed to that journal would not appear until nearly three months hence, and I am unwilling to remain so long a time under the imputation of having acted in an uncandid and disingenuous manner.

In a critique on the third edition of my "Guide to the Study of Diseases of the Eye," the writer draws attention to the fact that, whereas in a former edition I had expressed a decided opinion against the use of atropine in the acute stage of iritis, I now suppress the passage and pass over this important subject in silence.

My remarks on the use of atropine in acute iritis were published in 1859; subsequent experience led me to modify my opinion, and in an article in "Holmes's System of Surgery" (1861) I inserted a paragraph on the use of atropine, in which I explained my reasons for writing as I had formerly done, and avowed the change that, to a certain extent, had taken place in my views.

When preparing my third edition (1866) for the press, I struck out the whole paragraph relating to the use of atropine, and sketched out a new one embodying the results of my later experience. By mere oversight and carelessness this rough note was not copied into the MS. which I sent to the printer, and it was not until some time after the work had been printed off that I discovered my act of negligence.

Of course the author of the critique in the *British and Foreign Medico-Chirurgical Review* could only speak of my book as he found it; and, observing that the passage against the use of atropine in the acute stage of iritis had been suppressed in the third edition, without any corresponding passage having been substituted, or any reason assigned for the omission, he naturally concluded that I had intentionally evaded the question in a manner which, as he expressed it, was "very remarkable" and "not praiseworthy." I am, &c.

Portman-square, July 27. JAMES DIXON.

CASE OF MONSTROSITY WITH TWIN BIRTH.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—If you deem the following case worthy of a place in your valuable journal, and of interest to its readers, I will feel obliged for its insertion.

On the 5th inst., at 10 p.m., I was called to a case of midwifery, and found the os uteri well dilated and the head of the child low down. Pains strong and regular, and thus continued till 2 o'clock next morning; but as the uterine contractions were not so good as I wished, I gave some ergot, which acted well so far. At 4 a.m., finding the head make no progress, and the patient, as she called it, being "worn-out," I applied the forceps and delivered a living child. When about to extract the placenta, I found the funis detached and the placenta adherent to the uterus. Much hæmorrhage, syncope, and all the horrors of such cases. I then introduced my hand, and detached and removed the placenta as far as I could. Owing to the extreme prostration of the patient, I gave up the manipulation, leaving, as I believed, a portion behind, as I could feel a something, and hoped it would slough away. All went on well until 12 o'clock the next night, when two very severe rigors came on, and something (a blighted ovum) passed by the vagina, which presented the following strange appearance:—It was very offensive in odour, 4 inches long, 3 inches thick, and 3 inches wide; nodulated surfaces; shaped like the head of a dog, with depressions corresponding with the eyes and nostrils, and a fissure like a mouth, with the tongue suspended from it. I slit it up, and found a large cyst. The mother of the patient told me that the patient had been frightened by a dog in the early part of the pregnancy. With the exception of great debility, the patient (aged 31 years) made a good recovery. The infant (her first) has lived.

I am, &c.,
JOSEPH HAZARD, M.R.C.S.Eng., L.S.A.Eng.

Litcham, Norfolk, July 30.

BOOKS RECEIVED—

The Curriculum of Modern Education, by Joseph Payne—Bulletin de l'Académie Royale de Médecine, Bruxelles—Drysdale, on Cholera—The Richmond Medical Journal, May and June—The Philadelphia Medical Reporter.

COMMUNICATIONS have been received from—

R. GRIFFIN, Esq.; Dr. H. S. MAYSMOR; Dr. J. BROWN; "O;" F. C. SKEY, Esq.; JAMES DIXON, Esq.; APOTHECARIES' HALL; Dr. BLANDFORD; R. LAWSON TAIT, Esq.; HARRY LEACH, Esq.; R. LEY, Esq.; J. PROPERT, Esq.; T. HUNT, Esq.; Dr. J. MARSTON; Dr. LIONEL BEALE; Mr. E. BELLAMY; Dr. BENCE JONES; Dr. F. J. BROWN; Dr GREENHOW; Dr. G. H. BARLOW; Dr. B. W. RICHARDSON; Dr. HUGHLINGS JACKSON; Mr. J. CHATTO.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 28, 1866.

BIRTHS.

Births of Boys, 1016; Girls, 973; Total, 1989.
Average of 10 corresponding weeks, 1856-65, ...

DEATHS.

	Males.	Females.	Total.
Deaths during the week	..	..	2600
Average of the ten years 1856-65	..	..	..
Average corrected to increased population ..	..	..	1387
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	4	8	4	2	4	4	48	12
North ..	618,210	3	4	8	4	9	14	78	20
Central	378,058	2	6	5	1	5	7	44	15
East ..	571,158	12	21	4	1	7	18	123	818
South ..	773,175	8	14	9	4	14	4	56	39
Total ..	2,803,989	29	53	30	12	39	47	349	904

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·842 in.
Mean temperature	59·3
Highest point of thermometer	74·4
Lowest point of thermometer	46·5
Mean dew-point temperature	52·3
General direction of wind	Variable.
Whole amount of rain in the week	0·09

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 28, 1866, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending July 28.	Deaths.		Temperature of Air (Fahr.)			Rain Fall.	
				Corrected Average Weekly Number.*	Registered during the week ending July 28.	Highest during the Week.	Lowest during the Week.	Weekly Mean of the Mean Daily Values.	In Inches.	In Tons per Acre.
London (Metropolis)	3067536	39·3	1965	1400	2600	74·4	46·5	59·3	0·09	9
Bristol (City) .	163680	34·9	99	73	‡67	74·5	49·3	60·2	0·16	16
Birmingham (Boro')	335798	42·9	256	163	124	72·3	48·0	58·7	0·13	13
Liverpool (Borough)	484337	94·8	380	281	440	71·2	54·1	62·4	0·34	34
Manchester (City) .	358855	80·0	238	203	‡262	79·3	48·5	58·1	2·23	225
Salford (Borough) .	112904	21·8	67	57	58	77·4	47·4	57·2	2·42	244
Sheffield (Borough) .	218257	9·6	173	115	112	71·6	50·0	56·4	2·38	240
Leeds (Borough) .	228187	10·6	156	116	144	75·5	37·0	56·7	2·31	233
Hull (Borough) .	105233	29·5	88	49	50	..	..	..	..	..
Nwcastl-on-Tyne, do.	122277	22·9	86	65	78	63·0	50·0	56·5	0·06	6
Edinburgh (City) .	175128	39·6	130	84	81	72·7	51·0	57·6	0·10	10
Glasgow (City) . .	432265	85·4	325	252	218	75·9	49·6	58·1	1·86	188
Dublin (City and some suburbs) .	318437	32·7	184	†156	122	77·1	45·0	63·3	0·21	21
Total of 13 large Towns . . .	6122891	34·4	4147	3014	4356	79·3	37·0	58·7	1·02	103
	(1863)				Week ending July 14.	Week ending July 14.				
Vienna (City) . .	560000	..	..	..	332	..	..	§ 67·8	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·842 in. The barometrical reading decreased from 30·09 in. on Wednesday to 29·48 in. by the end of the week.

The general direction of the wind was variable

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* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 68·2°.

APPOINTMENTS FOR THE WEEK.

August 4. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p.m.

6. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

7. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

8. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St Thomas's, 1½ p.m.

9. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

10. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

ORIGINAL LECTURES.

NOTES OF LECTURES ON INSANITY.

DELIVERED AT
St. George's Hospital,
By GEORGE FIELDING BLANDFORD, M.B. Oxon.

Lecture III.—Causes of Insanity—Insanity of Early Life.

Gentlemen,—The ancients used to vex their souls with metaphysical disquisitions upon the nature of causes. Everything, said they, must have a material, a formal, an efficient, and a final cause. Philosophers now-a-days have given up the first three, though they still cling fondly to the last. In Medicine you hear of "predisposing" and "exciting" causes; in books upon insanity they appear as "moral" and "physical." Now, it must be clearly borne in mind, that the cause of any given case of insanity is the assemblage of all the conditions which precede and contribute to it, whether they be *events* or *states.* We may talk of causes, or conditions, or antecedent states, or actual causal events, but it rarely happens that a case depends on one single state or event; almost invariably there is a concurrence of several, which concurrence or assemblage constitutes the cause. You will understand how little *events* have to do with the production of insanity when I enumerate among the most important causes that *state* which is termed hereditary predisposition, and such states as age, sex, and civilisation. Of these I will speak first.

Hereditary predisposition is pre-eminently the cause or state which of itself, without other event, may produce insanity. The whole question of heredity is no less intricate than interesting. When we speak of a man inheriting this disorder, we do not always imply that one or other of his parents were at some period of their lives undoubted lunatics. The evil is wider than this. As the children of an insane parent may exhibit some insanity, others deficient intellect, others epilepsy, or chorea, or great nervousness, so insanity may be derived from those who have been affected by these latter disorders, but have never been insane. Drunkenness even in a genius may lead to insanity and idiocy in the next generation. In the third, one portion of the offspring may degenerate into dementia and sterile idiocy and die out, while others, by dint of healthier germs inherited from other ancestors, may throw off the taint and regain vigour; for it is curious how certain children will escape and show no trace of insanity or nervous disorder, while others born of the same parents, and apparently under similar conditions, fall victims. The circumstances and conditions are no doubt dissimilar, but it is difficult to say in what they differ. The age of the parents, however, must vary; their state, mental and bodily, at the time of conception, the mother's state during gestation, must be different in the case of each individual child.

The relative influence of either parent is a point of some interest. Fathers are said to transmit the disease most frequently to sons, mothers to daughters. M. Baillarger states that out of 346 children inheriting insanity from the mother 197 were girls, out of 215 inheriting from the father 128 were boys. Notable instances occur of transmission from father to son: Charles VI. of France, his son Charles VII., and grandson Louis XI., were all insane. Interesting, too, is the subject of atavism, according to which the disease skips a generation or even more, and reappears in a subsequent one. The laws of reproduction are not yet laid down with sufficient accuracy to explain all this.

Statistics on this point are valueless, for correct data are not to be had. Hence it happens that one author attributes 10 per cent. of cases to this cause, another no less than 90. This lack of information arises partly because relatives will not tell the truth, partly because the disorder in the ancestors has not been undoubted insanity, but only epilepsy or drunkenness, or some such affection which has not been duly estimated. In pauper asylums it is difficult to get at the truth from the ignorance of the informants; in private practice the facts are concealed and denied in the most astounding manner.

Certain forms we may assume to be hereditary without inquiry. The insanity (I do not mean idiocy) of childhood and early life, and the gradual development in the young of what is termed "moral insanity" without assignable cause, may be set down as due to hereditary taint. Events have not happened to the young; they know no cares, anxiety, or losses. The cause and condition of their malady must be looked for in the constitution they have received by inheritance.

Is insanity transmitted in the same form and species? Undoubtedly, in some instances. Suicide occurs in successive generations of the same family. But, as a rule, I think the inherited disease is determined to this or that form by other causes and events. In early life we shall more likely meet with mania, in advanced years with melancholia. It has been remarked that insanity has often shown itself in successive generations at about the same age.

If you are called to a case of recent insanity, and told that it is inherited, how will this affect the prognosis? As regards the question of life and death, I believe the danger is less than where the disease is not inherited. It is more a part and parcel of the constitution, and such patients do not succumb to it like those in whom it has been produced by some powerful event or bodily disease; the deviation from their normal state is not so great. Neither in my experience is their chance of recovery less—at any rate, in the first attack. After an acute attack there is, it is true, a tendency to subsequent recurrence of the disorder, but this exists in all who have been insane, whatever may have been the cause. In the course of your practice you will have opportunities of watching the development of children whose parents are, or have been, insane; it may be that you will be consulted upon the training and education of such children, and upon the mode of preserving them from those dangers to which they are so certainly exposed. Their delicate nervous organisation will not bear the stimulation which falls lightly on that of others, and they must be protected against it; their *events*, their external surroundings must be adjusted to their necessities; yet do what we will, they but too often break down.

Age is another condition determining insanity. This malady becomes more and more frequent as the mental powers develope and advance. The child may be deficient and idiotic, but it rarely displays genuine insanity. The old man drifts into senile imbecility and decay, but is seldom affected for the first time with insanity. But as the mind expands from the days when it puts away childish things up to its prime of vigour, so does the proportion of cases increase, the period between the ages of 25 and 40 years being the most productive. And the form varies too: in early life, when the emotional part of the mind predominates over the intelligential, emotional insanity is oftenest found. In early manhood, in the time of bodily vigour, we meet with mania, often in acute and violent shape. In advanced life melancholia is characteristic of the feebler powers of body and waning mental strength—strength which is "but labour and sorrow," and later still comes the vacuity of dementia, the "second childishness and mere oblivion."

Does *sex* make any difference? Here statistics often mislead. The Commissioners' last report enumerates 11,992 female lunatics, and 10,085 male. Yet it is generally admitted that more men become insane than women, the above discrepancy being explained by the much greater mortality amongst male lunatics. In the same report, the Commissioners give the deaths of 1414 men and only 1103 women. The more serious and fatal forms of insanity, as general paralysis—and, in fact, of all organic disease of the brain—attack men far more frequently than women. On the other hand, the latter are more liable to the less fatal forms of nervous disorder, as hysteria, catalepsy, chorea, etc. It has been said that, if we except general paralysis, more women die of insanity than men; yet, on turning to the records of St. Luke's Hospital, where general paralysis and all incurable forms are not admitted, I find that in 100 years, 7311 males were admitted, and 10,778 females. Yet of these, 808 males died, and only 573 females.

It has been asked whether the dwellers in crowded cities or the agricultural population most swell the ranks of the insane. A question not easy to answer, but on which a word or two may be said. As regards the rich, I think residence makes little difference. The poor of towns are more likely to be affected by bad air, crowded dwellings, and greater excitement in the struggle for life. They go to asylums in larger numbers, for a patient in a town is troublesome, the asylum is near, and the transit easy. In the country, the asylum may be distant, and so the patient may be kept at home, a chronic lunatic, but never registered. On the other hand, the country poor subsist on a lower diet than the town poor. Their cottages are often as unwholesome as town dwellings, and they intermarry till a whole village is a circle of relations.

Does *civilisation* promote insanity? I fear this can only be answered in the affirmative. The working brain of civilised man must be more prone to disorder than that of the savage. Doubtless much is due to the evils attendant upon civilisation, and to these philanthropists must turn their attention to diminish this malady among us. The very care we take of lunatics fosters it, the care by means of which we send them back cured or half cured to propagate their kind. In a tribe of savages, mania would be "stamped out" in a fashion that would leave little chance of hereditary transmission.

The causes yet to be mentioned are usually called *moral* and *physical*. If you recollect what I said on the pathology of insanity, you will see that the moral causes nearly correspond to those which produce abnormal stimulation of the centre, while the physical causes may be said to produce defect or disease in the centre itself through the bodily health. The moral causes may be summed up as domestic troubles and losses, grief, disappointed affections, jealousy, religious and political excitement, fright, over-study. Now, all these, except perhaps the last, are violent stimuli of the emotional centres, morbidly exciting the feeling of self, self-love, and self-interest. The balance of the relation which the individual bears to his fellow men is upset, and he stands isolated and self-centred. Yet these events happen to men daily without driving them mad; therefore we must look upon them as only a part of the cause, the remainder depending on the constitutional defects of the patient. Often we hear that a man has had much trouble, or excitement, or disappointment, when in truth, being saturated with insanity, his own crazy brains have manufactured these so-called causes out of nothing at all, the excitement and worry being all along subjective, and having no real existence whatever.

We now come to the *physical* causes of insanity, those which through the bodily organisation affect the brain tissue and brain circulation to the extent of producing mental disorder. They may be sudden, and may pass away as suddenly, producing only transient aberration, as does a fit of epilepsy or an intoxicating dose of alcohol or chloroform; or they may be protracted over years, causing a gradual organic change and an insidious advent of the symptoms. Among the latter may be placed anæmia, where an absolutely insufficient blood-supply fails duly to nourish the brain ganglia; tuberculosis and syphilis, where an exhausting taint secondarily affects the brain; injuries of the head, where a gradual change in the cerebral structures follows a blow or fall; alcohol, opium, haschish, which by constant and recurring disturbance of the brain circulation gradually produce change; sexual excess, which violently excites the brain circulation and prostrates the nervous powers. And by this I do not mean merely the riotous debauchery of illicit intercourse or the vice of self-abuse. I have traced insanity just as often to sexual excesses in married life. Epilepsy, if frequent, produces loss of memory and dementia with slow disorganisation. Other causes act more rapidly, but their action is less explicable. Such are pregnancy and parturition; acute diseases, as measles, pneumonia, fever, which as they decline are sometimes followed by a transient attack of mania; rheumatism and gout, which often exhibit that curious phenomenon called "metastasis" as they alternate with symptoms of insanity; vicarious or masked epilepsy, *epilepsie larvée* as Morel calls it, where, instead of a genuine epileptic convulsion, we find a convulsed state of the higher cerebral centres, a transitory attack of furious mania, which may pass off and in twenty-four hours leave no more trace behind than an ordinary epileptic fit.

Diseases of the other parts of the body—as the lungs, heart, arteries, abdominal viscera, and uterine organs—often produce insanity; how they do this it is not always easy to define. They may act by directly affecting the circulation and nutrition of the brain, or in a more mysterious manner by that process which the old writers called "sympathy." We veil our ignorance now by attributing this to the influence of the sympathetic or vasomotor system, but we are far from any accurate knowledge of it, or of its connexion with the brain proper. We can illustrate this sympathetic insanity by the occurrence of convulsions in children, and epilepsy in adults, from worms, teething, and the like, and by the reflex paralysis of Brown-Sequard. It is possible that the insanity of parturition and pregnancy is to be assigned to this variety.

From these conditions and causes all cases of insanity arise. If you ask me for statistics as to the relative frequency of physical or moral causes, I have none to give. Insane patients are not sufficiently comparable to be reduced to figures and ticketed statistically. Their conditions differ too widely, and the causes are not ascertainable. This much is certain, that hereditary taint is the cause of causes, the *fons et origo* of three-fourths at least of all cases; a cause which even when foreseen is irremoveable. Others which are preventible or removeable must be sought for and dealt with, but such are comparatively few. As a rule, those who become insane without hereditary influence owe their malady to physical causes.

Classification.—Much has been written upon the classification of insanity, and systems have been proposed by various authors founded (1) upon the causes, or (2) upon the seat in one or other of the component parts of the mind, or (3) upon the most prominent symptoms. Now, what I have just said about the complicity of causes shows the impossibility of forming a correct classification according to them. What I said in my first lecture and what I shall say in my next will indicate that the mind is too much a unit to admit of a classification according to its parts. We therefore must fall back upon the time-honoured system of symptomatology, and laying aside the minute subdivisions of the modern French school, adhere to the old divisions of Pinel, who gave but four—idiocy, mania, melancholia, and dementia. Under idiocy may be studied the insanity of early life generally. The treatment of mania and melancholia is so opposite that this division is eminently practical, while under the head of dementia some other forms of insanity may fitly be ranged.

Insanity of Early Life.—Before the age of puberty genuine insanity is rare: the mental disorder of young children is more commonly idiocy. We meet, however, with four varieties.

I. There is the true congenital idiot. He may be either the microcephalic boy, often dwarfed in body as well as head, but vivacious, in possession of most of his senses, active in limb, mischievous, monkeyish; or he may be one who can hardly be called an animal, who is just above a zoophyte, and is not only mentally deficient, but is paralytic, dumb. He cannot raise his head to take food; he cannot put it to his mouth; he can only swallow it when it is placed there. Such a being is at the bottom of the scale, not only of humanity, but of animality.

II. Far more common are the children who, born intelligent and active, are attacked by epilepsy, convulsions, or the like at an early age, and reduced to the condition of idiots. The amount of damage may be great, reducing them to the state of the most abject idiocy, or it may be slight, allowing of considerable amelioration. This variety is, as I have said, far more common than the true microcephalic or any form of congenital idiocy. And it is, besides, far more hopeful. If the disease can be arrested, or if it of itself ceases before great mischief is done, there is more chance of recovery or improvement than might be supposed. I believe that these cases, if not extremely degraded, best repay the training and care of an asylum.

III. The next is a class of cases which is the difficulty and torment of every one that has to do with it—parents, tutors, and doctors. Under it may be ranged a number of weak-minded youths and girls who can hardly be called idiots. They are a shade above idiots in intelligence, and may rather be called congenitally insane. Yet it is often difficult to say whether they are mad or simply bad. They are deficient in power of learning: for want of intellectual grasp and application they cannot be educated, except to a very small extent, and at 17 or 18 their reading and writing is generally on a par with that of a child of 6. Yet they are sharp and cunning, can often talk fairly well, and are not to be comprehended except by those who have opportunities of seeing them for a long period. Their feeble minds lead them to seek the society of those beneath them, among whom they feel of more importance, and they quickly learn every kind of vice and low habit. There is in them no feeling of right or wrong. If they acknowledge an act to be wrong in the abstract, they will commit it immediately after. In the lower classes such individuals quickly reach a prison if they are not fortunate enough to get to an asylum. In higher life they soon become too troublesome to be kept at home, and they are then bandied about from tutor to tutor and governess to governess till at last the doctor is consulted, and probably an attempt is made to get certificates of lunacy signed. Now, you may be able to make an affidavit that such a patient is incapable of managing himself and his affairs, but you will find it next to impossible to sign a certificate of lunacy—to state evidences of insanity observed by yourself on any one particular day. You will find no delusions, and ordinary questions will be correctly answered. Imperfect education is not of itself evidence of insanity, neither are vicious habits. You may be able, however, to give advice as to the disposal and treatment of such a child. You will recollect that all such are congenitally deficient—more or less imbecile. It is therefore of no good to apply to them punishment, stripes, or starvation. Their inferior mental organisation, though it require discipline, will not be improved by violent measures. Difficult as the task may be, such boys and girls must be encouraged and led. The prognosis is unfavourable; only while young are they capable of amendment, and but too many end sooner or later in an asylum. The great thing is to find out something for which they are fitted—for which they have a turn—something to which they will apply, however humble the occupation. Did space permit, I could illustrate this class by many examples.

IV. Rarely before puberty do we meet with cases of genuine insanity in children previously sane. Between the age of puberty and twenty they are not infrequent. Most of the cases of insanity in young children recorded in books ought to be placed in my third class as congenital. Such cases, however, of true insanity as we do meet with are very interesting, and bear out all that we should expect from the period of life at which it shows itself. It is the insanity, not of the developed but of the developing mind: as in infant life we see the body itself convulsed and its innervation upset, the mind being secondarily affected, and as in fully developed mental life we find the mind distorted in its highest intellectual parts and disordered by delusions, so in this intermediate period we find a certain amount of irregular bodily action, hysterical and cataleptic attacks and choreic and automatic movements, and disturbance of the primary elements of the mind, the affections, emotions, and passions. As we should expect, both this and insanity after puberty is more common in girls than in boys, for between the age of ten and twenty girls undergo a greater change than boys. While I was clinical clerk at St. Luke's Hospital, there were admitted in five years 40 girls under the age of twenty and only 17 boys. I have before stated that mania is the disease of the young: of these 57 cases only 8 were melancholic. Mischievous, noisy mania is the predominant form, not always rising into delusions. The prognosis is very favourable. Of these 57 cases all but 4 recovered. This class is far more hopeful than the third, as the second is more hopeful than the first.

ORIGINAL COMMUNICATIONS.

REMARKS ON THE PATHOLOGY OF CHOLERA(a).

By G. H. BARLOW, M.D.,
Senior Physician to Guy's Hospital.

(Concluded from page 115.)

It has been alleged, however, that not only is the choleraic diarrhœa or drain of fluid in no way concerned in the production of the collapse and other choleraic symptoms, but also that these symptoms may occur and go on to a fatal result without diarrhœa; and further, that there is no relation whatever between the amount of diarrhœa and the degree of collapse. Now, I speak mainly, if not entirely, from experience, derived by others as well as myself from the disease as it has presented itself in this country, and therefore I am not prepared to deny the occurrence in India or other hot climates of what has been termed "*cholera sicca*," which I apprehend to mean death resulting from the cholera poison, or rather morbific agency, without the intervention of diarrhœa or cramps, or the other symptoms which constitute the fully developed disease. I say, I am not prepared to deny this, though I never witnessed it, since it rests upon testimony which I should be most unwilling to call in question; neither is it contrary to the view which has been taken above, since that there is a morbific agent we cannot doubt, though that there is a material poison pervading the system and requiring to be eliminated is a gratuitous assumption in proof of which the slightest evidence has never yet been adduced. Now, this agent, acting probably, in the first instance, upon the nerves of organic life—mainly, perhaps, the solar plexus and semilunar ganglia—may, as in the case of lightning, cause sudden death. But lightning may produce lesions of vital organs which may prove fatal in a shorter or longer time, and which we could never hope to counteract by any process of eliminating the electric fluid; and the same of cold. Several ponderable poisons will cause death upon contact with the lining membrane of the stomach or other mucous surface, which will also give rise to different and, it may be, fatal effects, when fully absorbed into the system, and still later lesions of particular organs which also may eventually destroy life. So that there is no more ground for maintaining that, because cholera may sometimes destroy life suddenly, therefore the subsequent morbid actions which ordinarily develope themselves have little or nothing to do with a fatal result when it occurs, than there is for asserting that, because sudden exposure to cold may prove almost directly fatal, therefore the inflammation of the lungs or kidneys which the cold may set up have nothing to do with the fatal result in many cases Or we might almost as gravely err in assuming that because some men, struck by a bullet, die from what soldiers term a shock to the system, therefore the inflammation, suppuration, or irritative fever has nothing to do with the fatal result in a large proportion of gunshot wounds.

But, again, it is stated that where there has been diarrhœa there is no proportion between the amount of the discharge and the degree of collapse; and this is asserted so emphatically that Dr. Johnson proceeds to say that he challenges any Medical man to produce an instance of its being so. Now the terms of this challenge are rather hard to understand, for if it is to be accepted literally of producing a single case, that, of course, excludes comparison with other cases, and consequently can mean only that where there is diarrhœa the collapse or tendency to it does not increase with the diarrhœa, and that Dr. Johnson defies any one to adduce a case in which it has done so. Now, with every respect for Dr. Johnson, I should state that my own experience and that of Medical Practitioners whom I was in the daily habit of meeting during the epidemic of 1849 was that the failure of the pulse, the coldness and duskiness of the surface advanced steadily with the diarrhœa. I do not say that there were not exceptions to this rule, but the exceptions were more apparent than real, as will be presently explained. The worst cases of cholera, especially at the commencement of the epidemic, occurred much in this way:—The patient went to bed apparently in good health, and was awakened about two or three in the morning with weight and pain across the epigastrium and desire to relieve the bowels. Their action would be followed by considerable relief to the patient. He would return to bed, but in a short time another and much more liquid evacuation would occur; after which he would feel exhausted and alarmed. This would recur several times, and each evacuation would be followed by increased prostration. And a very similar series would occur in many less sudden and violent cases. Take the instance of a very distinguished Surgeon, who fell a victim to cholera in 1849. This gentleman, to my own knowledge, had been the subject of diarrhœa for several days, so much so that I more than once remonstrated with him about it, but he replied that he did not feel the worse for it. One morning he got up in apparent health, ate his breakfast well, and, as I was informed by his servant, retired soon after to the water-closet, and came down into his consulting-room, looking haggard, with a dark countenance. He remained there about an hour, went again to the water-closet, and his servant becoming anxious about him went and assisted him again into his consulting-room, where he threw himself upon his favourite "lithotrity chair" in a state of extreme exhaustion, livid, and, as I was told by his servant, with cold clammy extremities and blueness of the surface. The diarrhœa returned, and continued incessantly until he went into a state of profound collapse. If, however, the challenge to produce a single case in which the prostration has been proportionate to the vomiting and diarrhœa is a mere pleonasm for the assertion that many died who voided comparatively small quantities of fluid, I reply that, in the first place, this is no more than we might have antecedently expected, since we know that many persons will faint from a very trifling loss of blood, whilst others are apparently unaffected by the loss of a very large quantity; and this may be equally or even more the case with the serosity which exists in such different quantities in different persons. For instance, a patient of mine in Guy's Hospital, who was the subject of albuminuria with enormous general dropsy, was attacked with cholera in the autumn of 1849. He passed gallons of liquid by stool, had cramps, and became livid and clammy, but his pulse did not disappear as in profound collapse, and he eventually rallied, and left the

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(a) Read to the Hunterian Society.

Hospital apparently well, but with his urine still albuminous. When he began to recover from his cholera his appearance was almost ludicrous from the manner in which his integuments hung loosely about him. Now this patient, having an excess of serosity in his system, was enabled to bear a drain which would have been destructive to most men.

Again, it has been asserted that patients have gone into collapse without any diarrhœa whatever. Now, independently of the explanation which has been given of those cases in which the morbific agent acts suddenly and fatally upon the nervous system, I would remark that the greatest caution is necessary in receiving such statements. I was once told by those about a young man suffering from cholera, and the statement was assented to by the Medical attendant, that there had been no purging, but that the patient had passed large quantities of urine, and it was only by examining carefully myself that I ascertained that the contrary was the fact, the pan of a night-chair being full of nearly transparent cholera stool, which had been mistaken for urine, and no one who was not conversant with the alarm and confusion often attendant upon an outbreak of cholera could be aware of the difficulty of obtaining accurate information and the necessity of examining carefully for oneself. Again, we know that a large quantity of liquid may be poured into the intestines and never excreted, and it is to be borne in mind that it is the secretion, and not the excretion, that brings on the collapse. Of this I remember a remarkable instance. In 1849 I was standing by the bedside of a patient in Rotherhithe with the late Dr. Crutch, when she suddenly complained of a feeling of excessive sinking. Her pulse sank and her countenance shrank. The bed was examined to ascertain if there had been any evacuation of which she had not been aware, but none was found. I placed my hand upon the abdomen and found it tumid, with an approach to fluctuation. We went into a room below for a time, and whilst we were there the patient passed nearly a bed-panful of rice-water evacuation, and when we returned to her room the signs of collapse were evidently showing themselves. Cases like these, whilst they clearly point to the inference that there is a great difference in the tolerance of a drain of serosity in different individuals, should also warn us against drawing hasty conclusions as to the amount of *se*cretion by what we hear or even see of the amount of *ex*cretion.

That cholera may be induced by articles of food or other adventitious circumstances is an opinion very generally entertained, not only by the public, but also by Medical Practitioners. Upon this, however, I do not wish to lay too much stress, since my desire has been to adduce tangible and ascertained facts in support of my arguments; but that cholera has been hurried on by aperients, and possibly a fatal result determined by their instrumentality, certain facts that have come under my observation leave me little room to doubt. A lady from the West Indies, residing at the time in the Kennington-road, Lambeth, was during the epidemic of 1854 attacked between seven and eight o'clock in the morning with pain in the abdomen and diarrhœa. As had been her custom with bowel derangements, she took a tablespoonful of castor oil. She became very ill, and sent for a Medical Practitioner. Just as I was leaving home at one o'clock I was asked to visit her, as she was said to be in the last stage of cholera. I was unable to get to her house before two, when I was informed that she had just expired. I then learned that after taking the oil she became severely purged, that after some time the watery evacuations streamed from her as she lay, and, in fact, the bed was saturated as if by colourless water when I went into her room. Now, although I never saw the lady alive, I can have no doubt that she went rapidly into the collapse of cholera, and so died, any more than I can doubt the evidence of those about her as to the amount and continuousness of the purging.

One morning during the same epidemic (1854), I was requested by Mr. George Odling, then practising in Southwark, to see a man who had been attacked with cholera about six o'clock that morning. As we were going to the house, he informed me that he had determined upon pursuing the treatment with castor oil. I replied that I had had little or no experience of it, and that, though I had little confidence in it theoretically, I should not feel disposed to interfere with it, as it had been recommended upon trustworthy authority. The patient, when I saw him, was slightly dusky in appearance; his extremities were getting cold, and his pulse feeble, but his breath and tongue were warm. He was freely purged, and his stools were becoming pale and watery. I remarked that this was a promising case for that period of the epidemic, on being informed that he had taken two half-ounces of castor oil with an interval of two hours between them. I suggested that the doses of the castor oil should be diminished, but not the frequency, and an appointment was made for me to meet Mr. Odling at 5 the same afternoon. Between 3 and 4, however, Mr. Odling, seeing my carriage, stopped it to say that the patient was dead. Here, then, we have a case of death from cholera in between eight and nine hours under the influence of aperients.

I have adduced these cases more as illustrative of the pathology of the disease than with a view to advocating or condemning any plan of treatment, a subject which hardly comes within the scope of this communication.

I will now mention a case in which the effects of the arrest of the diarrhœa were almost equally conspicuous. In the height of the epidemic of 1854 I was called upon by Dr. Sharpe, of Bermondsey, as I was going out for the afternoon, and requested to visit a severe case of cholera. Dr. Sharpe further informed me that he had put the patient upon a course of castor oil. I replied that I had determined to give that system a fair trial, but that I had then witnessed its action in six cases, all of which had ended fatally, and in none did there seem to have been any mitigation of the symptoms, but rather the reverse, and that consequently I should not feel justified in repeating the experiment, and that he had better obtain some other opinion. He, however, declined to do so, and requested me to come and act according to my judgment. We met accordingly; and finding that the patient, though severely purged and vomiting considerably, had a small but very perceptible pulse, and that though his features appeared sunken his extremities were not shrivelled or sodden, his tongue and breath had not become cold, or his voice choleraic, I suggested that this case was not so far gone but that I thought we might attempt to check the diarrhœa. He was accordingly ordered a grain of calomel and a grain of opium every two hours, and some gentle astringent mixture, with hydrocyanic acid, in the intervals, and to be allowed to drink freely. As I left the house Dr. Sharpe expressed a wish that I should see him again that evening. I replied that I should be unable to do so, but would see him early the following morning if desired. Dr. Sharpe expressed some astonishment at my talking of to-morrow in such a case, but I replied that I only spoke of contingencies. I heard no more of the patient, and feared he had died, as he seemed to be going so rapidly into collapse. In a few days, however, I learned that so far from dying before the following morning, he was by that time nearly convalescent.

I have thus far dwelt upon the leading features, as I believe, of cholera, so that I have little room left for adding more either as regards its pathology or its treatment. But I have been led to do this because I believe that the opinions advocated by Dr. George Johnson in his recent work are erroneous, and I felt it to be my duty to my Professional brethren, as well as respectful to Dr. Johnson, to give my reasons for that belief. I have been the more desirous of doing this, because it is evident that the theory of Dr. Johnson if applied to practice must lead to a mode of treatment directly opposed to that which has been found the most beneficial; and, what is of more importance, it is opposed to the rule of getting diarrhœa under control, which has been most serviceable as a preventive measure, especially when applied in connexion with house-to-house visitation, or regular inquiries into the health of inmates of large establishments.

I do not mean to say I have got to the first link in the chain of morbid phenomena constituting cholera, but I consider it far more safe, as well as more philosophical, to regard what has been ascertained as an "ultimate fact," than to assume and act upon more remote ones not yet established. That a change in the blood and considerable obstruction in the portal circulation precede the diarrhœa and vomiting there can be little doubt, and it is important to bear in mind that the exudation is not confined to the mucous membrane of the alimentary canal, but affects the skin and similar tissues. That a change in the blood may precede the exudation is highly probable, that a great change must follow it is, we know, a physical necessity, and experience, as well as reason, suggest the necessity of preventing this change if possible. That there is a poison present in the blood requiring elimination is, I do not hesitate to say, a mere assumption; but granting it, the idea of eliminating a specific morbid poison is altogether chimerical; we know of nothing of the kind. In the progress of specific as well as other diseases, morbid products are generated which require to be eliminated, as, for instance, uric acid, urates, unhealthy secretions, etc., but we have no evidence of the sanative effect of eliminating the specific poison. Take, for instance, Dr. Johnson's own example, small-pox. The attempts in the time of Sydenham to draw out the poison by heat, etc., were most disastrous, as was pointed out by that great Physician; but, replies Dr. Johnson, Sydenham's plan was the truly eliminating one, since he took care to remove all impure air and morbid excretions—*i e.*, the products of the disease. But we know that these do not constitute the specific poison, and that where there is a great elimination of the latter, as in very abundant eruptions, the danger is proportionately great; and so it will be when we attempt to promote the elimination of the choleraic poison by aperients.

CASE OF

SPASMODIC CHOLERAIC DISEASE SUCCESSFULLY TREATED BY HOT-WATER PACKING.

By F. A. BULLEY, F.R.C.S.,
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THOS. P., aged 40, a county police constable, residing at Maiden Erleigh, near Reading, a temperate man, and previously in good health, was attacked while walking on his beat, about one o'clock p.m., on Thursday, August 2, with sudden violent pain in the abdomen, followed almost immediately by tonic painful spasm of the abdominal muscles, and a sensation as if his intestines were being drawn up in knots. It was not accompanied by any particular feeling of sickness, nor had he had any previous diarrhœa. The symptoms had been gradually increasing in severity until I saw him—about half-past three the same day—when I found him writhing with the most excruciating pain. The abdominal muscles were universally hardened and contracted by spasm, somewhat resembling tetanic spasm, but more continuous and unrelaxing, and extremely sensitive to the touch. The most intense pain was just in the epigastric region, extending backwards to the spine, as if the diaphragm was affected with the spasm. He was in a cold, clammy perspiration, pulse feeble, and he was beginning to feel extremely faint. I immediately ordered the abdomen to be fomented, and the flannels, wrung out of water as hot as he could bear, having been applied three or four times, his body was enveloped in blankets to the number of five or six, the outer one being closely wrapped round his neck, to confine the heat generated by the wrapping, and to take the following draught every two or three hours:—℞ Elixir opii (Newbery's) ♏ x.; tinct. capsici ♏ v.; olei menthæ virid., olei anisi, āā ♏ ij.; confect. aromat. ʒj; aquæ menthæ pip. ad ℥jss. M. ft. haust. To take a little brandy-and-water occasionally.

On visiting him about two hours afterwards, I found him lying in a profuse perspiration, which, with the medicine, had much relieved, but not quite removed, the pain. The rigidity of the abdominal muscles had greatly subsided, and he altogether felt much more comfortable.

About 7 p.m. he had another attack of pain, but not by any means so severe as the first, for which his wife again fomented him and repeated the medicine, which again relieved him, some little amount of abdominal hardness, however, continuing. About 12 at midnight he had another attack, when his wife again packed him up in the wrappings and repeated the mixture. Shortly after this, while in the perspiration induced, he fell asleep, and on awaking about an hour afterwards he found the pain had left him, the abdominal spasmodic hardness had become quite relaxed, and he felt in every respect much better.

Friday, next morning.—He is quite free from pain and spasm; feels very weak, but the pulse has recovered its strength, with a natural uniform warmth of the body. In the afternoon he was apparently free from all symptoms of the disease, except that he felt somewhat languid and faint. Ordered to take cold strong beef-tea and small quantities of brandy-and-water for drink, and the following mixture should the pain or spasm return:—℞ Chlorodyn. ♏xl.; aquæ menthæ virid. ad ℥vj. M. ft. mist. Take a fourth part if necessary.

Next day the patient had apparently quite recovered from his complaint.

The foregoing case was, I have little doubt, of the nature of the prevailing epidemic, arrested in its progress, just at the point when the suspension of the organic functions was commencing, and which would in all probability have gone on to extreme collapse, if no means had been employed to prevent it; and I feel satisfied that nothing but the previous good health of the patient and his temperate habits enabled him to bear up against the continued and violent spasm so long as he did, without the induction of the more advanced and dangerous symptoms of the disease.

An objection has been made to the particular mode of treatment employed in this case, on the ground that in the more severe instances of the disease, the prolonged diaphoresis diminishes the quantity of serum in the blood, which has already been deprived of it in excess by the profuse colliquative discharges from the bowels which usually accompany the complaint; but I believe this to be an erroneous idea, because I have observed, that where this treatment has been adopted in former epidemics, as soon as the equilibrium of the circulation has been restored, and the presumed congestion and partial paralysis of the organic centres has been removed, these discharges have become more or less diminished in quantity in proportion as the other organic functions have recovered their healthy action; so, by the same means, the healthy assimilative action of the stomach and intestines and the natural absorbent function of the intestinal glands having been restored, a considerable portion of the fluid matters taken into the stomach in large quantities by reason of the urgent thirst which prevails in this disease is absorbed into the system, and would thus in some measure make up for the quantity of serum lost by the prolonged perspiration. I cannot for a moment suppose that the profuse colliquative discharges from the intestines are produced entirely through the secretory glandular system of these organs, because I imagine that the same causes which are acting in inducing an almost entire suspension of the natural secretory functions of every other organ in the body, would act upon this particular portion of the secretory system in the same manner; in other words, it would be strange, if, while the natural action of other organs of the body was suspended by the morbid influence at work, this particular one should preserve its integrity of function. I believe that these profuse discharges consist of very little more than the fluids taken into the stomach through the urgent thirst, which, in consequence of the assimilative functions being in abeyance, pass unchanged, or at least only mixed with epithelial *débris*, the abortive remedies employed, and the remains of the fæcal matter existing in the intestines, which as extraneous matter, is ejected irregularly by means of the spasmodic contractions, which accompany the advanced stages of the disease.

It has been clearly proved by physiological experiment that the maintenance of temperature alone is capable of exerting a direct and remarkable influence in preventing the ill effects of poison upon the animal economy; and the observations of M. Brown-Séquard upon the subject, as copied from a number of the *Leader* newspaper, are so appropriate that I shall be excused for quoting them:—"It has long been known that sudden lowering of the temperature to a certain degree causes death in all mammalia. It is also known that in cases of poisoning there is a remarkable lowering of the temperature. Connecting these facts with the known diminution of temperature resulting from wounds, from diarrhœa, from cholera, etc., it occurred to M. Brown-Séquard that diminution of temperature was in all these cases the proximate cause of death. He tested this hypothesis by experiment, and in the first volume of 'Les Mémoires de la Société de Biologie,' p. 102, will be found a communication he addressed to the Society in July 1849. He found that a dose of poison which would, under ordinary circumstances, destroy an animal, was ineffectual if the animal's normal temperature could be maintained. Thus a dose given to an animal kept in an atmosphere of from 8° to 10° Centigrade (46° to 50° Fahrenheit) destroyed it in periods varying from four to forty-eight hours, but a similar dose given to a similar animal, whose temperature was maintained by keeping it in an atmosphere of 28° to 30° Centigrade (82° to 86° Fahrenheit) did not take effect. Not only did diminution of temperature in these cases appear the proximate cause of death, temperature being the only condition which was varied in the experiments, but M. Brown-Séquard proved it in another way. It had been repeatedly shown by Magendie, Breschet, and others, that animals entirely covered with coatings of oil or varnish, which prevented transpiration, were invariably killed, poisoned, as it was supposed, by substances eliminated from the blood, which could no longer pass through the skin.

Now, M. Brown-Séquard performed this experiment, varying the condition of temperature, and he found that, when kept in an atmosphere of 82° Fahrenheit, they invariably survived. These experiments demonstrate the fact that the diminution of temperature resulting from poisons, and many other disturbances of the system, is the proximate cause of death."

It was a consideration of these circumstances which principally induced me to adopt the treatment I have described, not only as affording a ready and convenient method, accessible to everybody on emergency, of restoring the natural temperature of the body, but also as a means of assisting in the elimination of the poison of the disease from the system.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE LONDON HOSPITAL.

CASES OF CHOLERA—NOTES ON TREATMENT.

The cholera wards of the London Hospital still contain a great number of patients. Besides the two large wards for cases of patients who have either choleraic diarrhœa, cholera, or post-choleraic fever, a third ward has been set apart for convalescents. We are sorry to say, however, that not a few of those patients who get over the urgent symptoms of cholera die during the stage of reaction. One patient, whose case we reported July 21 (p. 59, Case 4), died about a fortnight after he had got through the stage of collapse. On Friday and Saturday last comparatively few patients were admitted into the Hospital, and it was hoped, scarcely believed, that the epidemic was declining in the East of London. On Sunday, however, many patients were admitted, and up to to-day (Wednesday) many more have been taken in. Yet it is believed that, on the whole, the cases are milder than they were.

Statement of Cases admitted into the Cholera Wards of the London Hospital for the week ending August 9, 1866, by Mr. Cappe, Clerk to the Hospital.

	Cholera. Males.	Cholera. Females.	Diarrhœa. Males.	Diarrhœa. Females.	Cases of Diarrhœa treated as out patients, Aug. 2 to 9.
Aug. 3, 25th day .	9	6	—	1	285
,, 4, 26th ,, .	4	5	3	1	241
,, 5, 27th ,, .	3	11	5	1	226
,, 6, 28th ,, .	7	8	1	—	248
,, 7, 29th ,, .	16	—	2	4	200
,, 8, 30th ,, .	4	6	6	2	234
,, 9, 10 a.m. .	7	3	2	7	175
	50	39	19	16	1609(a)

Ages.	Cholera. Males.	Cholera. Females.	Diarrhœa. Males.	Diarrhœa. Females.
1 to 10 . . .	8	7	1	2
11 ,, 20 . . .	15	3	4	5
21 ,, 30 . . .	9	7	6	4
31 ,, 40 . . .	7	11	1	3
41 ,, 50 . . .	5	6	4	1
51 ,, 60 . . .	4	2	2	1
Upwards . . .	2	3	1	—
	50	39	19	16

	Cholera.	Diarrhœa.	Total.
Recoveries	37	15	52
Deaths	66	3	69
Remain	90	23	113

From the Outbreak.

	Cholera.	Diarrhœa.	Total.
Admissions.	364	96	460
Recoveries	72	62	114
Deaths	202	11	213
Remain	90	23	113

Total out-patients treated since the outbreak, 6734.

As we mentioned last week, Dr. Fraser has tried Dr. Johnson's plan of treatment, and our impression is that those of the patients thus treated died who would have died under any kind of treatment. The milder cases have done well. Dr. Fraser has, however, returned to the calomel plan. Ten grains of this drug are given at once, and afterwards five grains every two hours. We mentioned last week that each of Dr. Davies' patients had a dose of a mixture of sulphuric acid with hydrocyanic acid every quarter of an hour; subsequently, pills containing podophyllin and camphor, of each a grain, were given occasionally with the mixture. More recently Dr. Davies has adopted the calomel treatment, Thus a very large number of patients are now being treated by calomel.

Dr. Andrew Clark has given castor-oil in a few cases, but has not been satisfied with the results he has obtained from it. Each of his patients is put in a warm bath, and if the patient seem better for it, the bath is repeated, sometimes four or five times. Dr Clark's clinical assistants assure us that this plan of treatment appears to be of great service, and at all events it seems clear that most of his patients like it. Dr. Clark has recently prescribed what may be called saline lemonade. This is given to patients *ad libitum* during reaction. It is sent to the ward in large bottles with pieces of lemon floating in it. The patients like the lemonade, and drink largely of it.

The following is the formula for one ounce :—

Carbonate of soda, gr. $1\frac{1}{2}$; phosphate of soda, gr. $\frac{1}{10}$; phosphate of lime, gr. $\frac{1}{10}$; sulphate of potash, gr. $\frac{1}{10}$; chloride of sodium, gr. $\frac{1}{2}$; phosphate of potash, gr. $\frac{1}{10}$; phosphate of magnesia, gr. $\frac{1}{20}$; distilled water, ℥j.

It is hoped that the patients will, by drinking this, supply to their blood some of the ingredients it had lost in the discharges.

We are obliged to defer our report of the cases of injection of fluids into the veins. Mr. Little has tried this plan with several fluids; but as yet no patient has been cured by this treatment. We hope to give a statement of the facts of the whole of Mr. Little's cases.

KING'S COLLEGE HOSPITAL.

CASES OF CHOLERA—CASTOR-OIL TREATMENT.

(Under the care of Dr. JOHNSON.)

Only two cases of cholera have been admitted since our last report. Of these one has died.

The following are particulars of these cases, which we have condensed from notes by Mr. Willcox :—

Emma C , aged 65, was brought in in extreme collapse and nearly pulseless ; temperature $96\frac{1}{5}$. She had been ill twelve hours, but there was no history of any vomiting or purging. A dose of castor-oil was given, but the patient neither vomited nor was purged, and died an hour after admission. At the autopsy, the lungs, which were but slightly emphysematous, were evidently anæmic.

Daniel C., aged 78. He was taken ill 7.30 a.m., August 5. The vomiting and purging went on all the morning, in spite of an astringent draught he took at 9 a.m. He was admitted 3.30 p.m., in slight collapse. His surface was cold, but the temperature in each axilla was $100\frac{2}{5}$. His abdomen was distended, and there was evidence of considerable fluid. Half an ounce of castor-oil was given. At 6.30 there appeared to be still a large quantity of fluid in the intestine, although he had been purged half an hour before the date. Another dose of oil was given at 6.45, which he rejected. A third dose, which he kept, was given at 7. 9.30 a.m. : He has been purged twice, and has vomited once since 5.30. August 6 : The oil was given at 3 a.m. 11 a.m. : Since 3 has been purged four times ; appears better ; temperature 96. Another dose of oil at 10.30 p.m. August 7 : Purged once since yesterday : temperature 97. August 8 : Much better ; appetite good : sleeps well ; purged four times to-day.

We now give the results of some of the cases reported last week :—

Elizabeth P. (Case 2) is convalescent and is about the ward, and is taking meat diet. She has had no vomiting nor purging, nor even a natural motion since August 1. She has had no medicine since our previous report.

Caroline M. (Case 4). This patient, it is believed, is convalescent, but she is still in bed, and is on milk diet.

Joseph P. (Case 5) was discharged well August 8.

(a) The diminution in these cases this week is probably due to the establishment of Dispensaries in the cholera districts.

GUY'S HOSPITAL.

TREATMENT OF CHOLERA.

(Cases under the care of Dr. BARLOW and Dr. OWEN REES.)

Up to Wednesday morning there have been admitted into the cholera wards of this Hospital, Upper and Lower Petersham, seven cases of cholera, and of these five have died. The notes of these cases have been carefully kept by Mr. Brown, B.A., with the assistance of Mr. Hartridge.

Dr. Barlow treats cases in the stage of collapse, especially when vomiting is troublesome, by effervescing mixture, with two minims of hydrocyanic acid to each dose, every two hours. Besides this the patient is allowed to drink as much iced or cold water as he likes. Hot bottles to the feet are used in every case. Mustard poultices are applied to the epigastrium when the pain is intense. Dr. Owen Rees has tried inhalation of nitrous oxide in one case. A gallon of this gas was administered mixed with atmospheric air. This quantity was given at one dose on two occasions. The gas is put into a large elastic bag, to which is fixed an inhaler. It thus resembles Clover's chloroform apparatus. The case was a very bad one, and the patient died. In another case the same dose was given once; this patient was very bad when she was brought in, and she also died. In one case a gallon of half air and half oxygen was inhaled by a patient suffering from severe diarrhœa and vomiting. No perceptible effect was produced. This patient was admitted August 4, having then been ill a week. He is still in the wards, and is doing well. In two cases Dr. Rees directed the subcutaneous injection of Quassine. Thirty minims of a solution (containing two grains and a half of quassine) are injected into each arm every four hours. One of these patients, a man, died after eleven hours' illness. He died six hours after admission, and three and a half after the injection. This patient was almost pulseless and in extreme collapse when admitted. The other case, that of a woman, was a genuine case of cholera. Her temperature was 95° F. (This is the patient whose case is referred to below as W.) The solution was injected six times. She is now in the Hospital, and it is hoped that she is doing well; but when we were last at the Hospital (Wednesday morning), although her vomit was bilious, her motions fæcal, and although she had passed urine, her temperature was only 95°.

We are indebted to Mr. Brown for the following account of a series of cases which seem to show the contagiousness of cholera:—

Three sisters, A., B., C., having a sister-in-law, W. B., C., and W. live in Park-street, Bermondsey. A. is a maid of all work, living near Temple-bar, and who washed the clothes of a patient who died of cholera in the Temple. She had cholera on August 1, and died the same day, near Temple-bar. B., C., and W. go to see her, and are with her while she dies. They return to Park-street, and B. is taken with cholera the same evening (August 1), and dies at 6 a.m. next morning (August 2). W. has diarrhœa on August 2, which is stopped by mist. cretæ, which she got from a chemist. At 8 p.m. of August 2 C. is taken, and a few hours afterwards W. is taken again, and both are brought into the Hospital at 6.30 on the morning of August 3. C. dies on August 4, at 1 a.m. W., as we have just stated, is still under treatment.

GERMAN HOSPITAL, DALSTON.

REMARKS ON THE TREATMENT OF CHOLERA.

(Cases under the care of Dr. HERMANN WEBER.)

From what he had seen in two former epidemics, Dr. Weber said he had lost faith in the correctness of the astringent and opium treatment, as also in the use of alcoholic stimulants, in cholera; and from the advice given by some good observers, as also from reasoning and analogy, he intended to try, if sufficient opportunity should offer itself, the plan of small doses of calomel given at short intervals, and also Dr. Johnson's castor-oil treatment, combined with a certain dietetic management. When the opportunity was afforded by cases in the present epidemic, he began with the calomel treatment, giving in severe cases half a grain every half-hour, and with commencing improvement every hour or every two hours. The fact that camphor often causes a feeling of increased warmth of the skin, and that it seems also to act favourably in some forms of catarrhal diarrhœa, induced Dr. Weber to add a grain of camphor to each dose of calomel. In three of the severe cases, where the calomel and camphor did not bring about a speedy change in the nature of the excretions, one or more half-ounce doses of castor oil at intervals of several hours have been tried, and in two out of three cases they appeared to assist in bringing about more bilious ejections, which preceded the general reaction. As soon as reaction *has* set in and the patient begins to pass urine, the calomel and camphor are given more rarely, and gradually left off altogether. In the milder cases very little is given, but in the severer with long-continued collapse, the entire quantity amounts to twenty, and even forty, grains of calomel and the double quantity of camphor.

As far as Dr. Weber could judge, under this plan the secondary symptoms are less severe than when opium and brandy are given during the collapse—the discharge of urine appears to be more abundant, and the bowels do not often become confined; but if they do so, an aperient dose of castor oil or of tincture of rhubarb is administered.

The dietetic treatment consists in rest, abundant ventilation in a spacious ward, supplying about 2000 cubic feet to every bed, in the external application of heat, the allowance of ice *ad libitum*, in the avoiding of alcoholic stimulants, in the giving of small quantities of iced beef-tea and milk, gradually returning, when reaction is well established, to more solid food. To this dietetic management Dr. Weber ascribes great importance, and says he is convinced that the milder class of cases do well with it, without any medicine whatever.

In two severe cases with protracted collapse the hot mustard bath was used, in addition to the calomel treatment, with great comfort to the patients, and with the apparent effect of bringing about the reaction. One of these cases, however, died this (Wednesday) morning from suppression of urine.

In two others, likewise severe cases, in which the calomel treatment seemed to exercise no rapid influence, subcutaneous injections of camphor, dissolved in oil of turpentine, were tried. Dr. Weber, however, said he could not recommend the imitation of this plan, as the immediate beneficial effect was doubtful, and the consequence in both cases large subcutaneous abscesses endangering the lives of the patient.

In looking at the results of the calomel and camphor treatment and the dietetic management described, assisted in some cases by the use of castor oil, it appears favourable that of twenty-three patients only two died, and only two more remain in a doubtful condition. Dr. Weber, however, with great candour, says that he by no means feels sure that the cures were effected through the Medical treatment; it would, he observed, require a much longer and more rigid testing of the plan, compared with the dietetic treatment alone and with other plans practised under as much as possible similar circumstances, to arrive at certain conclusions.

Dr. Weber added that the Hippocratic words "*occasio præceps, experientia fallax, judicium difficile*," are to nothing more applicable than to the treatment of cholera. If 80 or 100 cholera beds were at his disposal, he would allot a certain number (1) to the dietetic treatment, unaided by medicine; (2) to the calomel and camphor treatment; (3) to the castor-oil plan; (4) to the use of emetics and salines; (5) to the thermal hydropathic treatment with the warm wet sheet.

We defer until next week the further report of cases we have previously published from this Hospital. We are glad to be able to state that the last eight cases admitted have been of a very mild type.

THE MIDDLESEX HOSPITAL.

CLINICAL REMARKS ON THE TREATMENT OF DIARRHŒA AND CHOLERA.

(Cases under the care of Dr. GREENHOW)

Dr. Greenhow said that until quite recently there had been no great prevalence of diarrhœa among the out-patients, fewer cases having presented themselves than at the corresponding period of last summer. Since the 12th ult., however, applications had been very numerous both with out-patient letters and also as casualties. The diarrhœa in these cases was for the most part profuse, watery, and exhausting. A few cases had presented dysenteric symptoms, the evacuations being scanty, bloody, and attended by tormina and tenesmus, but with these exceptions the patients had rarely complained of pain. In a very few cases only had the diarrhœa been attended by vomiting, and three of these had been severe enough to be called English cholera. As regarded treatment he (Dr. Greenhow) thought that the great object was to check the diarrhœa as early as possible, especially just at present when we appeared to be threatened with an outbreak of epidemic cholera. Neglected diarrhœa at such times was exceedingly apt to pass into cholera, and he believed the use of even the mildest aperients during the diarrhœal stage of cholera to be so dangerous that during epidemic periods he refrained entirely from giving them until the diarrhœa was subdued. During the cholera epidemic of 1854 he had seen and heard of much mischief caused by the administration, in cases of diarrhœa, of even mild aperients, such as castor oil, and had known cases pass into fatal collapse under such treatment which he should have expected to recover under a different plan.

Even the administration of cathartics to persons not suffering from diarrhœa required to be done cautiously during a season like the present, for he had many times known hypercatharsis, induced by aperients, pass into true cholera. This remark applied especially to colchicum, and he had already for the last few weeks observed an unusual tendency in this drug to produce copious watery purging; compelling him to abandon its employment in many cases which would in ordinary seasons have derived much benefit from its use. His opinion, founded upon experience, of the danger of treating choleraic diarrhœa with aperients was confirmed by the two facts—viz., 1st, that profuse watery purging, caused by aperients only, could of itself induce a condition very analogous to cholera; and 2nd, that the injection of warm fluids into the veins during the stage of collapse in cases of true cholera appeared to relieve the more urgent symptoms almost instantaneously. With regard to the first, about eighteen years ago a nurse had accidentally given to an old lady under his care an embrocation containing thirty minims of croton oil. When he saw his patient two hours afterwards, she had all the appearance of a person in the cold stage of cholera. There had been very profuse watery purging exactly resembling the rice-water stools of cholera patients; the surface was cold, the features shrunken, the fingers shrivelled, the skin even more blue than is usual in cases of true cholera, and the pulse thready and almost imperceptible. The patient had had severe cramps; she was very restless, and her respiration gasping. Her intellect was unimpaired, and she died ten hours after taking the poison. This case presented all the more striking symptoms of cholera, for which it might readily have been mistaken by a Physician well acquainted with that disease but ignorant of the true cause of the patient's fatal illness. With regard to the second fact to which he had referred, he had no personal experience; but the effects produced by the injection of warm fluids into the veins of patients in the collapse stage of cholera were said to be very remarkable. The late Dr. Mackintosh, of Edinburgh, had tried the plan extensively in 1832. Out of about 150 cases, rather more than one-sixth recovered after having undergone this operation. One woman recovered who had been injected six times, and had had altogether upwards of fifty pints of fluid thrown into her veins, and several persons after having been injected three or four times. The fluid injected consisted of half an ounce of common salt and eighty grains of bicarbonate of soda, dissolved in ten pints of water at a temperature of from 106° to 120° Fahr. The results of the operation were, that almost immediately after the injection into the veins, the pulse, although it might have been previously imperceptible, became distinct, the body warm, the previously shrunken features filled out, the anxious expression of countenance passed off, and the choleraic whisper was superseded by the natural voice. It is true that in the larger proportion of cases this remarkable improvement was of very brief duration; but, especially when taken in conjunction with the effects of poisoning by croton oil, as shown in the case he had just related, it appeared to be corroborative of his opinion that the more urgent symptoms of the collapse stage of cholera were due to the excessive loss of fluid through the gastro-intestinal mucous membrane.

As regarded the treatment of diarrhœa, he in all cases recommended his patients to keep quiet, and, if the diarrhœa was profuse, to go to bed. He forbade the use of malt liquor, and prescribed such simple diet as beef-tea thickened with arrowroot, rice-milk or bread and milk, allowing, if necessary, a little brandy, either in water or arrowroot. When the diarrhœa was still bilious, he used the means he had employed last year (*Medical Times and Gazette*, July 22, 1865, p. 88), and had found them generally successful. In a few cases where the diarrhœa was very frequent he had given either the aromatic powder of chalk and opium in doses of ten grains every two or three hours until the complaint abated, or ten grains of white bismuth with two or three of Dover's powder at the like intervals. In all these cases, when the diarrhœa had been checked, he gave a single dose either of calomel or grey powder combined with opium at night, followed next morning by a moderate dose of castor oil or of rhubarb combined with an aromatic. In many cases, however, the diarrhœa had already become very profuse and watery when the patients came under treatment, and in these he had made trial of diluted sulphuric acid in doses of fifteen minims, combined with two or three drops of laudanum, in peppermint-water, at such intervals as the exigencies of each particular case seemed to require; and during the present epidemic, and in the class of cases he had specified, the use of this remedy had not been attended by the griping pain he had observed it produce on former occasions. Hitherto all his cases had, he believed, done well, and even though cholera were to become epidemic he should continue the same kind of treatment in cases of what had been called premonitory diarrhœa. If, however, it failed to arrest the diarrhœa, and symptoms of collapse were setting in, or if the patient when first seen were already in the state of collapse, he should discontinue the use of opium, and forbid that of stimulants, both of which he had found injurious during the cold stage. He should not torment his patients with the application of sinapisms or other external remedies, from which they derived neither benefit nor comfort, but, following the indication afforded by the patient's own feelings in each case, he should either apply hot dry flannels or employ friction for the relief of the cramps. So long as the collapse lasted he should not attempt to administer food, but would allow his patients to suck ice and to drink freely of cold water, or of simple effervescing medicines of potash and fresh lemon juice. Even when reaction had taken place he would at first give only the blandest kind of food, such as milk, eggs, or beef-tea and arrowroot. As regarded medicines he had both tried various kinds himself and seen many tried by others in former epidemics; but the only drug which had appeared to him to be of any use was calomel given in small doses at frequent intervals. He had himself tried this medicine extensively in the epidemics of 1848-9 and 1853-4, and the results had been so far good, as compared with those of other modes of treatment, that he should certainly test his former experience if he should again have occasion to treat cholera in its fully developed form.

GREAT NORTHERN HOSPITAL.

CASES OF CHOLERA AND DIARRHŒA.

[Communicated by Mr. W. H. ELLIS, House-Surgeon.]

DURING the past week diarrhœa has been very rife among the out-patients, nearly 200 having been under treatment; in some cases it has been very severe, attacking whole families. Three cases have been admitted into the Hospital—one a case of cholera and the other two diarrhœa with sickness and cramps, etc., but fortunately all are doing well. The following is an abridgment of my notes of the case of cholera:—

E. G., aged 31, an Irishman, had been living badly; for three or four days suffered from diarrhœa, but took no notice of it until Saturday, August 4. He was attacked with great pain in the body and severe cramps in the legs and thighs, for which he was admitted under Dr. Hardinge about 4 p.m.

When admitted the skin was cold, extremities very so; nails blue; countenance anxious and pinched; pulse 106, very small, weak, and irregular; extremely thirsty; very sick; bowels open about every ten minutes; motions pale and like rice-water. He was ordered sodæ carb. gr. iv.; creosoti gtt. j.; tinct. card. co. ʒss.; inf. hæmatoxyli ad ℥j., 2dis horis; hot bottles and turpentine stupes.

About 9 a.m. the next day the skin was a little warm, but the purging and sickness as bad as ever. He then had hydrarg. subchlor. gr. v. statim; gtt. ij. of creosote vice j., and hydr. subchlor. gr. iij., with each dose of medicine every two hours.

About 6 p.m. he began to improve; the sickness not so frequent, and the purging but three times since 2 p.m.; but still the motions very pale, but slightly tinged with green. The medicine was discontinued, and the next morning on inquiry I found he had a good night; bowels open only twice; only once sick; the last motion, about 9 a.m., was a yellowish liquid one. Since then he has continued to improve, and to-day (8th) has had but two motions, almost natural, only rather watery, and has not been once sick. Is eating toast and beef-tea, and expresses a wish to leave, saying he is quite well.

The other two cases have been treated with soda and creosote, and are now quite convalescent.

ST. BARTHOLOMEW'S HOSPITAL.

CASE OF ROSEOLA CHOLERICA.

(Under the care of Dr. ANDREWS.)

"Roseola Cholerica," says Dr. Wilks (*Guy's Reports*, 1857), "is the term applied to a rash which has been observed to accompany the secondary fever of a certain number of cases of cholera, in all the epidemics which have hitherto occurred in Europe, and has been described by English and Continental authors at every visitation." He says the first description was by Dr. Babington in 1832. It does not appear to be common. The reader will find particulars of a case in our report of cases treated by Mr. Richardson and his assistant, Mr. Widdas, at the Whitechapel Workhouse, p. 118. It is very desirable that this symptom should be carefully studied, and to further this we make another quotation from Dr. Wilks's paper :—

"According to our experience during the last epidemic, the rash appeared generally from the sixth to the tenth day (though sometimes later) after the first seizure. When the more urgent symptoms had passed, and reaction with its secondary fever had set in, there succeeded in the course of another day or two this peculiar eruption, appearing as an exanthem all over the body, but especially on the extremities. When in the most acute form, it resembled an urticaria febrilis, covering the trunk and limbs with large, raised, bright pink patches. In some cases the eruption was not so bright, but appeared on the skin in much smaller patches or spots, and in other cases the eruption consisted of an uniform mottling all over the surface 'resembling measles or scarlatina.'" In one case Dr. Wilks mentions, the scarlatina-like rash followed the roseolous.

Dr. Andrew suggests that the rash may be a simple urticaria in consequence of the intestinal irritation produced by cholera, rather than as a true part of the disease cholera.

Thomas A., aged 16, admitted into St. Bartholomew's Hospital on July 31. He had had diarrhœa since the 28th. On admission, he was suffering from rice-water vomiting and purging ; but the skin was warm and the pulse of fair volume. On the following day his extremities became somewhat blue and cold ; but he never passed into a state of extreme collapse. He first passed urine about twenty-four hours after admission, and it contained a small quantity of albumen. On August 2 the stools became bilious, but were still relaxed. The rash first appeared on August 7.

It is most abundant on the hands, on their dorsal aspect, where it produces an all but uniform red blush ; about the middle of the forearm it becomes discrete, the separate patches, which are slightly elevated, closely resembling urticaria febrilis. There are numerous patches on the face and feet, a few widely scattered ones on the back. At its first appearance it was attended with considerable itching, which has since subsided. The temperature rose from rather below 97° to 99·3° F. The case, though not a severe one, was attended throughout with considerable delirium. A marked improvement in his general condition coincided with the appearance of the rash.

To-day (August 8) the urine is limpid, of sp. gr. 1002, not albuminous ; temperature 101° ; pulse 96, of fair volume ; appetite fair. He passed a good night, and says that he feels much better.

Cholera Bulletins.—No returns have been published from Paris, but it is well known that the deaths are more than 100 per diem. Two members of the Medical Profession—M. Gibert, Physician to St. Louis, and M. Chaussier, son of the celebrated Chaussier—are among the victims. The former Physician had always ridiculed premonitory diarrhœa as a fanciful idea, and, it is said, suffered from it, without attempting to treat it, for several days before his death. The deaths at Amiens have decreased to 10 or 12 per diem.

The General Hospitals of Paris.—These are eight in number, and as a mean, deduced from the experience of eight years (1855-62), furnished the following number of beds :—Hôtel-Dieu, 796 beds, with a mortality of 10·54 per cent. ; Pitié, 594 beds, mortality 11·91 ; Charité, 480 beds, mortality 9·59 ; St. Antoine, 330 beds, mortality 10·39 ; Necker, 346 beds, mortality 11·02 ; Cochin, 116 beds, mortality 9·85 ; Beaujon, 399 beds, mortality 11·13 ; Lariboisière, 617 beds, mortality 11·70.

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Medical Times and Gazette.

SATURDAY, AUGUST 11.

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CHOLERA, AND THE WATER SUPPLY OF EAST LONDON.

The Registrar-General's Return for the week ending August 4 shows a slight increase in the exceptionally high rate of mortality which was attained in the preceding week. The deaths from all causes were 1266 in excess of the estimated number for the week ; the excess in the previous week was 1213.

The subjoined table will show at a glance exactly how the record of cholera and diarrhœa has progressed in the last three weeks :—

	Diarrhœa.			Cholera.		
	July 21.	July 28.	Aug. 4.	July 21.	July 28.	Aug. 4.
London . . .	221	349	351	346	904	1053
West Districts .	37	48	46	11	12	12
North ,, .	54	78	79	6	20	46
Central ,, .	31	44	42	1	15	32
East ,, .	60	123	125	308	818	916
South ,, .	39	56	62	20	39	47

The eastern districts continue to bear the violence of the epidemic, which still rages fiercely in Poplar, Whitechapel, Bethnal-green, Stepney, and Mile-end Old Town. The extensive district of Shoreditch, lying westward of Bethnal-green, and supplied with water chiefly by the New River Company, has hitherto been comparatively free from cholera ; but 16 deaths were registered there last week, against 7 in the preceding week. There was no increase either of cholera or diarrhœa in the western districts. In the northern districts, Islington and Hackney account for 39 of the cholera cases. In the central districts 12 cases occurred in St. Botolph (East London) and 8 in West London. In the southern districts 22 cases occurred in Deptford and Greenwich. Deaths from cholera or diarrhœa occurred in small numbers all over the London *districts*, although many parishes have not yet been visited. The *foci* of the epidemic are abundant enough to call for unflagging energy on the part of parochial authorities, with whom it rests to keep the invader at bay. With a properly organised system of house-to-house visitation, and an unsparing use of Condy's fluid, carbolic acid, etc., we may prevent the poison from domiciling itself amongst us. The Registrar-General is now publishing a *daily* statement of deaths registered in the London districts, and the results for Monday and Tuesday last show just such fluctuations as one would naturally expect. 206 deaths from cholera and 58 from diarrhœa were registered on Monday, whilst for Tuesday the numbers were 129 and 43. These daily accounts are, however, subject to correction at the end of each week for returns not received in time for publication : the numbers for Monday are minus the particulars for seven sub-districts, and on Tuesday for two only. It may be that the epidemic is declining, but it would be unsafe to presume upon the increase or decrease in so short a period as one day or two, especially as we imagine that registration is rather intermittent than continuous.

It seems that the remarks which the Registrar-General—or, to drop a figurative expression which is everywhere understood, Dr. Farr—made in the preceding week's Return, concerning the water supply of the East London districts, were objected to by the Company, in whose hands the supply is a monopoly. Dr. Farr personally inspected the chief cholera districts at the East-end, and he noticed, what would strike anybody who was aware of the relationship existing between cholera and impure water, that the East London Waterworks were in exceeding close proximity to the foul and abominable waters of the River Lea and its tributary channels and cuts, which intersect the worst of the affected districts. He expressly stated that the Company's water looked clear, and was, according to Professor Frankland's analysis, fairly comparable with the other London waters. On the authority of maps of recent date, Dr. Farr referred to what is laid down as the "East London Waterworks Canal," running close alongside the Hackney-cut down to certain reservoirs on either side of the Lea near to Old Ford, and described as "East London Waterworks Reservoirs." He added that "the Company will no doubt take exemplary pains to filter its waters; but it is not easy to guarantee the purity of water drawn from such a river as the Lea, in dangerous proximity to sewers, cuts, and canals." The Company, by their engineer, complained of these statements as injurious, and explained that, whatever might have been the case at one time, the open canal and the large reservoirs which Dr. Farr had referred to were now no longer in use. The engineer says that their intake is some three miles above Lea Bridge, where the filtering beds are situate; that from those filtering beds the purified stream flows through an iron pipe to the pumping station at Old Ford, and is conducted into a large new reservoir two and a half acres in extent, whence it is distributed over the area now suffering so much from cholera. The Company supplies certain districts north of Victoria Park direct from its filter beds at Lea Bridge, and Dr. Farr is justified in calling it a notable circumstance that the districts so supplied, albeit in close contiguity to the worst infected districts, have not hitherto suffered from cholera more than districts supplied by other companies.

The engineer states that all the sewage betwixt Tottenham and Enfield, embracing therefore the area of the source of the East London Company's supply, is cut off from the Lea by intercepting drains; consequently at their intake the water is as pure as at Enfield. Now we must really assure the Company that having not the least desire to "get up a case" against them, we nevertheless fail to see what security is afforded to the drinkers of their water by the Enfield standard of purity, seeing that towns and villages higher up the river are allowed fo pollute it with their sewage. The river between the two limits may be protected, but water in a river is a variable quantity, which is perpetually influenced by conditions not arising at any one spot, but partaking of the character of its worst as well as its best part. The strength of a chain is that of its weakest link, and the purity of a river may be destroyed by pollution at any point of its course. At Ware, Hertford, and Waltham Abbey, sewage is poured into the Lea—so, at least, we are informed—and this is one of the sort of things abont which there is not much likelihood of mistaken identity.

The engineer says that the Company makes no use of the canal or of the large reservoirs for their present water supply; bnt it is admitted that the communications between these disused reservoirs and the present pumping-apparatus are still retained. Now, one of these old reservoirs, it is said, was recently emptied, *and filled itself again.* Where did the water come from which could get into this reservoir unaided? It is to be feared that it made its way thither from the Lea or one of its contiguous tributaries. The engineer says that it is proposed to turn one of these old open reservoirs into a covered reservoir for future use; we hope not the one which has given proof of its powers to help itself from the most convenient source. Dr. Farr says of the covered reservoir at Old Ford that the water in it looked perfectly pure, and that its walls were well built, but that "close by its side flows the tidal end of the Lea, black, and full of the foulest impurities."

We cannot help thinking this proximity dangerous to the purity of the reservoir's contents; that wall must indeed be well built which with water on both sides of it can defy the amalgamation, more or less, of the two bodies of fluid. Let us add that the maintenance of the means of communication between the disused reservoirs and the works now in use is, to say the least, injudicious. The Company would no doubt take special care that those channels should never be used, but are they quite sure that they are safe against the indolence or negligence of servants and the like? Very serious interests are involved herein, and we would advise the Company by all means to lose no time in abolishing all communication between their works and the river outside them, which are so many objects of suspicion so long as they remain intact.

Dr. Farr concludes his remarks this week by asking, as he is fairly entitled to do, "Why, as land is valuable in East London, a commercial company has for many years retained some miles of a canal and nine acres of reservoirs for no purpose?" And we agree with him that, in the interests of the public health, the Company are bound to give the fullest security that their water cannot possibly be contaminated by the tidal impurities which encompass their works. Nobody alleges as a fact that the East London Company are chargeable in any way for the explosion of cholera within the area of their supply; but certain remarkable coincidences made it absolutely incumbent that public attention should be drawn to them in order that they might receive proper explanation.

Not the least discomforting feature of the whole matter, and which affects all the water companies alike, is the statement by Professor Frankland that "chemical investigation is utterly unable to detect the presence of choleraic poison amongst the organic impurities of water, and there can be no doubt that this poison may be present in quantity fatal to the consumer, though far too minute to be detected by the most delicate chemical research." So that the occurrence of a single case of cholera or choleraic diarrhœa upon the banks of the Thames, the Lea, or any other river from which the London water supply is derived, may at any moment diffuse the *cholerine* all over the metropolis. The usual analyses would give no indication whatever of the death-draught in the cup.

Dr. Frankland states that filtration through *animal* charcoal removes practically all organic matter, and he therefore urgently recommends—

> "That, during the prevalence of cholera, the whole of the water supplied to the metropolis should be passed through animal charcoal immediately before transmission to consumers from the reservoirs of the respective companies. For this purpose 300 tons of bone-black in the condition in which it is used by sugar-refiners would be required to purify the total supply of the metropolis, as I find that water passed at the rate of 1,000,000 gallons in twenty-four hours through 3 tons of bone-black is completely purified. This operation, even when performed upon the water supply of London (100,000,000 gallons daily), would be neither formidable nor expensive. Three or four days would suffice to fix the necessary filtering boxes, whilst the animal charcoal, being an article which is now manufactured on a very large scale, can be had on the shortest notice. It is scarcely necessary to add, that the water should be passed through the animal charcoal after it has undergone the usual process of filtration."

Of course we must expect that the companies will regard this as a question of expense; but if, as we understand, the cost of filtering the entire water supply of London on Professor Frankland's plan would not exceed £7000 or £8000 for twelve months, we have a right to demand that no time should be lost in putting the plan into operation. £10,000, if distributed over all the companies in rateable proportion, would be but a flea-bite individually, and we shall hope to learn that, now a definite recommendation is made, the companies will try the experiment forthwith. By such means they may possibly avert for a time the complete reorganisation of the London water supply on a basis less open to objection than the present system affords. Sooner or later, however, as population and sewage impurities increase along our river-banks, we must go elsewhere for water; and we cannot help saying, the sooner the better.

CONDY'S FLUID AND CARBOLIC ACID.

We print in another column a letter of inquiry as to the exact value of permanganate of potass, and conceive that it may be useful to make a few remarks on the subject.(a)

All London is now smelling of carbolic acid. Placards recommending disinfectants are affixed to every wall, and in the parish in which we live men are going round the houses of the poor with instructions to put a dose of carbolic acid into every sink and closet, and to put half an ounce of Condy's red fluid into every water receptacle that is made of wood. These measures are taken in the belief that something dangerous lurks in dirty drains which carbolic acid can destroy, and something in suspicious drinking water which Condy's fluid can destroy, leaving the water fit for use. So far as regards cholera, the dangerous matter may be of three kinds: either living matter of some low sort, as held by Dr. Beale, and rendered most highly probable by the Cattle Plague Reports; or an alkaloid, as held by Dr. Richardson; or, lastly, matter in a state of change, according to Liebig's theory, which last hypothesis is not inconsistent with the first.

Condy's fluid is a solution of some permanganate; for our present purpose let us say permanganate of potass. One equivalent of this salt = 158 is calculated to lose one-fourth of its weight of oxygen in presence of oxidisable matter, and in so doing loses the pink transparency of its solution, and forms a brown precipitate. The quantity of oxidisable matter may either be estimated by giving the quantity of oxygen in the decolorised permanganate simply, or on Dr. Letheby's method, by multiplying the amount of oxygen by 8. But we cannot at present go into the process, which will be found well described in the papers above referred to. We want rather to come to one or two practical points of present application.

Let us suppose a water of a bad, or at least a suspicious marshy smell; the addition of one or more drops of "Condy," or of one of the finer solutions of permanganate, will speedily remove that smell and taste, and make the water fresher and nicer. The quicker the decolorisation, the greater the need of it.

If water so treated, with a slight pink colour remaining, be passed through a filter, it comes out perfectly clear and colourless; but without filtering may be used for cooking or making tea and coffee after the brown sediment has settled. Most assuredly any one thirsty enough to drink raw London water just now had better use the permanganate and filter too.

It seems generally agreed that the gases of decomposition are very quickly neutralised by this means, and that organic matter actually decomposing very quickly decolorises the liquid also. But this is not the case with *stable* organic matter. Water coloured with Condy so as not to be drinkable with pleasure, yet may contain animalcules in the most lively state. Nay, the amœba, paramœcium, colpods, and other disgusting broods are not in the least affected by water too reddened to be drinkable. The same with regard to minute plants. Give *quantity* enough and *time* enough, and all will be destroyed—first, the stinking gases; next, the decaying organic matter which evolves them; then the microscopic animalcules which feed on it, and which, if not destroyed by the Condy, would die of starvation; and the plants last.

Time and quantity also are required for the destruction of such a substance as the bitter extract which is diffused into water from quassia; this may be got rid of in 12 hours. The resistance of strychnia is much greater; still a very weak solution may be deprived of all bitter taste by excess of permanganate in 24 hours. Matters having organic form and firmness, as starch, etc., if not decomposing, are very slowly acted on.

Animalcules of the kinds indicated may also live in water just containing carbolic acid enough to be smelt and tasted.

The conclusions we would draw from the above remarks are that when we employ the carbolic acid for the disinfection of drains, sinks, etc., it ought to be employed in a state of pretty high concentration and large quantity, so as, above all things, to purify the aperture out of which the dangerous emanations would come. Likewise in the use of Condy's fluid for purifying water-butts, enough should be used, but we should take care also that the butts themselves are cleansed, and pitched or charred inside, for it is a waste of force to use the permanganate to do what might be done by a handful of lighted shavings and a brimstone match.

We may add that at least one traveller of our acquaintance used the permanganate daily for some time with no ill effects whatever.

TAPEWORMS AND DISINFECTION.

It is far from agreeable to think that different parts of our bodies are liable to become the abodes of a host of animal parasites, and that additions are being constantly made to the existing list of these creatures by the discoveries of those who are designated by the learned name of Helminthologists. It is also difficult to make ourselves believe that some of these parasites have a right to dwell within us, and that our bodies are their natural home. Von Siebold insists that "it is incompatible with the dignity of man that these parasites should be originally intended to take up a temporary abode in the human body." However, another observer, equally entitled to our confidence, accepts the uncomfortable conclusion that the human body is "the exclusive home and legitimate territory of at least two species of entozoa." It is idle to discuss this side of the question: the fact will remain, whatever we may think, that a host of verminous creatures get within us. There is some satisfaction in knowing that we can detect the source from whence they are derived, can get rid of them, prevent their increase, and guard against their reintroduction. The most common animal parasites, of course, are tapeworms. The assertion that exact knowledge upon not only the history of entozoa in general, but tapeworms in particular, is scant and unsatisfactory, will not be very far from the truth. Dr. Cobbold has done very good service in issuing a little work (a) of eighty-three pages, comprising the pith of all that is known on the subject, with illustrations of the different tæniæ, and an appendix entitled "On Beef, Pork, and Mutton, in relation to Tapeworms." Very few men would care to wade through an elaborate treatise on helminthology; the list of long names alone would deter many at the outset. The contents of this present work we ought really to know.

We hear a vast deal more about entozoa now-a-days—more, indeed, within the last two or three years, comparatively speaking—than formerly; and some think that they are increasing very rapidly in numbers. This does not appear to be wholly explained by the fact that they are more curiously sought for. Trichinosis is an example. The deficiency of grouse on the Scottish moors is said to be due to the death of the birds by tapeworms, which are rapidly increasing, and the ova of which are derived from the colley-dogs of the country, who deposit them with their excrement on the moors. Man may, it is thought, thus be affected *viâ* the grouse. The two common forms of tapeworm in man are the tænia solium, armed and hooked, derived from measly pork; and the tænia medio-canellata, the unarmed and hookless, obtained from beef. Dr. Cobbold shows that, contrary to an almost universal belief, the latter is much the more common of the two. The cysticerci of beef are small—scarcely so large as a pea—and readily overlooked; they have a large unarmed head, so has the adult tapeworm. Those of pork are as much as nine-tenths of an inch in length, and always sufficiently conspicuous to the naked eye; they possess a smallish head, with a double crown of hooks. The ova of the beef tapeworm are obtained from pastures by cattle, and we become infested through our beef-eating habits. Dr. Cobbold enumerates experiments upon this point. Out of 90 specimens of tapeworm examined by Dr. Cobbold, no less than three-fourths were of the unarmed kind. Dr. Cobbold is an enemy to underdone beef-steaks, and, on the score of the prevention of these parasites, a knowledge of the distinction of these two species is very important. The author tells us all about the Bothriocephalus latus, which is introduced into the body "by eating certain kinds of imperfectly cooked fresh-water fish," and in Russia infests dogs; the Greenland tapeworm, common in the dog, rare in man; the elliptic tapeworm, found in the cat, and probably the same as the Tænia canina of the dog; the triple-crowned, the spotted, and the ringed tapeworm, possibly got from mutton; and lastly, the hydatid-forming tapeworm, common in its larval state (known as *hydatids*) in man, derived from dogs, and very prevalent in Iceland, where every peasant has on an average half-a-dozen dogs.

(a) We may refer those who wish more exact information to Mr. Condy's book on "Purification of Air and Water;" to a paper by Prof. Miller, of King's College, in the *Pharmaceutical Journal*, vol. vii., p. 58; and to a pamphlet by Dr. Angus Smith, "On the Estimation of Organic Matter in Water, with reference especially to Sanitary Purposes." London: Longmans. 1866.

(a) On Tapeworms (Human Entozoa); their Sources, Nature, Treatment. By T. Spencer Cobbold, M.D., F.R.S., Lecturer at the Middlesex Hospital. Longmans. 1866. Pp. 83.

The dissemination and transplantation, as it were, of tapeworms from man to animals, and *vice versâ*, is very easy. The pork tapeworm contains not less than 45,000 eggs, and these escaping from the joints before they leave the body, or subsequently, are distributed by sewerage, by water, or other means, reaching the stomach of pigs or even man, where the gastric juice dissolves the shell of the egg and sets the embryo free, which bores into the tissues around. "Pigs reared in the neighbourhood of thickly populated districts are very likely to be measly" (p. 20). People who live in districts where dogs abound are liable to the dog hydatid, and the same line of reasoning holds good of the beef measles and the unarmed tapeworm. Man is more likely to become the seat of the latter where beasts are fed on pasture near large towns, watered with sewage.

Preventive measures have never been well considered. We may check the prevalence of parasites by "enforcing a more general cleanliness amongst the poor and by promoting all good sanitary measures. Despite our care, however, many parasites will gain access to the human frame, under circumstances which no amount of caution, foresight, or cleanliness could prevent. The connexion between uncleanly habits and parasitic disease is by no means invariable, nay, it is exceptional," says Dr. Cobbold, p. 61. One golden rule seems to constitute the essence of prevention, viz., to eat our "meats" well cooked: *apropos* of this cholera time, it is highly important to inquire whether the germs of tapeworms may not be effectually destroyed by disinfecting alvine discharges. We are now encouraging the wholesale disinfection of drains, closets, sewers, gullies, and secretions of all kinds. May we not hope hereby to destroy a large number of tapeworm eggs? Their tenacity of life is perhaps great, for, if we mistake not, Dr. Budd has recorded the case of a woman who recovered from an attack of cholera, and whose condition shortly after gave evidence that the tapeworm with which she was affected was still alive. If parasitic disease of animal origin seems more than usually rife amongst us, we may fairly look for satisfactory results by the free practice of disinfection, not limited in its application to that which belongs to man personally, but adopted, when possible, where animals are concerned.

APPOINTMENT OF DR. MARKHAM AS POOR-LAW INSPECTOR.

We are sure that the whole Profession is gratified at the appointment of Dr. Markham as Poor-law Inspector, and not less that his appointment is considered the reward, or at any rate the result, of his exertions as a member of the late Committee for investigating the claims and position of the Medical officers of the Army and Navy. It is stated that his duties will connect him, at least for the present, with the Metropolitan district. This, too, is as well, for the present state of affairs, even without the complication of cholera, demands the supervision of a strong-willed, clear-headed man, committed to no extreme views, but yet determined to point out and if possible enforce what is right. If, in addition to public and acknowledged services, it be permitted to refer to the tone of certain articles in the *British Medical Journal*, which must have been published with his sanction, we would especially commend his attacks on the Council of the Royal College of Surgeons, as showing that no "board of guardians" need expect a mercy which has not been shown to their ancient homologues in Lincoln's-inn-fields. We are sure, as we said last week, that the Physician's eye will see for itself what the Barrister's eye only sees with the aid of what Dean Swift called "a flapper." Such questions as floor space, cubic space, ventilation, the classification of the sick and imbecile, the need of new Hospitals (whether for acute or chronic cases), and the quantity and quality of Medical attendance, will all be dealt with by Dr. Markham in a manner that will satisfy the demands of the humane without trenching too much on the pockets of the ratepayer.

WHY NOT STAMP OUT THE CHOLERA?

Mr. Glaisher and Mr. Lowe believe that a blue mist is hanging over us, which is possibly a comet detained by the earth's attraction. This reminds us of Dr. Prout's statement of the suddenly increased weight of the atmosphere during the cholera of 1831, and is a matter for investigation by chemists. If strong winds do not blow this mist away, it is clear that it depends on conditions which science has not yet fathomed and is not responsible for; but it will be a great pity if this blue mist diverts attention from matters quite within our control. It is very possible to send an army of men into the district supplied by the East London Waterworks, and to empty every waterbutt, scrape out its filthy and rotten inner surface, and purify it by burning a handful of shavings and a large brimstone match within it. This process saves wine; why should it not be used to purify water? There is not a single lazy wretch out of the hordes of "working-men" who live within the cholera district who might not do this in half an hour to the butt in his own lodgings, instead of brawling about "manhood suffrage." Let them show their manhood before asking the suffrage. If not charred, these butts and the water contained might be purified by Condy's Fluid. The Secretary of State for the Home Department also might insist on the daily use of the permanganate in the reservoirs of that Water Company for at least a week. Dr. Frankland suggests that eighty pounds of the permanganate at one shilling per pound should be added to each 1,000,000 gallons of water; and as the East London Water Company supplies seventeen million gallons a-day, £476 would be the weekly cost of this experiment, which might be continued till new charcoal filters are set up. These measures were recommended months ago in the "Memorandum" issued by the Metropolitan Medical Officers of Health. In the next place, there can be no insuperable difficulty in getting a sufficient army of workmen to cleanse every street, every court, and every back yard of all removeable filth on the surface, and to cart it away, and drench the earth underneath with a solution of carbolic acid. The closets and drains may be disinfected in like manner, and the houses well washed outside, and all the basements and cellars rinsed out with carbolic acid and water delivered by means of a fire-engine or a hydrapult. When these things are done, and found unavailing, then pray Heaven for more light; but don't let us commit the profanity of calling for the interposition of Providence whilst we neglect what clearly lies before us for our hands to do.

We have again this day (August 9) visited certain parts of Bethnal-green to which we referred in our article last week. There are the same squalor, filth, and mouldy hopelessness. In one house, No. 15, Princes-court, near St. Philip's Church, where four deaths have occurred, the water receptacles are two rotten old butts in the back kitchen, such as would detain any organic germs and foster their growth. The danger of the water, and the notion of emptying and scorching the inside of the butts, never seem to have occurred to these poor helpless people.

THE WEEK.

PROGRESS OF CHOLERA.

No cholera case has been admitted during the present week, as far as we have been enabled to learn, into St. Mary's, St. George's, the Westminster, University College, or the West London Hospitals. Two cases, however, were admitted into King's College Hospital, the one on Sunday, the other on Monday, one into the Middlesex on Sunday, and, according to report, a gentleman was seized with violent "cramps" and taken to St. Bartholomew's on Monday, and one is at present under care at the Great Northern Hospital. Diarrhœa is very prevalent all over London. There were no less than 500 applications for diarrhœa medicine made at University College Hospital on August 3; on Monday, however, the number had diminished to about 250. Cholera seems to have made its appearance in various parts of the country within the last few days—at Chichester; in the districts of St. Philip's and Redcliffe Mead at Bristol; and, according to the local papers, at Deal, Dover, Faversham, and Sandwich. A fatal case has been recorded at Canterbury (the deceased came from London). Near Guildford two fresh cases have occurred; at a place called Warwick Town, in the Reigate district, a child died not many days since from an attack closely resembling, if not identical with, cholera. In both the two last-named localities the water used by the inhabitants is polluted, and diarrhœa is rife. Cholera is also reported to have broken out at Forest Gate, Essex, Sherborne, in Dorsetshire, near Huddersfield, and at Montrose; two additional cases have occurred since Friday at Appledore, in Devonshire, one at Charlestown, in Cornwall, and one at Dublin, towards the end of last week.

THE RICHARDSON FUND.

An influential meeting was held at the offices of the Medical Benevolent College, Soho-square, on Friday, August 3, to adopt measures for giving effect to the feeling expressed by many members of the Profession that some acknowledgment should be made to Dr. B. W. Richardson, M.A., for his devotion to scientific research. The attendance was very numerous. James Paget, Esq., F.R.S., occupied the chair. Drs. Chambers, Sibson, F.R.S., Aldis, Ogle, Camps, Markham, Martin, of Rochester, Tilbury Fox, Drysdale, Routh, Henry, H. Martin, Protheroe Smith, and Messrs. Partridge, F.R.S., Carr, Adams, Lord, Henry Lee, Moore, Erasmus Wilson, F.R.S., Propert, Lowdell, of Brighton, Walker, R. Dunn, and R. W. Dunn, etc., were among the number present. The chairman (Mr. Paget) said he should perhaps express the opinion of those present if he gave vent to his own feelings in reference to their present meeting. If it were asked why they were taking the present unusual step, the answer was easy—that Dr. Richardson had been for many years engaged in the culture of scientific research; that the results had been very meagre as regards the personal benefit which he had thence derived, but advantageous as far as the public were concerned. He would not contend whether or no Dr. Richardson was the first investigator of the day, but he certainly claimed to place him foremost in position amongst scientific investigators. In one quality he is known not to be surpassed—in the entire generosity with which he has always pursued his inquiries. All regard for self has been left out of view, while he has shown his good sense in casting aside little matters of interest, and steadfastly directing his efforts towards the accomplishment of some useful result. Generosity, Mr. Paget said, is the characteristic of the Profession, and the practice of Medicine is the only calling in life in which holding a patent is regarded as discreditable. Dr. Richardson, had he not possessed it, might have reaped no small pecuniary advantage. Dr. Richardson's career was in no sense to be regarded as complete; the expression of good opinion on the part of a large number of the Profession would encourage him to strive after greater and even more useful discoveries. The testimonial which they would give to Dr. Richardson should be substantial—no ordinary honorarium, such as a bust or piece of plate—they should give him that which, though he may not need it, would be useful to him in the prosecution of research. Dr. Richardson's recent invention (the ether-spray) seemed to indicate the present as affording the most suitable and convenient opportunity. Mr. Paget then spoke of the daily frequency with which the ether-spray was used by him in his own practice; that this happy adaptation of scientific knowledge combined with mechanical ingenuity was no trivial boon to humanity; its value in cases in which chloroform cannot be used, either because of possible or probable risk, or because the pain caused by operation is not sufficiently severe or too brief to warrant inhalation. The proportion of minor to capital operations made occasion for its general use, and the number of cases in which pain can be put a stop to is as great by the ether-spray as by any other means. On these grounds it seemed that the proper time for giving Dr. Richardson not only an honour, but the advantage of a testimonal, was the present. The Chairman then called upon Dr. Day, of Stafford, the originator of the testimonial, to propose the first resolution.

Dr. Day had the liveliest gratification in proposing the resolution. He had, however, a duty to perform independently of asking for its adoption—viz., to render an account of the reason which led him to take such a prominent position. After referring to a letter he addressed to the Medical journals, Dr. Day said that he was induced to enter into the matter promptly, in consequence of an event which happened a month ago. He had been up to hear the Harveian oration delivered at the College of Physicians. On his way home he got into a carriage with two gentlemen, strangers to him, who were most eulogistic in their remarks about Dr. Richardson and his spray producer. Dr. Day got into conversation, and was asked if he knew Dr. Richardson, and whether the latter had not made a handsome fortune. Dr. Day was unfortunately obliged to draw an exactly opposite picture. The conversation ran on, and one of the strangers, who turned out to be a noble lord, declared that if the Profession did not take the matter up the public would, and secure to Dr. Richardson the results and position he ought to possess. Dr. Day went home, thought the matter over, and the meeting this day, he said, was the consequence. He had written to 200 Medical men, and had received favourable replies from nearly 150 of these. After speaking in high terms of Dr. Richardson's attainments, he proposed the first resolution, to the effect that a committee be formed, with power to add to their number, for the purpose of raising a testimonial to Dr. Richardson.

Mr. Dunn, in seconding the resolution, was sure that no one was better qualified or better able to appreciate scientific discoveries than the Chairman. Carried unanimously.

The second resolution was proposed by Mr. Lord (Hampstead), and was as follows:—"That the following gentlemen be requested to become honorary officers of the Committee:—*Chairman:* James Paget, Esq., F.R.S., London. *Vice-Chairmen:* Sir Thomas Watson, Bart., London; Sir Ranald Martin, London; R. Carden, Esq., Worcester; Dr. Brady, M.P., London; E. Clements, Esq., M.P., Shrewsbury; Dr. Symonds, Bristol; Dr. Sharpey, F.R.S., London; T. Paget, Esq., Leicester. *Treasurers:* Dr. Day, Stafford; and Dr. Sibson, F.R.S. *Secretaries:* R. Dunn, Esq., London; and R. W. Dunn, Esq., London." Mr. Lord spoke in most complimentary terms of the personal and scientific attainments of Dr. Richardson, and of the great utility of his researches.

Dr. Sibson, F.R.S., in seconding the resolution, expressed his belief that the ether-spray would be of great use in Medical practice, in cases of severe pain caused by internal inflammation; the application of the spray might save that of blisters, leeches, or the injection of morphia, acting by producing that effect locally which the use of a general measure was also capable of doing, and attacking a single symptom without risking the possibility of losing or diminishing the general power of the patient. All his life long Dr. Richardson had been interrogating the facts of science. His three-hundred guinea prize and his work on the heart were well known, and one of the best papers he (Dr. Sibson) ever read, On the Phthisis of the Drunkard, showed the acute clinical observation of the author, who throws the whole of the powers he possesses with a sort of joyousness, so as to pierce the thing he is working at and thus accomplish his object, and therefore the Profession would be glad to recognise the merits of (as Dr. Sibson said) "this fine-hearted fellow."

The Rev. Dr. Bell, who proposed the formation of an Executive Committee, said he had known Dr. Richardson and been thrown constantly in contact with him for several years, and had the greatest possible admiration for him, as one of the most liberal and disinterested men of the Profession, whom it is well we should honour. "I say we," said the speaker, "for it is scarcely sixteen years since I belonged to the Profession myself. I did not leave it from any dislike, and have tried to maintain close intercourse with it since I left it. And how liberal, how generous, how benevolent, and how godlike it is! I hope we shall not only have Medical men, but also the laity, who are really more interested in the matter than the Profession, to assist. The Profession should commence the movement, and the public will no doubt foster it."

Mr. Adams spoke very much to the point, and was followed by Dr. Fuller, who, in asking that the Executive Committee might be empowered to receive subscriptions, said it had occurred to him to meet with many men of high position, who had felt strongly—indeed, had gone so far as to assert—that Dr. Richardson ought to be placed in a position independent of all fees, that his time might be given up unfettered to his researches.

Mr. Erasmus Wilson, F.R.S., no doubt expressed the feeling of all present in saying that they were indebted to the meeting in the railway train, the conversation there, and the steps taken subsequently, greatly, for it gave them the opportunity of helping a brother who deserved well at their hands, and he felt sure the public would feel grateful in being allowed to join in the scheme which those present were desirous of carrying out. It would be a source of great gratification to know that a man whose whole soul is in his work could be allowed to continue the prosecution of his favourite studies.

After some remarks from Mr. Partridge, F.R.S., Dr. Paul, Mr. C. H. Moore, and Dr. Ogle, in support of resolutions,

Mr. Henry Lee proposed a vote of thanks to the Chairman. They were all of one mind as to the work they were then engaged in. The large attendance was most propitious, and augured well for the progress of the movement. But he could see that it was of the greatest advantage that one so distinguished should have occupied the chair—one whose presence must be regarded as a guarantee for the success of any movement, and I give utterance to my conviction, said Mr. Lee, that your having given the weight of your personal approval is a sure sign of success.

Mr. Paget replied that he was only too glad if he could do anything that would tend to promote the testimonial. The efforts of one, he felt, could avail little compared with the united exertions of those present. They were each the centre of a circle of friends, and if they desired to secure the object for which they had met together, they would take care to obtain the influence and action of the several circles around them.

It will be seen that the meeting was unanimous in wishing that in some way or other means might be found to enable Dr. Richardson to prosecute investigations without entailing any drain upon his own private resources. We hope that Dr. Day's name will be always associated (as the originator) with the fund, and that he will enjoy the full credit of having initiated the movement.

THE EDINBURGH MEDICAL SCHOOL.

Professor Christison's address as *Promotor Facultatis* at the late annual graduation in Medicine of the University of Edinburgh is a digression from the beaten path which orators of former years have trodden. On two former occasions he told his hearers he had occupied the same position, and had given the usual good advice to the newly fledged Doctors on their approaching outset in Professional life. As, however, he cannot assure himself that the gentlemen thus addressed have been much the better for the admonitions and directions which he delivered, he this year omitted "improving the occasion," and gave his auditors an amusing and discursive sketch of the history, fortunes, successes, and prospects of the Medical Faculty of the University whence they derive their right to practise on her Majesty's lieges. Of course such a subject in the hands of such a man could not fail to interest, and we can thoroughly believe that Dr. Christison was never listened to with greater attention. The foundation of the Medical Faculty by the first Monro in 1720—the tincture which the new Faculty took from the Dutch and German Universities, where its first professors had all graduated—the Scotch professorial system as compared with the English tutorial—the great names who have given the Edinburgh Medical School a position second to none in modern Europe—the School traditions—the Burke riot which arose from the Edinburgh magistrates wishing to debar the students from inspecting the body of Burke, the murderer, before he was dissected—the snow-ball tournament—a town and gown row, when the 79th Highlanders were called out—the competition in University teaching, to which a wide path (Dr. Christison seems to think almost too wide) has been opened by the late radical changes in the University statutes—and the success which Doctors of Edinburgh have attained in the British and Indian armies, in the navy, in London practice, and in the provinces and colonies, were some of the topics touched on. Dr. Christison's views upon the apprenticeship system are very much the same as those advocated two or three years ago in our own columns. Apprenticeship, in the old sense of the term, has nearly died out in Scotland, and is vastly modified in England. Dr. Christison allows, as all must, that a portion of the student's period may be profitably spent with a well-educated Practitioner in large general or dispensary practice, but he thinks that instruction in the sciences which form the groundwork of the Medical should precede the private pupilage. Whilst, however, he is an unsparing opponent of the old apprenticeship as an offshoot of the tutorial system, he is candid enough to acknowledge that there are some faults in the professorial. He thinks there should be a limit to the multiplication of lectureships and the number of lectures. We think so too, and we are glad to learn that there is a prospect of amendment in this particular in the University of Edinburgh itself! The concluding part of the Professor's address is rather sad. Edinburgh is becoming merely a provincial city. London is absorbing much that was hers, and Glasgow far surpasses her in wealth. She still, however, retains three great supports of her fame and prosperity—her law courts, her University, and the romantic beauty of her town and site. But the University is sadly in want of money, and is in danger of being eclipsed in London, Glasgow, and Ireland. £15,000 are now required for the erection of new chemical and anatomical theatres, and the Professor appeals to the public spirit of the citizens of Edinburgh to supply it. We hope that funds will be forthcoming, for we should indeed regret the decadence of Edinburgh from her present high position as a Medical University.

FROM ABROAD.—RICHARDSON'S SPRAY-PRODUCER—SILENCE IN PARIS ON THE CHOLERA—ADHESION TO THE GENEVA CONVENTION BY AUSTRIA.

Dr. Clymer, in the June number of the *New York Journal of Medicine*, speaks highly of his experience with Richardson's apparatus for the production of local anæsthesia, and deprecates the undervaluing of the ingenuity and perseverance of its inventor because some imperfect procedures of the same kind may have been previously suggested or even tried in France, but which otherwise would have fallen into oblivion.

"I may here mention," he adds, "that I have used the ether-spray in cases of sciatica, lumbago, and hemicrania. I look upon the instrument of Dr. Richardson as the best I know of for the exhibition of medicated pulverised fluids either to the throat or upon the skin, and Dr. Douglas, of New York, informs me that he too has largely and satisfactorily employed it for this purpose. By the introduction of a short delicate silver wire into the inner tube, any degree of fineness in the dust may be obtained. Having a case of stricture with great irritability of the urethra and troublesome and painful erections, I was induced to try spraying, from a Richardson, the perineum and along the urethra with a strong solution of the bromide of potassium. After two or three applications the unpleasant symptoms ceased, and there was no subsequent difficulty in exploring the urethra and going on with the dilatation. In another case, almost similar, the same results followed."

The Paris Medical journals are becoming somewhat restive under the silent system which has been forced upon them in regard to the cholera. In an article on the subject in the *Gazette Médicale* we find the following passages :—

"What is the consequence of the clandestine kind of publicity which takes place? The statements which we and our *confrères* are obliged to make to our patients go on increasing from mouth to mouth, until the hundreds of cholera cases whose existence is acknowledged become thousands, and apprehensions increase in proportion. If the sanitary condition were at least amending during this period of continually increasing apprehension, we should arrive at the point at which the fear of the disease would constitute the only ailment. But we have the three evils united : the disease, the fear of the disease, and disease from fear. We therefore think it high time to submit to the Administration the Medical reasons which lead us to believe that this silent system entirely fails to accomplish its end. If the epidemic had only lasted a few days, it would not have been worth while alarming the population by revealing the exact state of things. But the epidemic has now lasted three weeks, and the number of admissions and deaths is about the same as at the commencement—*i.e.* more than 300 patients and 100 deaths per diem.

"The inconveniences of silence are therefore greater than its advantages. In fact, the inhabitants of Paris cannot be long kept in ignorance of the real state of things, private information and the great number of funerals quite preventing this. Many persons, however, uninformed of the actual prevalence of the disease, may most unnecessarily expose themselves to the danger of contracting it, while due precautions in relation to premonitory symptoms and their effectual treatment will not be taken."

We see that it is just announced that Austria has at last given in her adhesion to the provisions for the neutrality of Army Surgeons and the wounded adopted by the Geneva Congress, she being the only European power who had not already agreed to them. It would have been more commendable as well as more advantageous for her if she had done this before the commencement than after the termination of the present war. At the battle of Skalitz an Austrian ambulance, posted to all appearance in the best possible manner for the execution of its duties and for securing a retreat if necessary, was suddenly charged from behind by a troop of Prussian cavalry, and the Doctors trodden under foot. The chief Medical officer, Dr. Kloss, was precipitated into the River Aupa, and was seen no more, while another Surgeon was kicked by a horse, and a third killed outright. In a neighbouring ambulance a consultation of Surgeons was suddenly dispersed by a shower of projectiles, leaving behind twenty-six severely wounded soldiers, protected only by a white flag. An ambulance, formed in the woods at the battle of Sadowa, was only discovered by the Prussians two days afterwards, the wounded having been abandoned by their Medical attendants, and left without any succour whatever. So, too, 130 wounded were left in a Hospital at Lechtomischel, without any succour, until the arrival of the Prussians three days afterwards. It is said, also, that as many as eighteen Austrian Surgeons were either killed or captured. Two prominent members of our Profession at Vienna—Professors von Pitha and Hebra—have to deplore the loss of their sons, both Army Surgeons, one killed at Skalitz, and the other wounded and made prisoner.

PARLIAMENTARY.—PUBLIC HEALTH BILL, CONVEYANCE OF PERSONS SUFFERING FROM INFECTIOUS DISEASES IN CABS AND OMNIBUSES—SANITARY CONDITION OF THE ARMY—THE CHOLERA—MR. FARNALL'S REMOVAL FROM THE LONDON DISTRICTS—THE STATE OF THE RIVER LEA—THE ALLEGED CRUELTIES AT THE SHOREDITCH WORKHOUSE.

On Thursday, August 2, the Public Health Bill was read a first time in the House of Lords.

In the House of Commons, the Public Health Bill, as amended, was considered.

On the motion of Mr. T. Chambers a new clause, declaring that the nuisance authority might require payment of costs or expenses from the owner or occupier of premises, the occupier being allowed to deduct the same from the rent, was added to the Bill.

On the motion of Mr. Ayrton the following new clause was added to the Bill :—"If any person suffering from any dangerous infectious disorder shall enter any public conveyance without previously notifying to the owner or driver thereof that he is so suffering, he shall, on conviction thereof before any justice, be liable to a penalty not exceeding £5, and shall also be ordered by such justice to pay to such owner and driver all the losses and expenses they may suffer in carrying into effect the provisions of this Act; and no owner or driver of any public conveyance shall be required to convey any person so suffering until they shall have first paid a sum sufficient to cover all such losses and expenses."

Mr. Ayrton moved the following proviso to clause 16 :—"That no officer of police shall be at liberty to enter any house or part of a house used as the dwelling of any person without such person's consent, or without the warrant of a justice of the peace, for the purpose of carrying into effect this Act."

After a short conversation the amendment was agreed to.

On clause 39,

Mr. Ayrton said it would be competent for a policeman to seize persons living together as a family, and unless they could give legal proof of relationship they would be liable to fine or imprisonment. This was a very strong step on behalf of morality, which the House would not be willing to apply to the upper classes of society, where there was often as much necessity for it. He proposed the omission of the clause.

After some discussion,

Mr. Walpole said that, if a proper statement were made explaining the relationship of the parties, they would not be interfered with.

The clause was then agreed to.

The Solicitor-General moved an addition to clause 50, giving the Privy Council power to make such provisions as they may see fit, with a view to the treatment of persons affected by cholera and epidemic and contagious diseases, and for preventing the spread of cholera throughout the country or upon the high seas for a distance of three miles, and also providing that any expenses incurred by enforcing the rules should be looked upon as expenses incurred under the Nuisances Removal Act, and that publication of the Order in Council in the *London Gazette* should be deemed a sufficient publication. He trusted the House would agree to the motion, as it was most important under the circumstances that strong powers should be given to the Privy Council.

The addition was agreed to.

The remaining clauses were also agreed to.

On the motion of Mr. Walpole, the Bill was then read a third time and passed.

On Friday in the House of Lords, in answer to Lord Fortescue,

Lord Longford detailed the various steps that had been taken within the last few years to extend to the British Army the benefit of all modern sanitary science, and expressed his belief that the Royal Engineers were fully competent to the duties required of them.

In the House of Lords on Monday, the Public Health Bill was read a second time after a brief discussion, in the course of which Lord Shaftesbury urged the necessity of more stringent powers in respect of the water supply, and Lord Carnarvon announced that in consequence of the prevalence of cholera an Order in Council would immediately be issued, requiring all ships coming under the operation of the Passenger Act to carry a Surgeon, whatever the number of passengers.

In the House of Commons,

Mr. J. A. Smith called attention to the prevalence of cholera in the eastern districts of the metropolis, and asked whether the Government were prepared to allow Parliament to separate without providing the means of summary interference in cases where the vestries might neglect the enforcement of sanitary precautions, or might omit or delay the necessary arrangements for the care of the sick, and the separation of the healthy from the dying and the dead.

Mr. Ayrton traced the whole of the present difficulty in carrying out proper sanitary provisions to the unjust Poor-law arrangements of the metropolis, and inveighed with great warmth against the motives and conduct of those who had opposed the enlargement of Poor-law administration and taxation.

Mr. Hardy replied that he was giving an earnest attention to the working of the Poor-law in the metropolis, and he hoped next session to be able to introduce a Bill which would be framed in a spirit of sympathy with the poor, whether ratepayers or relieved. He pointed out that in the metropolis the laws relating to public heath were administered not by the guardians, but by the vestries, and the Public Health Bill, which would become law, he hoped, to-day, would enable these local bodies to take all necessary precautions with greater rapidity. These local bodies, he remarked, were now on their trial, and if they did not carry out the powers intrusted to them efficiently, it would be necessary for Parliament to step in and place them in other hands.

Mr. Henley, apprehending that the local authorities would have some difficulty in taking the necessary measures for want of money, regretted that the Government had not passed a short Act to supply that deficiency either by a rate on the metropolis or in some other way. A penny rate on the whole metropolis would amount to £60,000, which would go a long way in precautionary measures.

Mr. Neate concurred in the suggestion, and threw on the Government the responsibility of any calamity which might arise from want of means.

The Chancellor of the Exchequer deprecated interference with the ordinary local administration of the metropolis in a moment of hurry and alarm, and expressed a conviction that no Government, if an emergency should arise, would shrink from the responsibility of meeting it in any manner which might seem most effectual.

Colonel Hogg, as a member of a local Board, urged that more stringent and summary powers should be given to nuisance inspectors.

In reply to a question put by Mr. Villiers in the House, Mr. Hardy said that in assigning to Mr. Farnall a provincial district he informed that gentleman that he did not make the change with a view of throwing any discredit upon him, or for the purpose of placing him in an inferior position to that which he has till now filled. Mr. Hardy added that he wished the inquiries he had on hand to be conducted by new inspectors, unconnected with the London district.

On Tuesday, August 7, in the House of Lords,

The Royal assent was given by Commission to the Public Health Bill.

In the House of Commons, in answer to a question by Mr. Monk in reference to the state of the River Lea,

Mr. Corry said there was no reason to suppose that the water of the Lea was more impure than that of other rivers from which the supply of water for London was derived. From the report of Mr. Rawlinson, the engineer, who was appointed by the Privy Council to investigate the water at the entrance of the works of the company at Enfield, it appeared that it was not exposed to any noxious influence, and was discharged into a private cistern. The last analyses, he might add, showed that the water was as free from organic matter as that of other companies. In consequence of complaints which had been made of the insufficient supply of water furnished by the East London Waterworks Company, a letter was written from the Privy Council Office, calling the attention of the secretary of the company to the matter, and suggesting that the times of service should be longer and more frequent. It must, however, be borne in mind that the Privy Council had no power to enforce obedience to the suggestion by means of any legal remedy.

In answer to a question by Mr. Oliphant in reference to the correspondence between Mr. E. Hart and the Poor-law Board on alleged cruelties at the Shoreditch Workhouse, Mr. Hardy gave an account of three charges of cruelty which had been made the subject of inquiry. One of them had reference to a case that occurred two years ago, another could not be substantiated, and on the third, which charged a wardman with harshly treating a pauper of extremely filthy habits, the facts having been proved, the Poor-law Board had ordered the dismissal of the wardman. Copies of the correspondence he would be prepared to lay on the table if the hon. member thought proper to move for them. Their production would at the same time, he thought, lead to no useful result.

ETHER SPRAY IN MIDWIFERY.—In the Glasgow Lying-in Hospital local anæsthesia by etherial congelation has been tried experimentally on several occasions. The apparatus for producing the spray is a modification of that of Dr. Richardson, and is found to answer remarkably well. It is worked by the foot, instead of the hand, as in the ordinary spray producer. The advantages which the pedal bellows has over the manual are, that the ether spray can not only be projected with greater force and regularity, but the instrument can be worked with little or no fatigue. The ether spray has been freely applied over the lumbo-sacral region with the view of mitigating the pains of parturition. It has also been applied over the hypogastric region in a case of hæmorrhage, with the view of producing uterine contraction after delivery. In one case of very severe *post-partum* hæmorrhage, with a relaxed state of the uterus, the frigorific effect of the ether spray was so great as to induce immediate and permanent contraction. It is believed that in cases of lingering and tedious labour the application of the spray may have the desirable effect of rousing the organs at fault into increased activity. This has not yet been tried, but an early opportunity will, undoubtedly, be taken to bring the matter to the test of experience.—*North British Daily Mail*, August 1.

WE regret to announce the death of a lady, the widow of the late Rev. G. D. Whitehead, Minor Canon and Prebendary of Lincoln Cathedral, who had volunteered to take the place of the late Miss Lucy Nevill at the head of the nurses in the Lincoln County Hospital. She was cut off, like Miss Nevill, by diphtheria, acquired in the discharge of her duties, at the early age of twenty-seven.

REPORT OF THE

THIRTY-FOURTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

(By our Special Correspondent.)

The British Medical Association meets this year at Chester under circumstances very peculiar. The programme of the proceedings is more than ordinarily rich, and the scientific element stands out in the programme with remarkable force. The plan of holding open discussions, which commenced so well last year, is to be continued; the subjects proposed for discussion are of singular interest; and the men selected "to lead the way" are as singularly fitted for the duty. When to these facts we add that Mr. Bowman is to give the Address in Surgery and Dr. Hughes Bennett the Address in Medicine, we have said enough to promise a report that shall by its matter be worthy of possession.

This is so far good, and members are already looking forward with pleasure to what is in store for them; but unfortunately there is a painful novelty in this meeting; there is a gloom which tinges every effort and every proceeding. For the first time in thirty-four years the one familiar face is absent, the one most familiar voice is silent. "How strange it seems to meet without Sir Charles!" that is the sentence on nearly every tongue, and it is no mere waste of words, but a real deep sentiment. Sir Charles Hastings, in fact, hardly knew how thoroughly he had won his way, and we, so accustomed to what he did, and what he was expected to do, miss him the more severely now that he can do no more.

The number of members who have arrived is large, and the country is well represented from all parts. There has also been a considerable share of work done. The directors of the Medical Provident Society have held a morning sitting. The Committee of Council met an hour later, and at 4 p.m. the General Council assembled and prepared, or rather revised, the annual report. The Council was a full one, and the proceedings, we believe, were unanimous. After the Council had closed the Committee of Reference and Arrangement of Papers transacted their very useful but not over-pleasant business.

THE FIRST GENERAL MEETING.

The first general meeting was held on Tuesday at 8 p.m. at the Music Hall; Dr. Jeaffreson, of Leamington, the retiring President, took the chair. The proceeding that had precedence of all others had reference to the death of Sir Charles Hastings, the President moving amid deep silence a vote of condolence with the family and friends of Sir Charles. Dr. Jeaffreson briefly touched on the career of the founder of the Association, and on those subjects which were of most interest to him.

Mr. Carden, of Worcester, seconded the resolution, and stated that having attended Sir Charles professionally to the time of his death, he could refer to the fact that up to the last the British Medical Association was the prevailing theme of Sir Charles' discourse. One of his latest questions was—When will the Chester meeting be held?

Dr. Richardson supported the resolution, and dwelt shortly on the great mental characteristics of the deceased—these were the power of bringing men to one mind, and untiring industry. To such qualities Sir Charles added a quietude, a silence of action, which obscured, but did not diminish his power.

"Like a poet hidden
In the light of thought,
Singing hymns unbidden
Till the world is wrought
To sympathy with hopes and fears it needed not,"

so Sir Charles Hastings had laboured quietly and often unseen, but yet achieving the most important results for himself and for his fellows.

The resolution was unanimously and solemnly passed, after which Dr. Jeaffreson resigned the chair, and in a few appropriate words installed Dr. Waters, of Chester, as President for the ensuing twelve months.

On taking the chair, Dr. Waters proceeded to read the following Address:—

THE PRESIDENT'S ADDRESS.

Gentlemen,—In the year 1859, when I filled the post of President of the Lancashire and Cheshire Branch of this great Association, on the occasion of its meeting for the first and, as yet, only time in Chester, I gave expression to my gratitude for the signal mark of regard and confidence then conferred on me. Then, as now, I stated that "the esteem of my Professional brethren, as it is one of the most worthy, so has it ever been one of the most cherished objects of my life." I have an undoubting trust that that same feeling will ever animate me; it burns within me now as vividly as in the most sanguine period of existence, when, rich in the possession of that priceless appanage of youth—a warm, confiding heart, unchilled by the trials of life—the future spread itself out before me bright and unclouded.

The present is an occasion when I may perhaps be excused saying some few words of myself. In doing so I am not actuated by any vain-glorious spirit, but for those who have to follow the older members of any profession there is not unfrequently some little advantage to be derived in the way of guidance and instruction from those who have preceded them. The maxim I would seek to establish is that, though there is much of uncertainty and of accident in the career of most, steady and persevering application, however unassuming, generally reaps all, and not unfrequently more than it is strictly entitled to; but, above all, without referring to the delights incidental to extended knowledge and increase of intellectual power, it often confers rewards of which no instability of fortune can deprive the possessor.

During the course of my Professional career marks of kindness, and I may say distinctions, have been conferred on me by those under whom I studied, as well as by those in community with whom I worked, for which I scarcely dared hope, but which, for that very reason, I value the more highly. Gentlemen, standing before you in my present position, one of the highest and most honourable to which any man whose lot is cast in the provinces can aspire, while dreading the responsibility devolved on me, and which, but for a conviction that your kind consideration and forbearance will pardon my shortcomings and more than supply all my deficiencies, I must have hesitated to accept, it may readily be believed that I regard this day as the proudest of my life. The personal gratification incidental to the day is, however, alloyed by a deep and solemn feeling of profoundest grief. This, the thirty-fourth anniversary of the British Medical Association, the first held in the time-hallowed and ancient city of Chester, takes place under circumstances previously unknown in the annals of the Association. The founder, the venerated founder of the Association is no more. Only a few days back, on the 30th of last month, in the 73rd year of his age, the pure spirit of Sir Charles Hastings winged its flight for a higher existence, leaving us to regret and lament his absence. As is the grief of a loving son mourning the loss of a wise and good father, to whose fostering care and affection, to whose untiring devotion he is indebted for all the happiness and prosperity which he may enjoy, such is the deep pervading sentiment of sorrow experienced by every member of the Association for the death of him we now deplore, who will no longer cheer us by his genial presence, elevate us by his noble aspirations, stimulate us by his achievements, and guide us by his wise counsels and great experience. During the past year death has indeed fallen heavily upon us in removing many a valuable member. Without attempting to enumerate all, some there are whose names I cannot refrain from mentioning. The mortality amongst

Medical men from contagious diseases is so heavy as to raise their death rate to a height which, if it fell on the general body of the people, would soon solve the difficulty of disposing of our surplus population. The disease of all others which specially decimates their ranks is typhus. All members of the Profession are, of course, subject to it, though it necessarily falls with greatest weight on the Medical officers of public institutions. With respect to other contagious diseases—for instance, with cholera—intervals sometimes of great duration occur during which the disease is scarcely met with, but our public Hospitals are never free from typhus; in greater or less degree cases always present themselves, and, owing to the length of time over which they extend, those in charge of them are peculiarly exposed to take it. Drs. Stokes and Cusack have shown that in Ireland during the twenty-five years prior to 1843, 560 out of 1220 Medical men who were attached to public institutions suffered from typhus fever, of whom 28 had it twice and 9 three times. The tables from which these facts are drawn do not extend over a period of exceptional mortality, for they stop short of the fatal epidemic of 1847, when out of every three deaths occurring in Ireland amongst Medical men about two were from typhus, the exact proportion being 1 in 1·55. In Chester during little more than a twelvemonth we have lost Dr. Hutchinson Powell, one of the Physicians to the Chester Infirmary, Dr. Lewis Brittain, House-Surgeon, the eldest son of Mr. Brittain, Senior Surgeon to the Infirmary, and our valued associate, Dr. Hughes, also House-Surgeon, together with Mr. Jones, one of the pupils; all four have fallen a prey to typhus.

Gentlemen, it was in the discharge of the holy and self-sacrificing ministrations for which our Profession is so pre-eminently distinguished, that these our brethren, free from the taint of worldly gain, wholly unrewarded for their priceless services, were thus immolated; one only, Dr. Brittain, was a member of our Association, but all intended to have joined it. Amongst the victims of fever I would, however, specially mention one associate, the late Dr. Barker, of Bedford. It has in numerous instances been observed that those whose studies have been directed to any special disease, or any distinct organ or portion of the system, have themselves experienced the suffering incidental to it. In this way Laennec succumbed to pulmonary consumption; Reid, of St. Andrew's, to the most painful of diseases which afflict mankind, and involving in his case the very nerves whose influence his numerous experiments had done so much to elucidate; so Dr. Barker, in dying of typhus, also succumbed to one of that very class of diseases which it was his effort to prevent. A short time only elapsed after the celebration of last year's anniversary at Leamington, where Dr. Barker received from the hands of him whose name it bore the Hastings medal for his prize memoir on Disinfectants, ere we all heard of his being stricken by fever and perishing under it, another martyr, alas! to Professional duty. In one short year both he who received and he who presented the valued reward of competitive merit have by death been lost to us. The recent death of Mr. Toynbee has deprived us of another of our most valued associates, one who helped to sustain the reputation of England by the high rank he attained in that department of the Profession to which he devoted himself. Still, high as were his Professional attainments, and in these no man excelled him, he was no less remarkable for his open-handed charity. There is one charitable institution specially connected with our Association, one which in no way interferes with the Royal Medical Benevolent College at Epsom. The establishment at Epsom, founded by our respected associate, Mr. Propert, who, as a Welshman, is an honour to the principality, exercises a wide and most beneficial influence, and enjoyed the distinguished honour of having the late and ever-lamented Prince Consort as its patron. It affords a sound education, such as will bear comparison with the best of our public schools, to the sons of living Medical men at a very moderate charge, and to a certain number of orphans and fatherless free of all expense. It also supports, as pensioners, superannuated and disabled Medical men or their widows. The numerous applicants to fill the vacancies that occur, far exceeding the resources of the institution, are incontrovertible evidence of the necessity for its existence. Acting, as I have done for several years, as one of the honorary local secretaries to the Epsom College, I need not say that it has my warmest support, and that I hope not only for its continuance on its present scale, but that I look forward to its great extension. To secure the great advantages offered by the Epsom College, a system of arduous and expensive canvassing is resorted to, which when continued year after year is almost heart-breaking, and crushes those whose influence is not sufficiently great to insure success. This charity, however, is not specially connected with the Association, as is the Medical Benevolent Fund, which is conducted on a different plan to that of the Epsom College, and occupies an entirely different field. Its chief object is to grant temporary rather than permanent relief. To obtain assistance from it, all that is required is to have the case of distress well authenticated and recommended by two or more members of the Profession. The application is then at once considered, and relief granted. No canvassing and no publicity are necessary; and if the *bis dat qui cito dat* can ever apply, most unquestionably it attaches to the aid granted by the Medical Benevolent Fund.

It is with reluctance that I have trespassed on your time with these details, but though well known to many of us, they may not be equally so to all our associates; and I have been influenced to do so by the fact of the late Mr. Toynbee having devoted much of his valuable time, abstracted from incessant Professional demands, to enlarge the sphere of its operations. The unobtrusiveness of the method in which the Fund dispenses its relief accorded with that pursued by Mr. Toynbee himself in the exercise of his private charities, and hence his special support of it, on one occasion giving, I believe, £500 towards it, but above all bestowing on it his time, more valuable even than his pecuniary munificence. The melancholy accident by which he met his death was in harmony with his life—while seeking, by experiment on himself, to discover means for alleviating the sufferings of others, he sacrificed his own life in its fullest prime. In Dr. Conolly we have lost another chief who, as long as health permitted, always attended our meetings, and, by his exquisite literary taste, his high Professional attainments, and graceful urbanity, contributed largely to their attractiveness. In him society has lost a true and practical philanthropist; but the influence of his life will remain in all that he has effected for the humane treatment of the insane, and in the aid he rendered in founding the first asylum in this country for the reception and education of idiots, awakening and training their affections, developing their feelings, and opening a new world to those whose existence before was a dark and dreary blank.

Dr. Conolly was one of the earliest members and one of the pillars of the Association, and with Forbes, Johnstone, and others, aided Sir Charles in founding it. One by one these early friends passed away, leaving Sir Charles their only survivor, and it became painfully evident to all who attended the later anniversaries that the conviction was deepening in his mind that the day was not far distant when he also would be summoned. At the Leamington meeting he appeared so much like his former self, so much better and stronger than the year before, and spoke with so much vigour and power, that when he accepted for Lady Hastings and himself my proffered hospitality for this meeting, I fully calculated on the pleasure of receiving them. I knew that Sir Charles Hastings had for many years looked forward to a meeting being held in Chester, but little did I imagine at Leamington that when we assembled he would be absent, and that I should not only lose the ever-ready counsel of him the grand object of whose life was the promotion of the growth and the increase of the influence for good of this Association, but that I should have to deplore his death. This is the first occasion on which the person who has to preside over your proceedings has not been aided by the experience of him who had never missed one of its gatherings. The ship he built is fairly launched, and the pilot who so long guided it has departed. It now remains to be proved whether others can safely navigate it, and whether his great ambition to fix this Association on the firmest possible basis has been realised.

Gentlemen, as I have before stated, in accordance with our founder's wish we are met together in Chester, and in the name of the Profession I give you a most cordial welcome, and hope the meeting will prove a successful one. In objects of interest Chester can be nowhere surpassed. It is no modern town; it boasts an antiquity of nearly 2000 years, dating from the occupation of the Romans when the 20th legion of the Empire was encamped here. The remains of Roman antiquities are extremely numerous; but of these, in your perambulations through the city, you will acquire a far better knowledge than from any description of mine. The most important fact for us is the existing unmistakable evidence that the Romans built their city with a view to the health of its inhabitants, on a foundation of new red sandstone at an elevation admitting of easy and effectual drainage. The city was clearly characterised by a high state of civilisation. It possessed at least two sets of public baths, and many fine public buildings, the remains of which are occasionally disinterred where least suspected to exist. These remains generally lie from four to five or more feet below the present surface of the ground, such being the accumulation of soil during the time that has elapsed since their erection. The remains also show that pure drinking water was much valued, and that hygienic measures were carefully carried out, better probably than they have been at any subsequent period. With the Roman occupation and civilisation, Christianity undoubtedly came in. The theory has been maintained that existing savages are the descendants of civilised races. In some cases this may be the case, in others, however, much more probably not. But in no way should we be justified in terming the Saxons savages, though it is certain and very remarkable that under their rule the arts and comforts of civilised life were replaced by earthen floors strewed with rushes, and Christianity by Paganism. In Wales, where the Saxons did not penetrate, Christianity remained. In the neighbourhood of Mold, a town twelve miles distant, the Christians under Germanus gained the Hallelujah victory against the Picts, and about twelve miles up the river Dee, where no vestige of a monastery now remains, but simply a church that replaced it, an establishment numbering 2000 monks existed, who resided there when Saxon England was Pagan. I would also mention that in the neighbourhood of Chester Delamere forest is situated, which under the rule of Ethelfleda, daughter of Alfred the Great, was the site of an important station. The hundred in which it is situated is named Eddisbury, obviously a corruption of Ethelfleda's borough. Any one now visiting it, and perceiving no trace of any kind of ruins, would never imagine it to have been the seat of a large population, though yet an undoubted fact. That a civilisation of so high an order and marked by that special attention to the preservation and promotion of good health which characterised the Romans—a civilisation which could not merely have occupied this portion of the kingdom, but which must palpably have extended wherever the Roman rule prevailed, and was moreover refined by the softening influence of Christianity—that such a civilisation should have been absolutely extinguished and replaced by barbarism and Paganism, and that we should now have the proof of the change at our own doors, is in the highest degree worthy of attention and reflection, and should make us, who by our calling are the conservators of the public health, carefully guard against the influences which tend to deteriorate it, for degeneracy of body and degeneracy of mind unquestionably coincide. In Chester it took years of suffering, during which the penalty for neglected hygienic measures was paid in the form of fearful mortality from the sweating sickness and from repeated attacks of plague, before the inhabitants again awoke to the necessity of drainage, of water supply, and of public baths, all which have only very recently been attended to. Whatever may be the causes that bring together large bodies of men, whether the mustering of great armies or the demand for labour resulting from manufactures or from commerce, neglect of hygienic rules is under such circumstances inevitably followed by sickness and premature death. The terrible lesson experienced by our army in the Crimea, when a mortality of 35 per cent. from disease in the short space of seven months extending from October 1, 1854, to April 30, 1855, decimated its ranks, is still fresh in the memory—a rate of mortality which by disease alone, without reckoning the casualties of the battle-field, would in twenty months have swept away every living soul of one of the finest armies that ever left our shores. The mortality above given does not comprise the numerous men whose health, broken by the privations under which their comrades, happily for them, more speedily fell, have since their return succumbed, or are still dragging on a weary suffering life of hopeless illness. That this sad state of things might have been prevented is unquestionable, for the officers, who from their private resources were to some extent independent of Government care, did not suffer equally with the men; and when the reclamations of the Medical officers—for our Professional brethren in the Crimea did not allow our noble soldiers to die from disease without pointing out the neglect that occasioned it—at length succeeded in obtaining their demands, then the mortality rapidly diminished.

The French profited in their Italian campaign by the experience of the Crimea; for owing to the admirable arrangements directed by the Emperor at the instigation of the distinguished Surgeon Baron Larrey, notwithstanding the monster armies assembled, notwithstanding the heat, which was excessive, and the unfavourable telluric influences incidental to a campaign in Lombardy, neither hospital gangrene, neither typhus, nor other contagious disease prevailed to any extent.

If the English nation, equally with the French Emperor, should thus profit by the Crimean lesson, then our gallant men will not have died in vain; but it is a lesson that the English nation seems too frequently to require, for in 1809 the same feeling of horror, engendered by the Crimean losses, thrilled through all England at the result of the Walcheren expedition, when out of every 1000 men 16·7 only were lost by wounds and 33·2 by disease. The Medical Profession in this country is, however, year by year increasing in influence, and bringing its weight to bear on questions of public health, although it has but scant encouragement afforded it.

Since our last anniversary Cheshire has been heavily visited by the cattle plague. Well do I remember how the alarm was sounded by our associate, Dr. W. Budd, at Leamington this time last year; no one who then heard him can forget the deep impression he stamped on the minds, and not only on the minds but on the feelings, of those who listened to the moving, eloquent language in which he predicted the sad results which would inevitably follow the neglect of the only precautionary measures which experience had too surely proved could alone avail. The preventive measures he advised were of no hypothetical character; they had been tested and proved effectual in countries actually adjoining infected districts, and with entire success; they were carried out in France, where the disease had actually penetrated, and with equally good result; they were peculiarly easy of application in England, girt as she is by the sea, and capable of complete isolation. The measures suggested were marked by no taint of novelty, but as with the Walcheren, as with the Crimean expedition, the teaching of past experience was disregarded. A century back the plague had passed over the herds of this country, carrying desolation in its track—desolation the effects of which in the ruin it entailed it took a generation to erase. With all this knowledge pressed upon the authorities, no adequate measures of repression were enjoined, and step by step the disease advanced until at last it invaded our Cheshire herds. Gentlemen, I did my best at that sad and anxious time to have the disease stamped out; I addressed one of our county members, and urged the impropriety of attempts at cure, and showed that no amount of private success could be otherwise than injurious to the public weal, for that the very process of cure must entail the spread of the disease. I urged that the visitation was a national calamity, and should be met by a national tax; that it was not the agricultural interest which was alone involved, but that every member of the community, from the labourer upwards, would, in the price of meat, be affected, and that the drain on the public purse would be insignificant, if not imperceptible, if the poleaxe were resorted to in time. I endeavoured to impress on him that it was the duty of the executive to anticipate and to guide public opinion, rather than to be governed by it; and that, at the expense of present unpopularity, it should at once enforce such measures as superior information and intelligence dictated, and allow subsequent events to justify them.

The gentleman to whom I thus applied endeavoured to influence others; time, however, travelled on, the disease extended, and the reply he then generally received was, "We are not going to pay for your losses in Cheshire."

The poleaxe system was then put in force, and killing was adopted with a view to compensation, but in very many, if not the majority, of instances this was only done when the animals were at the point of death. As far as Cheshire was concerned, all the misery and loss the disease could effect was accomplished, the infection was so general that no killing could save the stock. The poleaxe system in Cheshire at that time could only be of advantage to those parts of the kingdom not yet invaded by the disease, and those gentlemen who replied to my friend "We are not going to pay for your losses in Cheshire" may yet pay the penalty of their selfishness in the loss of their own herds.

One consequence of the disease has been the selling off of a large quantity of hay, which has been forwarded to other parts of the kingdom. As yet, no ill results seem to have followed. It may be that the hay, owing to the abundance of grass at this season of the year, has only been used for horses and not for cattle. It is highly probable that much of it contains the fomites of the disease. Let us, however, hope that no ill results will follow. The face of Cheshire is completely altered by the disease: farms where cattle abounded are now stocked with sheep, for which our pastures are ill adapted.

A loan of £300,000 has been obtained from the public purse to compensate those whose cattle were killed, and rates extending over thirty years will be levied to pay off interest and loan. For two years nothing is to be repaid, for the simple reason that the farmers have not wherewithal to pay. Such is a short sketch of the progress and effects of the cattle plague by an eye-witness.

The subject of contagious diseases is one that has always excited interest in Chester. The late Dr. Thackeray, whose name is connected with our principal charities—especially the Infirmary and Bluecoat School—who was one of the early members of this Association, and to whose memory a monument has been erected by his fellow citizens in our picturesque cemetery, placed £50 at the disposal of the Association as a prize for the best essay on fever. Another of the Medical celebrities of Chester—Dr. Haygarth—at the end of last century, with a view to the prevention of infectious diseases, inculcated the necessity of isolation in their treatment and the adoption of fever wards; and it is one of those matters of which the Profession in Chester is naturally proud that the views he so strenuously advanced and maintained, and which at the time were met by uncompromising opposition from many, are now generally adopted.

The cholera at present more than any other disease occupies public attention. On its last occurrence in Chester the worst possible course was adopted with regard to it. The cases were treated as they occurred in the localities where they originated, spreading the disease around, and so continuing until it wore itself out. The authorities at present are fully warned against the danger of pursuing a similar plan, and are taking steps to insure as far as practicable the isolation and separate treatment of the disease. There is one point of deep interest connected with Chester as regards cholera, and has a direct connexion with the conclusions arrived at by Dr. Snow in his pamphlet on cholera, published in 1849 and again in 1855, and by the reports of the Registrar-General on the epidemics of cholera in 1848 and 1854. Dr. Snow showed that the cholera in London was more general in districts where the population drank water contaminated by sewerage than elsewhere. This was particularly the case with the notorious Broad-street pump, which, as supplying water of a pleasant, bright, sparkling character, though thus contaminated, was in general request. It was mentioned in the papers recently that the handle of this pump had been repaired, but happily Dr. Lankester has since intervened and ordered its removal.

The supply of water to Chester is derived from the river Dee, within the tidal influence, the spring tides flowing some miles above the point whence the water is pumped. The water, however, is only pumped into the reservoirs, which immediately supply the city when the tide is out. This constitutes an objection to the present source of supply. There is, however, a still graver one to be urged, and this affects the very body in whose hands the interests of the community are lodged. In reference to this point, I must mention that in the reports I have referred to the following facts are stated. I shall select provincial towns as specially bearing comparison with Chester. During the epidemic of cholera in 1832, 1000 cases occurred in Exeter, of which 347 were fatal. The water supply at that time was derived from the river, and was contaminated.

In 1834 the water supply was improved, being drawn from the river two miles above the town; and when the epidemic of 1849 occurred, there were only forty-four cases, and those chiefly amongst strangers. In Dumfries, in 1832 and in 1849, the supply of water was both scanty and impure, but after the second visitation a better supply, perfectly free from taint, was procured; and in 1854 the place was very lightly visited by cholera. I might multiply similar cases, but those I have given sufficiently show the importance of pure drinking water.

Now, in Chester, as in most other towns, we are dependent on a water company for the convenience and advantage of our water supply. The water, at the time of their establishment, was drawn from a point of the river above the city; but with the extension of the city, houses have now been erected beyond it, and the company are at present laying down pipes extending above them. Complaints have not unfrequently been made against the water company, and this has been done by members of the Town Council. Now, there is one source of pollution of our river for which I believe the Town Council is responsible. Some fifteen years back the sewerage of the city was remodelled. Difficulties present themselves in all undertakings, and the difficulty in this case was the disposal of the sewerage.

We have a sandy alluvial soil within easy reach of the city, thirsting for all the manure we can bestow on it; but, be this as it may, obstacles existed to obtaining an outlet, and in consequence the Town Council decided on discharging the sewerage of the city, yearly increasing in population, into the River Dee but a short distance below the point whence the present water supply is obtained. At the point where the sewer enters the river a bank of deposit is rapidly forming, and the tide passing over it necessarily carries upwards beyond the waterworks the influence to be exerted by the excreta of the inhabitants. I have ventured to call attention to this subject because, after the experience of Exeter and other places, it will be interesting, should cholera invade the city, to watch its effects, and learn what, if any, may be the effect on the citizens consequent on this pollution of their river. The water supply of Chester is trammelled by the objection which ever applies when such a prime necessity of private and public life rests in the hands of a private company: the occupiers of low-rented tenements, unless the water be supplied through their landlords paying the water-rate—and this is by no means generally done—are dependent on surreptitious supply or supply from private pumps and fountains, and the very houses and localities which, for the sake of the public health, stand most in need of cleanliness and purification, are thus left without the means of effecting it. All sanitary reformers maintain that the supply of water should be free as air and light. The window-tax being abolished, the time has arrived when, wherever practicable, the supply of water should, for the public good, be taken up by the local authorities, and a general water-rate levied which would bring all the property of the city under contribution, and make the supply a profitable one. In the interest of the public health this plan of proceeding might be well urged on the Government, which would thus do something to counteract the ill-effects resulting from the great facilities afforded for obtaining less innocent beverages.

When the diversion of the sewerage from our lovely river is effected, and when the city takes into its own hands the supply of water to its citizens so as to supply it to all, a great advance will have been made in our sanitary arrangements.

Gentlemen, in the discursive remarks with which I have opened this anniversary I have avoided trenching on the subjects to be treated by the readers of the addresses, who are so much better equal to dealing with them than I am. I have touched on some matters of local interest; the more important business of the meeting I resign to other hands, and again thank you for the kind manner in which you have received me.

At the close of the address, Dr. Falconer, of Bath, moved a vote of thanks to the retiring President, and his election as a Vice-President of the Association. In his speech, Dr. Falconer touched on the death of Sir Charles Hastings incidentally, but with much eloquence and feeling.

Mr. Husband, of York, seconded the resolution, and it was carried unanimously.

The Secretary next read the Report of the Council.

Report of Council, 1866.

Your Council has much pleasure in meeting the members of the British Medical Association in the ancient city of Chester. From the subjects for discussion and papers announced, as well as from the distinguished position of those gentlemen who have undertaken to deliver the addresses in Medicine and Surgery, a very successful meeting may be confidently expected.

The Committee of Council has held its usual quarterly meetings in Birmingham, at the last two of which they have had to regret the absence of their esteemed President of Council, Sir Charles Hastings, in consequence of his severe bereavement and the failing state of his health. On the 5th of July Sir Charles resigned the office of Treasurer, feeling himself unable any longer to perform its duties. On this occasion the Committee of Council passed an unanimous resolution, which was ordered to be forwarded by the Chairman to Sir Charles, expressing their deep sympathy with him under his affliction, their regret that his declining health obliged him to resign the Treasurership of the Association, and their hope that his life might long be spared to fulfil the less onerous duties of President of Council. This hope is now lost. Sir Charles Hastings, the founder of the Association, and for thirty-five years its leading spirit, died on the 30th of July last. The Council feel that in no way could they better express their recognition and remembrance of their late friend and founder than by vigorously sustaining the greatest effort and object of his life—the British Medical Association—which, so long as it shall last, will perpetuate his honoured name.

It will be necessary for this meeting to elect some gentleman to fill the office of Treasurer.

Your Council has much pleasure in congratulating you upon the continued improved condition of the Association. The number of members in 1865 was 2368. Notwithstanding the unusual number of deaths last year, there are now on the books 2462. Since the 1st of January last 167 new members have been admitted.

Your Council very gratefully acknowledges the valuable services of the Branch Secretaries.

Your Council would suggest to some of the larger Branches the desirability of holding more frequent meetings, or of holding district meetings, such as have been established by that most admirably managed branch, the South Eastern. A considerable increase in the number of members has resulted from these meetings.

The following is the Financial Report for 1865: the accounts have been audited by the Auditors, Dr. Melson and Mr. Hadley:—

Financial Statement for 1865.

The improvement in the finances of the Association, which was reported with so much satisfaction last year, still continues, and is increasing. The subjoined cash account shows that the balance in favour of the Association on the 31st December, 1865, was £318 14s. 8½d., against £243 16s. 8½d. in December, 1864. It should be observed that a sum of £50, due for distributing the *Journal* in 1864, has been paid during 1865, in addition to a like sum due for the latter year.

Receipts.

1865.	£	s.	d.
Balance from 1864	243	16	8½
Subscriptions	2229	3	0
Arrears	105	0	0
Advertisements and Sales	655	9	3
	£3233	8	11½

Payments.

1865.	£	s.	d.
Journal expenses:—			
Mr. Richards (printing and stamps)	1807	10	6
Mr. Richards (directing, etc., two years)	100	0	0
Mr. Honeyman (office expenses)	103	4	6
Mr. Davidson (commission)	63	1	9
Mr. Orrin Smith (engraver)	15	16	0
Editor of *Journal*	200	0	0
Dr. Henry (sub-editor)	50	0	0
Contributors	230	7	6
Dr. Henry (salary, for work at office)	50	0	0
Executive expenses:—			
Secretary and clerk	167	0	0
Secretary's petty cash	37	3	2
Branch Secretaries and Collectors	30	4	9
Leamington reporter	16	16	0
Mr. Moore (gold medal)	21	0	0
Anniversary expenses	3	17	3
Birmingham stationer	18	8	10
Bank cheque-book	0	4	0
	2914	14	3
Balance	318	14	8½
	£3233	8	11½

CHARLES HASTINGS, Treasurer.

Your Council, in August last, caused a memorial to be presented to the Council of the Royal College of Surgeons, urging the justice of allowing provincial Fellows to vote by voting papers in the election of Members of the Council of the College. In the early part of this year your Secretary procured about fifty memorials on the same subject, signed by a very large number of the Fellows resident in the provinces, and which were presented by Mr. Paget, of Leicester. Notwithstanding this, the Council of the College returned the same answer, an excuse having been found this time by the presentation of a counter memorial. Your Secretary has endeavoured to ascertain the number of memorialists on each side respectively; but even this scanty information has been refused. Your Council leave it to the members of the British Medical Association to draw their own conclusions as to the value or importance of the counter memorial. The efforts of your Council having, hitherto, been unsuccessful, the Association should decide what further steps ought to be taken. Your Council recommends that a deputation should be appointed to lay before the Home Secretary the injustice under which the majority of the Fellows of the College are placed by the present charter.

Your Council has observed with much pleasure the desire of the Medical Council to obtain an amendment of the Medical Act, and recommends that a deputation be appointed from this Association to wait upon the Home Secretary at the proper time.

Your Council hopes that, at length, the Medical officers of the Army and Navy have received at the hands of the authorities that measure of justice for which your Association has contended; warrants for increased pay and rank having been signed by her Majesty the Queen.

Your Council desires to offer its warmest thanks to Dr. Markham, Dr. Stewart, and Dr. Sibson, who for more than two years have so energetically worked for the good of their brethren in the united Services.

The Charter.—This Committee has, by direction of the Committee of Council, published in the *Journal* a copy of the draft charter, which will be submitted to the general meeting for approval.

Medical Provident Society.—A report will be presented by the Directors of this Society.

Scientific Witnesses Sub-Committee.—A report will be presented by this Committee.

Registration of Diseases Committee.—A report will be presented by this Committee.

The Medical Benevolent Fund continues a prosperous career, dispensing the blessings of charity among our less fortunate brethren and their widows and orphans.

Your Council has to deplore the death of Mr. Toynbee, whose services to this valuable charity have been beyond all praise.

Your Council bears willing testimony to the continued improvement of your *Journal* under the editorship of Dr. Markham.

The Hastings Medal has been awarded by the adjudicators—Mr. Carden (of Worcester), Mr. Hilton (of London), Mr. Southam (of Manchester)—to Mr. Furneaux Jordan (of Birmingham), for an essay On Shock after Surgical Operations and Injuries.

The introduction of subjects in Scientific and State Medicine for discussion having proved so very successful at Leamington last year, your Council has decided upon continuing such discussions, and your Council has good grounds for hoping that such discussions will this year be equally successful.

Mr. STEELE, of Liverpool, moved the adoption of the Report, entering carefully into the details. On the whole, he considered that, so far as the Report gave evidence of the stability of the Association, it was the most satisfactory he had seen.

Mr. J. HARRISON, of Chester, seconded the resolution, and it was carried without discussion.

ELECTION OF GENERAL SECRETARY.

Dr. JEAFFRESON moved the re-election of Mr. Watkin Williams, of Birmingham, as General Secretary of the Association, and in doing so read part of a letter from Sir Charles Hastings, suggesting that the very inadequate salary of the General Secretary should be considered, with a view to its increase.

Dr. RICHARDSON seconded the resolution, and it was carried also without discussion.

REPORT OF MEDICAL PROVIDENT SOCIETY.

Dr. HENRY, the Secretary of the Provident Society, read the following Report:—

> The Board of Directors of the Medical Provident Society have to report that during the past year the Society has continued its labours, that two meetings of the Board have been held, exclusive of the meetings of the Executive Sub-Committee, and that the financial position of the Society is most satisfactory, there having been no demands upon the funds on the part of contributing members, the direction having been purely honorary, and the disbursements of the Society having been conducted at the smallest possible expense. This position would be most gratifying were it attended by a response on the part of the Profession at large adequate to the labour required and to the responsibility accepted by the Board. In the course of the year now past the number of applications for papers has been 150, and 32 candidates have completed the term of membership. Several suggestions have been made to the directors to reduce the scales of contributions and benefits, and these suggestions have received the most careful consideration by the members of the Executive Sub-Committee. The directors are of opinion that while such a step might at first sight appear likely to be beneficial to a section of the Profession with whom they sincerely sympathise, it could not be safely carried out in a provident society limited to a single profession. The directors therefore feel that they cannot recommend any modification of the present Rules and Tables of the Society. The directors ask the Association to complete the organisation of the new Board by electing a Chairman and Vice-Chairman, in accordance with the rules. The directors hope, now that the Society is fairly launched and financially sound, that a considerable number of members of the Profession will be induced to enrol themselves as contributing members.

Dr. RICHARDSON moved (*pro forma*), and Dr. WILLIAMS seconded—"That the Report of the Medical Provident Society be received and adopted."

The resolution led to a very warm discussion.

Mr. STEELE, of Liverpool, moved an amendment to the effect that the Report be not received. Mr. Steele spoke of the Society as contrary to the wishes and position of the Profession. He held that the design had failed, notwithstanding all the labour and money that had been spent upon it; and he maintained that the Association had no right to continue to give it countenance and support.

Dr. MORRIS, of Spalding, seconded Mr. Steele's amendment.

Mr. HUSBAND and Dr. CAMPS supported Mr. Steele.

Dr. DAVEY, of Northwoods, put some questions respecting the number of members belonging to the Society.

Mr. HECKSTALL SMITH, in a forcible and most logical speech, defended the Society and the Board of Directors from the attack that had been made. Mr. Smith showed that the Society was the work of the Association; that it had been instituted to determine whether there was scope for such a Society, and, although it could not be considered a success, what had been done was sufficient to settle a question that had long been in agitation. He (Mr. Smith) congratulated the Profession on the fact that it did not require the assistance that had been tendered to it.

Dr. RICHARDSON, in reply, said it was unfortunate that the meetings of the Association represented a fluctuating expression of opinion, rendering it almost impossible to base upon such meetings any scheme that was intended to be lasting. He showed that for many years this question of a Provident Society had been discussed and discussed again. At last the effort was made, and at Cambridge a board of directors was elected and vested with certain powers by the Association on which they acted for the Association. But at the next meeting of the Association it was objected that the question had not been tried at all, and the act of the previous meeting was actually visited on the directors, who were merely discharging at great labour and cost an onerous duty. This year it was moved that the effort be summarily disowned and dismissed. If that were done, he (Dr. Richardson) could only say that he would never undertake another duty for the Association. He could not believe the Association would be so insincere as to elect men to fill posts of great difficulty one year, and another year, because their efforts had not been all that was expected, it would send them adrift as if they, apart from the Association, had done something to offend it. (Cheers.)

Mr. Husband said, after the speech they had just heard, he hoped Mr. Steele would withdraw his amendment.

Mr. Steele acceded, and the resolution that the Report be received and adopted was carried.

Dr. Paget moved, and Mr. Hickstall Smith seconded, that Dr. Richardson be elected President, and Mr. Clay, of Birmingham, Vice-President, of the Medical Provident Society for the ensuing year.

This resolution was also carried.

The business on the paper being now concluded, the meeting adjourned at 10.30 p.m.

SECOND GENERAL MEETING.

Chester, Wednesday.

The second general meeting of the Association was held this morning at 10 o'clock. Previously the Council had held a meeting, and had elected Dr. Sibson as President of the Council for three years in place of Sir Charles Hastings.

Medical Representation in Parliament.

The first business of the general meeting was to receive the following resolution by Dr. Mackesy: "That a favourable opportunity now presents for soliciting the attention of the Government, the public, and the members of our Profession, to the question of granting Parliamentary representation to the Medical Profession in its collective capacity; that, with a view to the accomplishment of this important object, the Council be empowered to take such measures as they may consider judicious to promote its success, by presenting memorials to the Government, petitions to both Houses of Parliament, and by communicating with the Medical Universities, Colleges, and Associations, to urge their zealous co-operation."

Dr. Paget seconded the resolution.

Mr. Timothy Holmes, Mr. Heckstall Smith, Mr. Steele, Dr. Jeaffreson, and Dr. Stewart opposed the resolution on the ground that special—that is to say, class or Professional representation—was not sound policy, and would not succeed.

Ultimately, Dr. Mackesy withdrew his motion.

Next Place of Meeting.

Dr. Jeaffreson moved, and Mr. Nuneley seconded—"That the next meeting of the Association be held in Dublin, and that Dr. Stokes be President elect." Dr. Mackesy supported the resolution.

The motion was carried with acclamation.

Message from the American Medical Association.

The President announced that Lieutenant-Colonel Cox, M.D., had been deputed to represent the Medical Association of America at the meeting. The announcement was received with much enthusiasm.

GENERAL CORRESPONDENCE.

ON THE ACTION OF ACIDS IN CHOLERAIC DIARRHŒA.

Letter from Dr. Thorowgood.

[To the Editor of the Medical Times and Gazette.]

Sir,—At the present season when so many persons are, to use the expression of a hard-working London Physician whom I met to-day, "under epidemic influence," we can all value such sound practical advice as was conveyed in the article on "Remedies for Diarrhœa," which appeared in the *Medical Times and Gazette* of July 28, and I would that Doctors, clergymen, and laymen could all have a copy of that useful article in their possession.

In this short communication I purpose to submit a few ideas on the action of acids in curing diarrhœa, especially when this is of choleraic nature.

That the diluted sulphuric acid is a very trustworthy remedy is a matter I have often proved, and such experience as I have recently had among Hospital out-patients from East London has strongly confirmed me in my previous faith. It seems, however, that numerous other acids are almost, if not quite, as efficacious as the sulphuric, and I have thought whether their *modus operandi* may be by virtue of the diffusibility of these bodies as compared with that of alkaline solutions.

The experiments of (a) Graham and of Jolly have shown us that the endosmotic equivalents of the acids are extremely small, as compared with the equivalents of the acids, the equivalent of hydrated sulphuric acid being 0·350, while that of hydrated potash is 215·725. When, therefore, an alkaline and an acid fluid are separated by a membrane, the main current of the interchanging fluids will always be directed towards the alkaline side, and hence the naturally acid state of the small intestine aids in promoting and facilitating the resorption of its contents.

It seems that in true choleraic diarrhœa the alkaline serum of the blood tends to pass into the intestine, so that its contents are no longer acid, and one object attained by the administration of acids is to restore the natural acidity of the intestine, and possibly cause the endosmotic current to return to its proper course.

I have often observed that it is in pale serous diarrhœa that acids answer most certainly as curative agents, and the theory I have here put forth has struck me as a possible explanation of the why and wherefore of a well-ascertained fact.

I am, &c.

John C. Thorowgood, M.D.,
Assistant-Physician to the City of London Hospital for Diseases of the Chest.
August 4.

(a) See Lehmann's "Physiological Chemistry," vol. iii., p. 218.

THE TREATMENT OF DIARRHŒA.

Letter from Mr. J. King Sampson.

[To the Editor of the Medical Times and Gazette.]

Sir,—If we may judge from the numerous recommendations of Medical men in the treatment of diarrhœa, opinions are pretty equally balanced between the advantages of the acid and the alkaline plan. The chalk mixture with opium and astringents may be taken as the representative of the one side of the question; the dilute sulphuric acid as the other This apparent discrepancy is less difficult of explanation than at first sight would appear.

Scarcely sufficient importance has been given to the fact that during an epidemic of diarrhœa, especially when cholera prevails, persons suffering from disordered stomach or bowels will be found to have an excess of acid or alkali in the system (more commonly the latter), abundant evidence of which will be furnished by testing the vomited matter, the urine, or the discharges from the bowels. In cases where the ejected matters are alkaline, the mineral acids, frequently administered, will rarely fail to put a speedy check to vomiting and purging; nor are they less efficacious in relieving the nausea and discomfort in the bowels so commonly observed during an epidemic of diarrhœa or cholera, whenever the alkaline diathesis is known to exist. On the other hand, when the secretions are of an acid character, the chalk mixture or alkaline treatment will be found the most certain.

It is not improbable that the depressed state of the system, associated with an alkaline condition of the secretions, so frequently observed in diarrhœa and some kindred disorders, may be evidence of a similar state of the blood, which, by increasing the fluidity of the liquor sanguinis, may be more closely allied to the collapse of cholera than is generally supposed. Certain it is, that the alvine discharges of cholera patients are for the most part highly alkaline.

These observations are the result of my own personal experience for years past; but as I here adduce no cases to support these views, they must be taken merely as suggestive, at a time when every circumstance having a bearing upon the subject may prove of importance.

The common turmeric paper of the shops is not sufficiently delicate to be relied upon as an alkaline test; I prefer good porous litmus paper which has been slightly reddened by exposure to the air. I am, &c.

J. King Sampson, F.R.C.S.,
Surgeon to the Royal South Hants Infirmary.
Southampton, August 6.

THE VIRTUES OF ALKALINE PERMANGANATES.

[To the Editor of the Medical Times and Gazette.

Sir,—I trust you will excuse my addressing you, but the great present importance of anything connected with water must be my plea. You would greatly oblige me, and I doubt not many of your readers, by giving a few detailed instructions as to the use of the alkaline permanganates in organic analysis and purification of water. I have read Mr. Condy's book, but cannot find what I want, particularly the following points:—1st. What weight of permanganate of potass decomposed by, say, a litre or a pint of water indicates dangerous impurity? or is it possible to give an approximate estimate of the quantity of organic matter in a certain quantity of water from the known weight of permanganate decomposed? 2nd. Should the water immediately decompose the permanganate, or what length of time should be allowed for the colour to disappear? 3rd. How practically to purify water for domestic purposes? Is it necessary to filter after adding the permanganate? Is it advisable to add it in excess so as to tinge the water or not, or is its use really advisable at all with ordinary London pipe-water? Boiling has been recommended, but it is not always easy to boil large quantities of water, and expense is an object with many; besides, boiling expels the air and carbonic acid, and renders water insipid for drinking. Filtering through charcoal is said not to be efficient in destroying organic poisons, and it seems reasonable to suppose that its action is confined to absorbing free gases. Is the permanganate more efficient? I know not whether the effects of permanganates on the system have been investigated, and fancy the habitual use of even a minute quantity may be injurious. Another point I am not clear about: does any organic matter decompose the permanganate, or only matter which is itself in the act of decomposing? I have added sugar, flour, &c., to slightly tinged water, but they do not seem to exercise any influence. Trusting that you will forgive my ignorance and favour me with an answer, I am, &c.

August 2. Aqua Pura.

CHANGE OF TYPE?

Letter from W. O. Markham.

[To the Editor of the Medical Times and Gazette.]

Sir,—Dr. F. J. Brown says "that country labourers that used to be bled every spring thirty years since found themselves a few years later fainting after four ounces, whilst they formerly would lose sixteen ounces and walk miles without any sign of faintness," and adds, "these facts are unanswerable evidences of a change" in the type of diseases. Will you permit me to ask Dr. Brown for the proof of his facts? I am sure he will excuse me for saying that he must not expect the Profession to accept such a statement unless very satisfactory proof of it be given. I remember, when I was living a student in a country Hospital thirty years ago, that I had a pretty large experience in the practice of blood-extracting from agricultural labourers, and certainly they showed no signs of waning under the loss such as Dr. Brown speaks of. The change of type, at all events, did not extend into one midland county. I am, &c.

W. O. Markham.

POOR-LAW MEDICAL REFORM ASSOCIATION.—VACCINATION.

Letter from Mr. Richard Griffin.

[To the Editor of the Medical Times and Gazette.]

Sir,—Many of my Medical brethren will have seen with regret that the Vaccination Bill has been withdrawn, but your readers may not be aware of the cause. It will be in the recollection of all that the Vaccination Bill was brought in as a Government measure, and framed by Government officials; but as it contained many objectionable clauses, and made no provision for the better remuneration of the Medical officers, I addressed a pamphlet to each member of Parliament on the subject, and suggested certain remedies. My views were, through the medium of your journal, made public, and so much opposition was raised in Parliament by the Profession that the Bill was referred to a Select Committee, to whom I sent copies of the amendments proposed by us, and the result was that a large number of the clauses were amended, and the Bill, had it become law, would have given the Profession some twenty or thirty thousand pounds per annum more than they now have. The measure was not perfect; but I considered it would be most unwise to offer any further opposition to a Bill which had the sanction of a Select Committee of the House, and which would be of material benefit to the public, as well as to our Profession, and unopposed would pass into law. Judge, therefore, my surprise when on July 21 I received a letter from Dr. Gibbon, with a printed heading, "Metropolitan Counties Branch of British Medical Association, Parliamentary Committee," asking me to oppose the Bill, at the same time enclosing printed reasons against the fines and registration clauses contained in the Bill. Unfortunately for us, the gentlemen composing this Parliamentary Committee, who seem to have a *carte blanche* to do as they like, without consulting the members of the Association raised such an opposition in the House that when the Bill should have gone into Committee on July 23, Mr. Corry withdrew it, saying "he had ascertained from hon. gentlemen on both sides of the House that the measure was likely to meet with great opposition, and it was therefore doubtful whether it could be carried through this year." I sincerely trust the Association at their next annual meeting will point out to their Parliamentary Committee that whenever practicable they should consult the members of the Association before they take active measures to oppose Bills; and here permit me to say, I do not believe the Association as a body would ever dream of asking Parliament to do away with the registration of vaccination, without which the whole machinery must fall to pieces. I regret the loss of the Bill, as on the whole it was a good measure, and would have been of great benefit to the poorer portion of our Profession—the Poor-law Medical officers. I regret it still more as it is the imprudent act of members of our own Profession.

I am, &c. Richard Griffin.

12, Royal-terrace, Weymouth, July 28.

THE VACCINATION BILL.

Letter from Dr. Septimus Gibbon.

[To the Editor of the Medical Times and Gazette.]

Sir,—I congratulate the Profession on the withdrawal of this Bill. Although the sixth clause provided a little additional remuneration as payment for the operation in Workhouses and an extra sixpence for cases at a distance of one instead of two miles, it was by no means an equivalent to the trouble of the certificates (A, B, C, and D), together with the penalty to which the vaccinator was made liable for not registering every case within twenty-one days of the operation. The best and indeed the only way to stimulate the practice of vaccination is to pay a proper fee for it. The fifth clause, proposing to give a gratuity according to the Privy Council opinion of the quality and quantity of the vaccination, even Mr. Bruce admitted to be impracticable, and assured me that it would not pass. The principle of payment by results is a good one, but then the result must be attainable, which is not always the case in Surgical operations.

The greatest blot in the measure was the heavy penalty on parents and public vaccinators for the non-registration of certificates of cowpox. The probable effect of this fine, which would ultimately fall upon the private as well as the public vaccinator, would be so to enhance the cost of the operation as to reduce, or altogether suppress, the demand for it. No "Medical Practitioner" would submit a second time to the degradation of being fined like a nuisance-monger in a police court, so that the guardians of parishes and of private children would have to employ other than "Medical" Practitioners to vaccinate, who, I presume, from the wording of the Bill, would not be liable either to give the certificate or to pay the fine. In April last, I drew Mr. Bruce's attention to the extreme impolicy of this penalty.

Unfortunately Mr. Bruce would listen to no arguments but those of the Privy Council Inspectors, who, he said, must know more of the matter than others. The Select Committee decided not to take evidence.

The present Home Secretary consulted the Registrar-General, whose opinion as to the practicability of carrying out the registration clauses was not favourable. As Mr. Bruce stated in the House that he had determined that the Bill should be "thoroughly complete and effective," surely the re-vaccination ought to be registered as well as the vaccinations. I imagine, Sir, that all Mr. Simon and Parliament require is a periodical return of the vaccinations, which, at a trifling cost, they can get with tolerable, if not perfect, precision, direct from the vaccinators. Parsimony seems to be a failing of the Medical Department of the Privy Council. Thus in this case it has elected to put the Profession to a vast deal of trouble and annoyance, and the ratepayers to an expenditure of about £40,000 annually, rather than expend a few hundreds itself in collecting returns of vaccination. The same false economy made it give up printing a valuable weekly return of all fresh cases of sickness occurring in the metropolis supplied by the Medical officers of health and most ably edited by the late Dr. Dundas Thompson. Such return was ever most useful, but now that we have an invasion of cholera it would be invaluable. I am, &c.,

13, Finsbury-square, July 25. Septimus Gibbon.

MEDICAL NEWS.

Royal Colleges of Physicians and Surgeons' Edinburgh.—The following gentlemen have since April 1 last passed the Examination in General Education :—

Townson Ashburner, Lancashire; James H. Bogle, South Wales; D. Blair Brown, Glasgow; Duncan Brown, Comrie; Henry William Drew, Cape of Good Hope; Andrew Lyall; Henry Mackenzie, Edinburgh; William Mackie, Glasgow; D. E. Mills, Nottingham; George Campbell Naismith, Sultanpore, Oude; George Robathan, Monmouthshire; David Sime, Wick; John Somerville, Moffat; John Souter; William Day Stewart, Madras; Daniel Sutherland, Wick; Francis Perley Taylor, New Brunswick; Francis Vacher, London; P. M. Vaughan, Cheshire.

The following gentlemen passed their First Professional Examinations during the July and August sittings of the Examiners :—

Francis Vacher, London; William T. Limrick, Cork; William Knox, Tyrone; Theobald M. Bryson, county Londonderry; Jas. L. Dingwall, Glasgow; George Stanley Elliot, Exeter; William Thomson, Edinburgh; David Scott, Park, Hawick; John Wilson, Edinburgh; James Stuart, County Cavan; Thomas Todhunter, Whitehaven; Orssen Beamish, Clonakilty; James B. N. Kane, Kilkenny; Richard Windele, Cork; Thomas M. W. Ahearne, Cork; John Jennings, County Cork.

And the following gentlemen passed their Final Examinations and were admitted L.R.C.P. and L.R.C S. Edinburgh :—

Omesh Chunder Dutt, Calcutta; William Day Stewart, Madras; Terence Joseph M'Gann, County Clare; James Meehan, Limerick; Nicholas Maher, Thurles; Henry Brown, Belfast; William Chisholm, Edinburgh; John Bowie, Edinburgh; Andrew M'Master Paterson, Madras; James Alexander Cochrane Kerr, Edinburgh; John Fletcher Little, Kilkenny; James Fergusson, Kirkcudbrightshire; Thomas Fearon, Warrenpoint; Henry Scott Cribbes, Perthshire; Joseph Traill Watt Brass, Orkney; James Pitcairn Bookless, Kelso; Thomas Michael Dolan, County Tipperary; William Sale Sandham, Cork.

Royal College of Surgeons of England.—The following Members of the College having undergone the necessary examinations, were admitted Licentiates in Midwifery at a meeting of the Board on the 1st inst. :—

William Folkes, Dukinfield, Diploma of Membership dated May 9, 1860; William John Wey, Plymouth, May 7, 1863; George Owthwaite Spencer, Upper Gordon street, April 26, 1865; William John, Haverfordwest, April 26, 1866; Joseph Loane, Dock-street, Whitechapel, May 8, 1866; William Monckton, Brenchley, near Tonbridge, April 26, 1866; John Quick, Penzance, May 8, 1866; Charles George Edmonds, Southampton-street, Camberwell, May 9, 1866; Richard Holt Robinson, Manchester, May 10, 1866; George Moore, Birmingham, July 24, 1866; Thomas Bell Hay, L.S.A., Caledonian-road, July 25, 1866; Richard Cresswell, Lewisham, Kent, May 10, 1866; William Harris Butler, Old Charlton, Kent, July 25, 1865; Richard Matthews Pryce, L S A, Caersws, South Wales, July 26, 1866; and John Macdonald, Kidderminster, L.R.C.S.E., August 6, 1858, and L.R.C.P.E., October 4, 1864 (not a member).

The following gentlemen having undergone the necessary examinations, received their Diplomas in Dental Surgery at a meeting of the Board of Examiners on the 2nd inst., viz. :—

Thomas Read, Holles-street, Cavendish-square; William Penny Bartlett, Kensington-park-terrace; Edwin Frederick Lane, Bedford-place, Russell-square; William Caleb Williams, North Petherton, Somerset; Ebenezer Apperly, Stroud, Gloucestershire; John Cardell Oliver, Cardiff; George C. McAdam, Hereford; Edward Byatt West, New Broad-street; Thomas Henry Gostling Harding, Park-square, Regent's-park; and Nathaniel Tracy, Ipswich.

Royal College of Surgeons, Edinburgh.—The following gentlemen were admitted Fellows of the College, at a meeting held on the 2nd inst. :—

William Scott Carmichael, L.R.C.S.E., Edinburgh; Joseph White, L.R.C.S.E., Nottingham; Robert Alexander Mauford, L.F.P. and S. G., Inverness.

The following gentlemen passed their final examinations, and were admitted Licentiates of the College during the July sittings of the examiners :—

Joseph Henry Moore, Downpatrick; John Clark M'Nicoll, Argyllshire; William Green Balfour, Montrose; Richard Gerald Fitzgerald, County Carlow; Thomas Kingston, County Cork; John Stuart Muir, Leith; Robert Vincent Power, Cork; Charles Moss Campbell, Cawnpore; James Gordon, Perthshire; Francis Perley Taylor, St. John's, N.B.; John George, Carrickfergus.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to practise on Thursday, August 2, 1866 :—

William Folkes, Dukinfield; Alfred Charlton, Tonbridge; George Francis de la Cour, Chatham; Samuel Argent, 25, South Molton-street, W.

The following gentlemen also on the same day passed their First Examination :—

Clement Dukes, St. Thomas's Hospital; William Richard Davies, University College Hospital; Thos. John Burroughs, Guy's Hospital.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Birkenhead, E. H., D.Sc. Lond., has been appointed Lecturer on Chemistry at the Liverpool Royal Infirmary School of Medicine.

Browne, J. C., M.D., has been elected Medical Superintendent of the West Riding of Yorkshire Lunatic Asylum at Wakefield.

Duncan, B. Archdeckne, L.R.C.P., M.R C.S., 88, Gower-street, W.C., has been elected a Fellow of the Royal Society of Literature.

Wightman, W., M D., has been appointed Physician to the Halifax Infirmary

BIRTHS.

Barclay.—On the 6th inst., at 2, Courtland-villas, Kensington, the wife of Dr. A. Barclay, Staff Surgeon-Major, of a daughter.

Down.—On August 4, at Earlswood, Redhill, Surrey, the wife of J. Langdon H. Down, M.D. Lond., of a son.

Duncan.—On August 7, at 46, Great Marlborough-street, W., the wife of P. C. Duncan, M.D., of a son.

Forrest.—On July 26, at Greenock, the wife of E. P. Forrest, Esq., Surgeon R.N., of a son, stillborn.

Foster.—On August 7, at Edgbaston, Birmingham, the wife of B. W. Foster, M.D., of a son.

Garner.—On the 5th inst, at Downpatrick, the wife of W. H. Garner, Esq., F.R.C.S.I., L.R C.P. Edin., of a son.

McOscar.—On August 4, at 4, Argyll-street, Regent-street, the wife of John McOscar, M.D., of a son.

Martyn.—On July 20, at Clifton, Bristol, the wife of Dr. Martyn, of a son.

Maxwell.—On July 26, at Stickney, Boston, Lincolnshire, the wife of P. Maxwell, M.D., &c, of a daughter.

Spackman.—On the 7th inst., at Bowers House, Harpenden, the wife of Frederick R. Spackman, M.D. Lond., of a daughter.

MARRIAGES.

Bastian—Orme.—On August 4, at the parish church at Hampstead, by the Rev. Andrew Campbell, M.A., of Dublin, uncle of the bride, assisted by the Rev. Gerard A. Harklots, M.A., Henry Charlton Bastian, Esq., M.A, M.B, F.L.S., to Julia Augusta, daughter of Charles Orme, Esq., of 81, Avenue-road, Regent's-park. No cards.

Eagles—Hills.—On August 1, at St. Luke's Church, Holloway, by the Rev. G. A. Rogers, M.A., incumbent, Philip Augustus, youngest son of William Barnfather Eagles, of Sutton Valence, Kent, to Mary Jane, second daughter of the late Robert Hills, M.D., and granddaughter of the late Richard White, of Maypole House, Goudhurst, Kent. No cards.

Puckle—Edwards.—On August 2, at St. Giles' Church, Camberwell, by the Rev. Stephen Bridge, M.A., George Puckle, M.D, of Denmark-hill, Surrey, eldest son of George Puckle, Esq., of De Crespigny-park, to Caroline, the youngest daughter of the late Edward Edwards, Esq., of Champion-hill, J.P. for the county of Surrey. No cards.

Ruffe—Baker.—On July 24, at Stapleford, Cambridge, Richard Edwin Ruffe, M R.C.S., L.S.A., of Bingley, Yorkshire, to Lucy, youngest daughter of W. Baker, Esq., of Stapleford.

Stewart—MacDonald.—On July 31, at the Free Church Manse, near Leith, by the Rev. Principal Candlish, Thomas Grainger Stewart, M.D., F.R.C.P, to Jessie Dingwall Fordyce, eldest daughter of the Rev. Robert MacDonald. No cards.

Tate—Way.—On the 2nd inst., at Freshwater Church, Isle of Wight, by the Rev. J. F. Isaacson, M.A., George Ralph Tate, Esq., M.D., Assistant-Surgeon Royal Artillery, to Sophia, eldest daughter of David Way, Esq., of Afton, Isle of Wight.

Williams—Coldham.—On July 26, at the parish church, Snettisham, Norfolk, Hutchins Williams, M.R.C.S.E., L.R C.P.Ed., &c., Surgeon Peninsular and Oriental Company's service, son of the late Hutchins T. Williams, Esq, of Dublin, to Ellen Harriet, daughter of the Rev. John Coldham, M.A., Vicar of Snettisham. No cards.

Young—Matthews.—On August 3, at Wetherden, Suffolk, by the Rev. Jos. Matthews, assisted by Rev. T. Richard Matthews, brothers of the bride, Graydon H. Young, Esq., eldest surviving son of the late Thos. Young, Esq., M.D. of the Royal Artillery, to M. Annie, elder daughter of the late Rev. T. Richard Matthews, of Bedford.

DEATHS.

Andrews.—On August 1, at 149, Camden-road, N.W., Ada Collingwood, the beloved wife of James Andrews, M.D. Friends will please accept this intimation.

Beyran.—M. Beyran, of the Paris Society of Surgery, and author of a "Traité de Pathologie Générale," died last week of phthisis, at the age of 41.

Campbell.—On August 1, at Chislehurst, Kent, Margaret Munro, aged 68, widow of the late John Shaw Campbell, M D., of Weymouth-street, and youngest daughter of the late Edward Penman, Esq., of Great Russell-street, London.

Drought.—On July 23, Dr. Frederick Drought, of Richmond, Fairview, Dublin, aged 78.

Gibert.—M. Gibert, Physician to the St. Louis for the last 20 years, a pupil of Biett and Alibert, and well known for his writings on Syphilis and Diseases of the Skin, died last week of cholera.

Gilby.—On July 20, Charles Otter Gilby, M.R.C.S.E., of Brewood, Staffordshire, aged 46.

Hood.—On August 2, Jane, the wife of W. Charles Hood, M.D., of Croydon Lodge, Surrey, aged 43.

Steinhaeuser.—On July 29, suddenly, at Berne, Switzerland, J. F. Steinhaeuser, Esq., Surgeon-Major of H.M.'s Indian Army, and late Staff-Surgeon at Aden.

Young.—On July 23, Edward Young, M.R.C.S.Eng., late of Highbury-grange, formerly in H.E.I. Co.'s service, aged 52.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Axminster Union.—Mr. George Gillett has resigned the Shute District; area 2450; population 609; salary £18 4s. per annum.

Calne Union.—Mr. John D. Bishop has resigned the office of Medical Officer for the Union; area 27,689; population 8879; salary £200 per annum; including attendance at Workhouse. This officer is restricted from private practice.

APPOINTMENTS.

Carlisle Union.—Wm. Hay, M.D. Glas., L.R.C.S. Edin., to the St. Cuthbert District.

Chertsey Union.—Samuel M. Ward, M.B. Cambridge, M.R.C.S.E., to the Chobham District.

Hinckley Union.—Thos. S. Ludlow, M.R.C.S.E., L.S.A., to the Burbage District.

Upton-on-Severn Union.—Henry B. Marsh, L.R.C.P. Edin., M.R.C.S.E., L.S.A., to the Third District.

Royal Medical and Chirurgical Society.—The library will be closed from Monday, August 13, to Saturday, September 8, both days inclusive.

University College, London.—At a Session of Council on the 4th inst., the following appointments were made:—Mr. J. E. Erichsen, Holme Professor of Clinical Surgery, in succession to Mr. Quain, who was invited to assume the title of Emeritus Professor; Mr. J. Marshall, Professor of the Principles and Practice of Surgery, as successor to Mr. Erichsen; Dr. Harley, Dr. Wilson Fox, and Dr. Ringer, hitherto Assistant-Physicians, Physicians to the Hospital; Dr. Ringer, Examiner for the Filliter Exhibition for Proficiency in Pathological Anatomy; Dr. Rickards, Resident Medical Officer of the Hospital (reappointment). The Liston medal was awarded to Mr. C. B. Laxon.

New Anthropological Society.—Manchester has started an Anthropological Society in connexion with the London Society. The following are the officers for 1866:—*President:* George Harris, Esq., F.S.A. *Vice-President:* C. W. Devis, Esq., B.A. Cantab., F.Z.S. *Honorary Secretary:* F. R. Fairbank, Esq., M.D., F.E.S. *Treasurer:* Rev. R. S. Scott, M.A. *Council:* David Morris, Esq., and Rev. S. G. F. Perry, M.A. Cantab.

Académie de Médecine.—At the last meeting of this learned body the celebrated pathologist, M. Lebert, of Breslau, was elected a Corresponding Member by the votes of 51 out of 53 members who were present; Drs. Bennett, of Edinburgh, and Magnus Huss, of Stockholm, were the other names proposed by the Committee. The Academy has for several weeks been engaged in a wearisome discussion on that endless subject, the healing of subcutaneous wounds. The old arguments on either side are reiterated with wearying pertinacity; and however palatable these may be rendered by the vivacity of oral delivery, their mere perusal is terrible uphill work.

The Bishopric of Meath.—It may be interesting to our readers to know that the Rev. Dr. Butcher, Regius Professor of Divinity in the University of Dublin, who has just been appointed to the vacant mitre, is brother of Dr. Butcher, the eminent Surgeon. Meath is the premier bishopric of Ireland, its occupant is always a privy councillor, and in virtue of the quasi-archiepiscopal nature of the See, comprising as it does within its limits several former bishoprics, takes the style of "Most Reverend."

The Roman Catholic Bishop of Liverpool has granted an indulgence from all fasts, including even that of Friday, until October 1 next, in order that cholera may not be encouraged through any want of sufficient animal food.

Edinburgh Medical Students' Christian Association.—A meeting of this Association was held in the University yesterday, Professor Balfour presiding. The following, among others, were present:—Professor Spence, Drs. Handyside, Grainger, Stewart, Black, and MacDonald. Letters of apology were read from Sir J. Y. Simpson, Bart., Professor McLagan, and Professor Henderson. The following resolutions were unanimously adopted:—"1. That, in the opinion of this meeting, this Association is worthy of all support, and that the students present resolve to promote its objects by all means in their power. 2. That those members leaving town resolve to make this Association widely known in the districts in which they may be established." A vote of thanks was then given to Professor Balfour for presiding, and to the Medical Missionary Society for its kind co-operation.—*Scotsman*, July 27.

Cholera in America.—There is no longer any doubt that Asiatic cholera has obtained a foothold in the United States. There are deaths from this terrible disease all along the Atlantic coast, and in New York and Brooklyn the number of new cases reported averages thirty daily. The scourge has broken out among the United States' troops near Savannah, having been carried thither in a troop ship from New York, and the mortality is quite large. All the old fears of the spread of cholera are renewed, and the sanitary precautions taken seem powerless for its obliteration. The bills of mortality both of New York and Philadelphia show an alarming increase, the weekly reports giving twice as many deaths as they did a month since, and fully 50 per cent. of the deaths now are of children under 2 years of age.—*Times'* Philadelphia Correspondent, August 7.

Cholera is said to have broken out in the Prussian camp in the Marchfeld, and is widely diffused, though there have not been many cases.

University College, London.—The result of the class examinations of the summer term for the Faculty of Medicine of the College was made known on Tuesday at a meeting in the Botanical Theatre of the College; Professor Williamson, Vice-Dean of the Faculty, in the chair. Prizes and certificates of honour were adjudged as follows:—*Medical Jurisprudence*—Gold medal, Edward Collett Shoppee; silver medal, Louis Marc le Grand. Certificates: 3rd, Robert Pollock; 4th, David Havard; 5th, Essex T. Williams; 6th, Samuel Pidwell. *Materia Medica*—Gold medal, R. L. Roberts; 1st silver medal, W. H. Allchin; 2nd silver medal, J. R. Darby. Certificates: 4th, William Hardman; 5th, Stanley Peacock; 6th, William R. Davis; 7th (equal), W. Bishop, Charles Wood, T. G. E. Bolton, Alfred H. Hackney; 11th, William R. Cheyne, Laurence K. Times; 13th, Enoch Snell, Allen Sewell; 15th, James L. Bullock. *Pathological Anatomy*—Gold medal, H. C. Wigg. *Practical Chemistry*—Gold medal, Alfred Shewen. Certificates: 2nd, William Milligan; 3rd, Frank Salter; 4th, Stanley Peacock; 5th (equal), J. R. Darby, Thomas Colcott Fox; 6th, John H. Mummery. *Midwifery*—Gold medal, G. O. Spencer; 1st silver medal (equal), William Hardman, David E. Jones; 2nd silver medal, S. B. Brooks. Certificates: 5th (equal), Richard M. Pryce, Louis Marc le Grand; 7th, Robert Pollock; 8th, Charles F. Groom; 9th, David Havard; 10th, C. P. Kemp; 11th, Alfred J. Pearce; 12th, Essex T. Williams; 13th, T. C. Lloyd. *Botany*—Gold medal, Henry Newell Martin; silver medal, David Watson. Certificates: 3rd (equal), William Wym Wescott, James Llewelyn Brown; 4th, Alfred Shewen; 5th, R. I. Smith. Liston's Clinical Medal (gold), Charles Bankes Loxon.

Westminster Hospital School of Medicine.—Distribution of Prizes.—May 9, 1866.—The Right Hon. Lord Charles J. F. Russell, Vice-President of the Hospital, in the chair. Mr. Henry Power, the Dean of the School, read a report of the present state and progress of the Westminster Hospital Medical School, giving a very favourable review of the behaviour and progress of the students, and more particularly their success in passing their several examinations before the public examining boards. The following prizes were then delivered to the several successful candidates by Lord Charles Russell, with a few appropriate remarks to each prizeman. Practical Chemistry: Mr. C. T. Winckworth, prize; Mr. J. R. Haynes, certificate; Mr. C. H. Furnivall, certificate. Materia Medica: Mr. C. T. Winckworth, prize; Mr. J. R. Haynes, certificate; Mr. C. H. Furnivall, certificate. Botany: Mr. C. T. Winckworth, prize; Mr. C. H. Furnivall, certificate. Forensic Medicine: Mr. Walter Moore, prize; Mr. Joseph Oakman, certificate; Mr. Thomas J. Quicke, certificate. Midwifery: Mr. Joseph Oakman, prize; Mr. Frederick Smith, certificate. Anatomy: Mr. C. T. Winckworth, prize; Mr. J. R. Haynes, prize. Prosectors' Prizes: Mr. W. C. Watson, Mr. M. W. Chambers, Mr. J. C. F. M'Donald. Chemistry: Mr. S. E. Owen, prize; Mr. R. H. Lloyd, certificate. Physiology: Mr. C. T. Winckworth, prize; Mr. C. H. Furnivall, certificate; Mr. J. R. Haynes, certificate. Medicine: Mr. M. W. Chambers, prize; Mr. W. C. Watson, certificate; Mr. Walter Moore, certificate.

Surgery: Mr. Joseph Oakman, prize; Mr. W. C. Watson, prize; Mr. Walter Moore, certificate. Clinical Medicine: Mr. Walter Moore, prize; Mr. M. W. Chambers, prize. Clinical Surgery: Mr. W. C. Watson, prize; Mr. Walter Moore, certificate. Dental Surgery: Mr. R. C. Brookes, prize; Mr. Walter Moore, certificate. Chadwick prize: Mr. W. C. Watson, Mr. Walter Moore. At the conclusion, Lord Charles Russell made a few remarks to the pupils, expressing the great pleasure he felt in presiding on such an occasion. He felt the greatest interest in the School of Medicine as one of the Governors of the Hospital, and he thought that, did he not do so, he would be like a man living on his capital and not his income, since death must sooner or later remove those eminent men who filled the posts of Medical officers, and without Medical schools it would be impossible to replace them. All students cannot be successful prizemen; but if they did not attain success, they might do more—deserve it: the best consolation for an unsuccessful candidate was the knowledge that he had done his best, and this he would find a comfort later in life. Emulation and competition brought out energy and perseverance, which the Chairman denominated the characteristics of the British race. Perseverance was necessary in success as well as in failure, and constant activity was most especially necessary in the Medical Profession, or one, however successful, would soon be left behind in the race. Shams and mysteries were gone by in Medicine, and Medical men were now regarded by the public as scientific men, and all must be careful to maintain that reputation. He was glad to know that most of those present were to meet again in the evening at a more social board—at the annual dinner of past and present Westminster men—and concluded by expressing a hope that, though scattered in various parts of the world, the old students would look back to the present occasion with pleasure and satisfaction.

THE following are the last week's Cattle Plague Returns.

Census Divisions.	1. Attacked.			Back cases reported in the week ended July 28, 1866.	2. Result of reported Cases from the Commencement of the disease.				
	Week ended July 14.	Week ended July 21.	Week ended July 28.		Attacked.	Killed.	Died.	Recovered.	Unaccounted for.
Metropolitan Dist.	1	..	1	..	7910	3428	3714	318	450
South Eastern Co. .	..	..	..	..	4880	1705	2539	465	171
South Midland Co.	25	17	42	1	20792	8794	10070	1541	387
Eastern Counties .	19	26	12	..	11483	5444	4851	789	399
South Western Co.	17	32	27	..	1834	729	827	207	71
West Midland Co. .	31	31	63	..	14916	6396	6096	1519	905
North Midland Co.	38	18	18	..	19007	10966	6271	1224	546
North Western Co.	144	61	30	33	72040	25012	35037	8472	3519
Yorkshire . .	20	10	12	1	34594	7937	18358	5938	2361
Northern Counties.	..	..	..	..	8636	4931	2613	974	118
Monmouthshire & Wales . . .	7	11	3	..	8375	1175	5793	1107	300
Scotland . .	2	1	..	..	46861	6263	28038	10707	1803
Totals .	304	207	208	35	251328	82780	124257	33261	11030

The Return shows that 208 attacks were reported to have occurred during the week ended July 28, being an increase of 1 on the previous week.

Correcting the total by adding an estimated average of attacks commencing during the week, but which may be subsequently included under the heading "Back Cases," the number for the week will be 231.

Fresh outbreaks took place in 46 farms or places where cattle are kept; the number of such outbreaks in the previous week being 33.

Note.—2 Inspectors, who reported cases last week, have not reported in time for this return, viz., for the county of Chester 1, and for the East Riding of York 1. These Inspectors reported 2 cases last week.

SCANDINAVIAN LORE.—A HARVEST FOR ANTIQUARIANS.—Those who take any interest in the Scandinavian element in our origin as a nation will welcome with no little pleasure the appearance of one of the most remarkable works of the age—"On the Old Northern Runic Monuments of Scandinavia and England, now first Collected and Deciphered," by Professor George Stephens, F.S.A., Part I., published by John Russell Smith, of Soho-square. We have had the pleasure of running through its pages, and we are astonished at the amount of research displayed by its contents. The Professor has devoted a lifetime to the discovery and preservation of monumental remains erected by the early Scandinavian people. He is well known to the English public through several translations of Swedish poets, but his present gigantic work will elicit from Englishmen especially an astonished gratitude, and will be a feast indeed for antiquarians, since in it there are solutions of inscriptions and the like the interpretation of which has baffled the most acute investigators for many a long day. And then the work is so charmingly illustrated throughout. The author gives us the pith of the views of the learned men of the past upon the question of the origin of language; he enters minutely into Runic literature, the language of monuments, old and northern; dialects; Runic remains and Runic writing, on Runic stones, etc.; various details of other Runic lore, the history of Runic remains in Sweden, in Norway and Denmark, and in our own land, England. The Danish Government has given £1000 towards the issue of the work, so highly do they appreciate its value.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Beale's Researches on the Cholera will be continued next week.

Dr. Edmond's letter shall appear next week.

Dr. J. G. Macvicar is thanked for his communication. We regret that we have not room for it at present.

Dr. Moriarty's paper on Diseases of the Gold Coast is intended for publication as soon as the pressing demands on our space are met.

Mr. Nisbet, Egremont.—Thanks for the communication.

Nemo.—We think the new comer ought to call on the old ones, and let them know who he is and where he comes from.

Erratum.—In the pass list of the College of Surgeons in last week's number, *for* "Charles George Coles," *read* "George Charles Coles."

Dr. Harcourt.—If your son passes the preliminary examination in arts at the Apothecaries' Hall in September next, he could enter on his Hospital studies the following October.

Mr. D. Mackechnie, Hartlepool.—We would strongly advise our correspondent not to notice an anonymous attack, and to write to that effect to the editor of the *Durham Herald.* In the presence of such an epidemic as now exists in various parts of England, we think Mr. Mackechnie was undoubtedly right in reporting the case to the local authorities. The documents Mr. Mackechnie has placed in our hands prove that he formerly had considerable opportunities for observing the disease.

Dr. Parkin.—The chapter on "The Cholera in Jamaica" in Dr. Parkin's work was not overlooked. Table I., referred to by Dr. Parkin, does give the number of cases of cholera treated by him as 746, with only 84 deaths. But the whole of the statistics of the Jamaica outbreak appear to be very imperfect, and it may be remarked that of these cases only 204 reached the stage of collapse; of those in a state of collapse when first seen 53·33 per cent. died; and of those who passed into collapse under treatment 34·10 per cent died. To this objection answer may doubtless easily be made, but we have neither time nor space to criticise in detail these tables. What we meant to express, and now repeat, is that the statistical evidence adduced by Dr. Parkin is in degree and kind utterly inadequate to the purpose for which it is brought forward—viz., to prove that Dr. Parkin has discovered an antidote to the cholera poison.

An Excited Member.—Under the circumstances mentioned by you, it is not surprising you were unable to retain the address made to you by the President on your admission as a member; it is something in the following style:—"Gentlemen, in the name and by the authority of the Royal College of Surgeons of England, I admit you members thereof. The diploma you will receive entitles you to register under the Medical Act, whereby you acquire all the rights, privileges, and immunities which that Act confers on the legally qualified Surgeon. The diploma of this College entitles you to practise Surgery in all parts of her Majesty's dominions, and exempts you from compulsory service on juries or in the militia, and from holding all municipal and parochial offices. In this College it admits you to the museum, the library, to all lectures delivered within its walls, and to compete for the Collegial and Jacksonian prizes. In conclusion, gentlemen, I have to convey to you the best wishes of this Court for your success in the honourable practice of your Profession."—Mr. Partridge, of King's College, has succeeded Mr. Wormald as President; write to Mr. Trimmer, the Secretary, who will send you the new regulations relating to the Fellowship.

DEFEAT OF THE VACCINATION BILL.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—A young gentleman in our office has been handing about the following, which he says is a classical quotation, and accounts for the defeat of the Vaccination Bill:—

"Victrix causa *Graham* placuit, sed victa *Simoni.*"

I am, &c.

G. R. O., July 6. RITHMETIC.

THE MEDICAL ATTENDANT ON CHOLERA IN THE WHITECHAPEL UNION WORKHOUSE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In your report of cases of cholera treated at the Whitechapel Union Workhouse with camphor, there is a slight inaccuracy, which I shall feel obliged by your noticing in your next impression. I beg to state that I had sole charge of the cases, it was by my direction that camphor was administered, and I alone am responsible, as Medical officer, for the treatment of the whole of the cases. Mr. Widdas is my assistant, and frequently saw the patients. Any one reading your report would infer that Mr. Widdas was Medical officer, and that I was assistant; or, at least, that I had entrusted some cases to him, which would have been quite contrary to the orders of the Poor-law Board. I am, &c.

12, Mount-place, London Hospital, E., Aug. 7. E. Richardson.

Cholera Mist.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In the *Times* of this day I notice that Mr. Glaisher has noticed a peculiar "blue mist," which he calls "cholera mist." May I suggest, through your columns, that possibly such an appearance might result from an acute attack of the "blues," and the yellow scarlatina mist might be occasioned by an attack of the vapours? Hoping you may not consider my suggestion irrelevant, I am, &c.

Kingsland-crescent, August 7. William Hewitt.

Treatment of Cholera.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Will you or any of your correspondents inform me whether Dr. Stevens's plan of treatment in cases of cholera has been followed during the present outbreak, and, if so, with what success? and also whether carbolic acid has been tried internally, and with what results?

I am, &c., H. L. Maysmor, M.D.

33, Mornington-road, N.W., August 8, 1866.

Clinical Remarks on the Treatment of Choleraic Diarrhœa and Dysentery.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Having anxiously watched the effect of remedies usually prescribed in the above-named cases for more than thirty years, and being so frequently disappointed with their action, I determined to resort to what I believe a new line of treatment. Early in the year 1863 I gave the tinct of belladonna in a case of acute dysentery, in combination with tinct. rhei co., sp. ammoniæ, and aq. cinnamomi, to be taken three times a day (five minims of the tinct. belladonnæ for a dose). The result far exceeded my expectation, the spasm ceasing almost immediately, and did not recur. The reports of many subsequent cases are in keeping with the above. In the cholera visitation of 1832 I held an appointment in a Scotch district where the epidemic raged very severely; and being always struck with the immediate effect the cholera poison had on the nervous system, and the disheartening results of treatment, I am induced to send this idea to my Professional friends, in the hope that belladonna may be found useful in allaying the fearful spasms in cholera cases, as it has in my hands undoubtedly stopped the pain and spasms of dysentery. If, as I conceive, the cholera poison acts first on the nervous, and secondly on the muscular system, then I think belladonna will be found useful in its action, from its known physiological effects, especially on the involuntary nerves I would it recommend to be prescribed with the lime-water or acid mixtures, or introduced by the hypodermic method. Of course this will depend on what stage of the attack the patient comes under treatment.

I am, &c.

Pocklington, Yorkshire, August 8. J. Watmough, M.D.

BOOKS RECEIVED—

The New York Medical Journal, June—Meredyth, On the Employment of Mercury in the Treatment of Syphilis—Barthelemy, On a Sure Preventive and Cure for Asiatic Cholera, &c.—Johnson, On Epidemic Diarrhœa and Cholera—Pharmaceutical Journal, August—The Dental Journal, July—Watts's Dictionary of Chemistry, Part 35—Brande's Dictionary of Science, Part 10—Gordon, On Army Hygiene—Billing, On the Treatment of Asiatic Cholera—L'Union Medicale, August 2.

COMMUNICATIONS have been received from—

Dr. Parkin; Dr. Nicholson; Dr R H. Taylor; G. C. Coles, Esq.; Mr. Atkinson; Dr. Crawford; Dr. Markham; Dr. Moriarty; Dr. Macleod; Lex; F A. Bulley, Esq.; Haynes Walton, Esq.; T. J. Haynes O'Connor, Esq; Dr. Kidd; Edward Richardson, Esq.; Dr. Moore; Dr. W. T. Robertson; Dr. W. Hewitt; J. K Sampson, Esq; Thomas R. Fraser, Esq; Dr Macvicar; W. Nisbet, Esq.; Frank W Cooper, Esq; Dr Thorowgood; Dr. Maysmor; Dr. Watmough; W. Whalley, Esq.; Dr. Blandford; Dr. B. W Richardson; Dr. Barlow; Mr. F. A. Bulley; Dr. Greenhow; Mr. J. Chatto.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 4, 1866.

BIRTHS.

Births of Boys, 1049; Girls, 939; Total, 1988.
Average of 10 corresponding weeks, 1856-65, 1739·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	1321	1340	2661
Average of the ten years 1856-65	647·3	621·4	1268·7
Average corrected to increased population ..	..	..	1395
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	—	4	4	1	6	1	46	12
North ..	618,210	11	8	3	1	8	17	79	46
Central	378,058	1	5	3	—	9	5	42	33
East ..	571,158	9	22	15	1	10	11	125	916
South ..	773,175	7	6	9	4	11	12	62	47
Total ..	2,803,989	28	45	34	7	44	46	354	1053

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·556 in.
Mean temperature	58·8
Highest point of thermometer	72·9
Lowest point of thermometer	46·0
Mean dew-point temperature	52·1
General direction of wind	W. & W N.W.
Whole amount of rain in the week	0·51

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 4, 1866, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending Aug. 4.	Deaths.		Temperature of Air (Fahr.)			Rain Fall.	
				Corrected Average Weekly Number.*	Registered during the week ending Aug. 4.	Highest during the Week.	Lowest during the Week.	Weekly Mean of the Mean Daily Values	In Inches.	In Tons per Acre.
London (Metropolis)	3067536	39·3	1988	1400	2661	72·9	46·0	58·8	0·51	52
Bristol (City) . .	163680	34·9	118	73	‡169	69·7	45·9	58·3	0·16	16
Birmingham (Boro')	335798	42·9	233	163	139	69·6	43·5	57·8	1·38	139
Liverpool (Borough)	484337	94·8	352	281	492	68·1	51·4	58·6	1·86	188
Manchester (City) .	358855	80·0	242	203	‡259	74·0	41·0	56·1	1·90	192
Salford (Borough) .	112904	21·8	99	57	65	71·2	40·1	54·4	1·59	161
Sheffield (Borough) .	218257	9·6	168	115	99	69·1	45·8	54·1	1·45	146
Leeds (Borough) .	228187	10·6	183	116	147	71·0	44·5	56·1	2·65	268
Hull (Borough) .	105233	29·5	76	49	48	..	..	..	..	..
Nweastl-on-Tyne, do.	122277	22·9	69	65	95	63·0	45·0	54·7	2·72	275
Edinburgh (City) .	175128	39·6	108	84	77	64·7	47·0	54·8	2·10	212
Glasgow (City) . .	432265	85·4	307	252	228	67·6	40·6	54·[illegible]	1·27	128
Dublin (City and some suburbs) .	318437	32·7	143	†156	120	67·4	42·0	56·7	0·75	76
Total of 13 large Towns . . .	6122894	34·4	4086	3014	4499	74·0	40·1	56·2	1·53	154
	(1863)				Week ending July 21.	Week ending July 21.				
Vienna (City) . .	560000	..	..	..	351	..	..	§ 80·4	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·556 in. The barometrical reading increased from 29·37 in. on Sunday to 29·77 in. on Wednesday.

The general direction of the wind was W. and W.N.W.

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* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 62·2°.

APPOINTMENTS FOR THE WEEK.

August 11. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p m.

13. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

14. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p m.; St. Peter's Hospital for Stone, 3 p.m.

15. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

16. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

17. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

THE PANCREATIC EMULSION,

A NEW REMEDIAL AGENT.

Originated by **Dr. DOBELL**, Physician to the Royal Infirmary for Diseases of the Chest.

Vide The Lancet, *Nov. 11th* and *18th*.—"A third report of cases of consumption treated with Pancreatic Emulsion at the Royal Infirmary for Diseases of the Chest."

"THE IMPORTANCE OF PANCREATIC EMULSIONS of Solid Fat over Cod-liver Oil, in the treatment of Tuberculosis, must be as great as that of supplying a plant with good soil instead of putting it into water."—Page 50. "On Tuberculosis," by Horace Dobell, M.D.

This Preparation is now made on an extensive scale, and the Price is therefore considerably Reduced.

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Silicate acid sesquioxide of iron Arseniate ,, sesquioxide of iron Phosphate ,, sesquioxide of iron Sulphate ,, sesquioxide of iron Sulphate of lime Chloride of soda Organic matter	0·44

Thermalité 13°.	*Saint-Jean.*	*Rigolette.*	*Précieuse.*	*Désirée.*	*Magdeleine.*
Free carbonic acid	1·425	2·095	2·218	2·145	2·050
Bicarbonate of soda	1·480	5·800	5·940	6·040	7·280
,, of potash	0·040	0·263	0·230	0·263	2·255
,, of lime	0·310	0·259	0·630	0·571	0·520
,, of magnesia	0·120		0·750	0·900	0·672
,, of iron and manganese	0·006	0·024	0·010	0·010	0·029
Chloride of soda	0·060	1·200	1·080	1·100	0·160
Sulphate of soda and of lime	0·054	0·220	1·135	0·200	0·235
Silicate of silica, alumina	0·080	0·060	0·060	0·058	0·097
Iodure alcalin, arsenic of lithia	traces	traces	traces	traces	traces
	2·151	7·826	8·885	9·142	9·248

Quantity Analysed, One Litre of Water from each Spring.

These Waters are extremely gaseous, and very agreeable to drink at table, pure or mixed with wine. An excess of Carbonic Acid, and the happy proportion of Bicarbonate or Calciques Magnesia, make these the richest Mineralised of all known Waters, and of a light, soft, and essentially digestive character. They are very valuable for preventing the formation of the alkaline diathesis. The ordinary dose is one bottle per day.

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COVERDALE & CO. 11, London-street, City, E.C.; and of all the principal Chemists in the Kingdom.

ORIGINAL LECTURES.

ON THE

EXISTENCE IN THE TEXTURES OF ANIMALS OF A FLUORESCENT SUBSTANCE CLOSELY RESEMBLING QUININE.

By HENRY BENCE JONES, A.M., M.D., F.R.S.,
Hon. Sec. R.I.,

AT THE
Royal Institution of Great Britain,
ON FRIDAY, MARCH 23, 1866.

WHEN I last year brought to your notice the fact that "a single dose of lithium in a few minutes passes, through the circulation, into all the ducts, and into every particle of the body, and even into the parts most distant from the blood circulation, and when I showed you that it remains there for a much longer time than it took to get into the textures (probably for three or four days, varying with the quantity taken), and that then it diminishes, and finally, in six, seven, or eight days, the whole quantity is thrown out of the body," I little expected that by prosecuting an investigation into this chemical circulation in the body I should come upon that discovery which forms the title for this evening's discourse.

No imagination could have anticipated that this line of research into the rate of passage of substances into and out of the textures would lead to the supposition that man and all animals possess, in every part of the body, the most characteristic peculiarity of the bark of the cinchona trees of Peru.

After determining the rate of passage of lithia and other mineral matters into and out of the body, Dr. Dupré and I proceeded to endeavour to trace the rate of passage of quinine into and out of the textures of animals.

We chose quinine because of that splendid test which led Professor Stokes to the discovery of the change of refrangibility of light.

Here, for example, are different solutions of quinine of different strengths, and by means of the production of fluorescence in the electric light, you see how we can determine which of these solutions contains the greatest quantity of quinine; and by forming standard solutions it would be easy to measure how much quinine existed in each of these solutions. Moreover, Professor Stokes discovered that when a solution of common salt was added to this quinine solution, the fluorescence entirely disappeared. Though this may be so for sunlight, it does not disappear in this electric light; and, moreover, on adding a solution of sulphate of soda to a solution of chloride of quinine, the fluorescence in great measure returns.

Still further, Professor Stokes showed that one solution of quinine entirely stopped these rays from passing into a second solution of the same substance, so that you might almost tell whether you had a solution of quinine by seeing whether it cut off the fluorescence from a second solution of quinine.

Our first object was to determine the delicacy of this reaction for quinine. We arrived at the following results, when the spark from a Ruhmkorff coil was the source of light :—
Sulphate of quinine gave

Slight fluorescence when $\frac{1}{360000}$ of a grain was present.
Feeble do. do. $\frac{1}{330000}$ do.
Distinct do. do. $\frac{1}{250000}$ do.

One grain of sulphate of quinine in 1,000,800 parts of water showed the blue fluorescence distinctly in 20 grs. of the solution. In another experiment, the same amount of quinine in 1,000,444 parts of water showed fluorescence very distinctly.

Having thus got our test, we proceed to apply it to determine the passage of quinine into and out of the textures of guinea-pigs.

A guinea-pig was given quinine, and for comparison another guinea-pig was killed at the same time, having had no quinine.

Of the pig that had taken quinine, each organ was heated in a water-bath, with very dilute sulphuric acid. This extraction was repeated over and over again. The acid extracts were mixed and filtered after cooling, neutralised with caustic soda, and repeatedly shaken up with their own bulk of ether. The residue left after evaporation of the ether was taken up by dilute sulphuric acid, filtered and tested for fluorescence.

The pig that had taken no quinine had each organ treated in a precisely similar way. To our great disappointment, at first, we found that not only had the pig that had taken quinine a fluorescent substance in the textures, but that an almost exactly similar substance was extracted from the organs of the pig that had taken no quinine. Every texture was examined, and in every one this fluorescent substance occurred.

We then endeavoured, in every possible way, to find a means of separating the natural from the induced fluorescence. And as every method failed, and we were compelled to recognise the close similarity of the substance that exists in the textures to quinine itself, we for a time dropped the original inquiry, and proceeded to a more complete investigation of the natural fluorescent substance in animals.

Without any preparation this substance can be shown to exist in the living and in the dead textures. There is one transparent substance which is above all most suited for this inquiry.

Here are some lenses removed from the eyes of bullocks, guinea-pigs, and man. You see how clear, white, and transparent these substances are; and if I take a bullock's eye, which by gentle pressure has been flattened so that the structure can be distinctly made out, there is plainly no colouring matter. As in quinine, nothing is seen until the blue rays of the electric light fall on the lenses; then look at the splendour of the reaction. Here, with the guinea-pig's lenses, the same is seen; and here, with the flattened bullock's eye. You might be tempted to think that this is a *post-mortem* change, a result of decay; but here is a fresh bullock's eye—look at this blaze of bluish-green light; but still more full of suggestion is an experiment with a dilated pupil in a living animal or in man. Let me show you my own eye, for in it you can see the lens shining with this unnatural, because unaccustomed, light, looking to you like an opaque substance, a blue-green cataract, whilst my eye can hardly distinguish anything, in consequence of the bluish haze which confuses my sight.

Life and death, then, have nothing to do with the existence of this substance; here it is present in the living lens; it does not disappear from lenses that have been kept for months in glycerine.

I have already said that this substance not only exists in the lens, but that it can be found everywhere by treating any animal substance, first with dilute acid, then neutralising with alkali, and then extracting with ether: thus we obtain solutions having exactly the same properties as you see in the lens. Here, for example, is such an extract from the liver. Here, from the kidney. Here, from the heart. When an acid solution of this substance is treated with ether, no fluorescent substance is obtained. First, as with quinine, the acid must be neutralised before this substance or the quinine can be taken up by the ether.

Having then obtained these solutions, we were able to compare them with solutions of quinine in their actions on the spectrum. And first, the solution of the natural substance begins to fluoresce a little before the solution of quinine; but on carrying it on through the spectrum it ends where quinine ends.

The fluorescent light of the natural substance is a little more greenish than the fluorescent light of quinine.

If a quartz cell containing this fluid is interposed between the source of light and a solution of quinine, no fluorescence takes place in the quinine; and if quinine is interposed between the light and this natural solution, scarcely any fluorescence is observed in it.

When a solution of common salt is added to the naturally fluorescing substance, it is almost entirely destroyed, as happens with quinine.

If the natural solution is boiled with permanganate of potass, it does not lose its fluorescence, nor does quinine; but when permanganate with excess of alkali acts upon this substance or upon quinine, the fluorescent substance is entirely oxidised.

Hence this substance, by the mode of its extraction and by its remarkable action on light, is very closely related to quinine; and this led us to apply the chemical tests for quinine to this natural fluorescent substance, after extraction from the body.

The different tests for alkaloids like quinine, as morphine, strychnine, veratrine, atropine, you may see in the following reactions. First, quinine gives, as you see, a precipitate with iodine in iodide of potassium. Secondly, iodide of mercury in iodide of potassium also gives a precipitate. Thirdly, phosphomolybdic acid also gives a precipitate. Fourthly, bichloride of platinum gives a precipitate. Lastly, terchloride of gold causes a precipitate, and this precipitate is soluble in alcohol.

Now each and all these different reactions are obtained with these same reagents acting on the fluorescent substance that is extracted from animals.

So that here again we have chemical proof that this substance is an alkaloid, and that it is closely related to quinine.

We have named it Animal Quinoidine because we have not as yet been able to crystallise it or to obtain enough for an analysis.

Having satisfied ourselves that an alkaline fluorescent substance resembling quinine existed in the different textures, we endeavoured to determine the proportion that was present in different parts. For this purpose standard solutions of quinine of known strength were prepared, and equal amounts of substance were treated in precisely similar ways, and then the fluorescence was compared with the standard solutions of quinine. No very accurate estimations could thus be made, but comparative results could be obtained, and these are represented in the following tables:—

On the amount of fluorescent substance in different parts of guinea-pigs and of man, measured by the number of grains of quinine in 100 *litres (=* 176 *pints) of water, that gave the same fluorescence.*

	In Guinea-pigs.			In Man.		
Liver	6 to 3	6	2	2	2	2
Lenses	3	2	2	2	—	—
Kidney	3	2	2	2	2	3 to 6
Urine	3	2	2	—	—	—
Bile	3	2	2	—	—	—
Blood	3	2	2	—	—	—
Brain	3	2	2	—	—	—
Nerves	3	2	2	1	1	2
Muscles	3	2	2	1	2	2
Humours of the eye	2	2	2	—	—	—
Cartilages	—	—	—	3	1	—
Spleen	—	—	—	1	1	3
Lungs	—	—	—	1	1	2

What, then, is the meaning of this widely diffused substance in animals which so closely resembles quinine? At present we are far from a perfectly clear answer. It is not thirty years yet since the presence of ammonia in the products of distillation of coal was considered "curious," because nitrogen was thought to be the characteristic of an animal substance, and absence of nitrogen was considered as the distinctive mark of vegetable creation. Gradually, year by year, each substance that has been thought to be the special property of the vegetable world has been found to occur in animals. Thus sugar, starch, woody fibre, vegetable colouring matter as indigo, albuminous substances, are common to animals and vegetables; and at length we have arrived at the fact that no distinction can truly be drawn between the three kingdoms of nature. In the body, salt and phosphate of lime and phosphate of soda are animal substances as much as fibrin and albumen. Sugar is as much an animal substance as albumen is a vegetable substance, and no separation can be made by chemical analysis between animal, vegetable, and mineral.

The processes which take place in the three different kingdoms are, however, very different. The vegetable generally from carbonic acid, ammonia, and water can synthetically build up acids, neutral hydrocarbons, fats, alkaloids, and albuminous substances; whilst the animal generally from albumen analytically produces alkaloids, fats, neutral hydrocarbons, acids, and ultimately water, ammonia, and carbonic acid.

Thus the following table of synthetically and analytically produced substances common to both kingdoms may even now be formed:—

From Carbonate of Ammonia and Water.	From Albumen passing down to Carbonate of Ammonia and Water.
Synthetically formed substances, by the plant or by the chemist.	*Analytically formed substances.*
Oxalic acid	Albumen
Formic ,,	Casein
Lactic ,,	Animal Quinoidine
Acetic ,,	Indican
Valerianic ,,	Glycocol
Glycerine	Taurin
Sugar	Leucin
Starch	Urea
Cellulose	Caprylic Acid
Cholesterin	Caproic ,,
Butyrin	Capric ,,
Palmatin	Olein
Stearin	Stearin
Olein	Palmatin
Capric acid	Butyrin
Caproic ,,	Cholesterin
Caprylic ,,	Cellulose
Urea	Starch
Leucin	Sugar
Taurin	Glycerine
Glycocol	Valerianic acid
Indican	Acetic ,,
Quinine	Lactic ,,
Casein	Formic ,,
Albumen	Oxalic ,,

From this point of view, then, our so-called animal quinoidine is descended from albumen, and its ultimate progeny are carbonate of ammonia and water, out of which substances the cinchona tree, under favourable circumstances, is able to build up quinine, $C_{40}H_{24}N_2O_4$

From the large number of carbon atoms in quinine, it may be regarded as one of the early substances produced in the downward passage of albumen, and from this we shall very probably find the key to the question how quinine acts in the body.

When sulphate of quinine is taken, like the lithium and other substances which I brought before you last year, it rapidly passes from the blood into the textures.

Even in a quarter of an hour, after four grains of sulphate of quinine the fluorescence may rise to 75 grains to 100 litres. It is found in greatest amount in the liver and kidney; rather less in the blood, urine, and muscles; still less in the brain, nerves and bile; and is perhaps even in this time increased in the lens of the eye.

In three hours the maximum effect of the quinine may be reached. It amounts then to from 100 to 200 grains of quinine in 100 litres of water, and it occurs to this amount in the liver, kidney, urine, bile, blood, brain, and muscles. The nerves and aqueous humour showed much less increase, and the lenses showed the least increase of all the textures.

In six hours the amount of fluorescence was rather less than in three hours.

In twenty-four hours it was considerably less than half as much as in three hours.

In forty-eight hours, except in the liver and blood, there was but little more fluorescent substance in the textures than naturally exists there.

And in seventy-two hours the liver showed no trace of increase of fluorescence.

Hence, in fifteen minutes the quinine had passed everywhere. In three hours it was at its maximum, and remained in excess for six hours. In twenty-four hours it was much diminished, and in forty-eight hours scarcely perceptible.

These results were obtained by extracting the natural fluorescent substance and the quinine together from the textures, determining the joint fluorescence by standard solutions, and by comparing the numbers thus obtained with the numbers given when no quinine was taken.

The following table of the fluorescence of the different textures after four grains of quinine had been taken by guinea-pigs was made,

	Experiment 1, ¼ hour.	Experiment 2, ½ hour.	Experiment 3, 1 hour.	Experiment 4, 3 hours.	Experiment 5, 4½ hours.	Experiment 6, 5¼ hours.	Experiment 7, 6 hours.	Experiment 8, 8 hours.	Experiment 9, 24 hours.	Experiment 10, 32 hours.	Experiment 11, 48 hours.	Experiment 12, 72 hours.
Liver . .	75	40	20 to 40	100 to 200	100		100 to 200		50	4	6	6
Lenses . .	6 to 3	5	—	3	2		3 ,, 1		3		3	3
Kidney . .	75	40	20	100 to 200	100		100		50		3	3
Urine . .	50	20 to 10	20	100 ,, 200	100		100	4 to 6	12 to 6	2	3	3
Bile . .	12	20	5	100 ,, 200	13		75	5	12		3	3
Blood . .	50	20	20	100 ,, 200	12 to 25	20 to 40	100 to 50		12		6	3
Brain . .	12	10 to 5	5 to 3	100 ,, 200	6 ,, 12		25		6			3
Nerves . .	6	5	least	6	2		6		3		3	3
Muscles .	50 to 25	20	5	100 to 200	50 to 100		25		12 to 6		3	3
Humours of eye	—	5	—	6 to 3	2		3		6		3	least

We have been able also to find some trace of the passage of the quinine even into the lens of the eye of man.

The following table, which we owe to the kindness of Mr. Bowman, who gave us the cataracts, makes this evident:—

On the Increase of Fluorescence in Cataracts after Quinine.

Natural fluorescence of lens = 1·6 grs. of quinine per 100 litres of water
1 hour after 5 grs. quinine; cataract = 1·6 ,, ,,
1¼ ,, ,, ,, = 1·6 ,, ,,
2 ,, ,, ,, = 1·6 ,, ,,
2¼ ,, ,, ,, = 2·1 to 3·1 ,, ,,
After many days taking quinine ,, = 6·2 to 3·1 ,, ,,

The figures represent the number of grains of sulphate of quinine in 100 litres (176 pints) of water, required to give a fluorescence equal to that of the substances extracted.

Thus, then, the quinine goes everywhere; and wherever it goes it meets with the natural fluorescent substance like quinine which most probably is constantly forming and undergoing oxidation. The incoming quinine causes a temporary excess of quinine in the textures. Probably it causes a stoppage of the fresh formation of quinine from albumen; a temporary arrest of the changes going on; a transfer of action probably to the quinine introduced, so that with large doses deafness and great prostration and almost imperceptible pulse are produced in man, whilst in guinea-pigs death even is caused by the extreme prostration. In small doses, quinine, probably like alcohol, gives an immediate stimulus when the first chemical action takes place: but soon the quinine retards the chemical changes in the nitrogenous substances, just as alcohol, by its secondary action, retards the chemical changes in the hydrocarbons in the different textures.

Possibly the increased resistance to changes in the textures and in the blood produced by excessive doses of quinine or alcohol, is analogous to that state well known to Medical men under the very indefinite and probably incorrect name of uræmia.

From these experiments two hopeful prospects of possible discovery arise—1st, as to the explanation of the cause and cure of ague; 2nd, as to the treatment of diseases in parts of the body external to the blood-vessels.

1. Assume that a substance like quinine exists, during health, in the textures, can its rapid destruction and removal through the action of marsh miasm give rise to ague? Does quinine cure ague by furnishing a substance which retards the changes which go on in the textures? and in the well-known property of arsenic to preserve organic substances have we also the explanation of its power in curing ague?

2. If the chemical circulation can carry alkaloids even into the non-vascular tissues, is it not reasonable to suppose that medicines pass through the blood and act on the textures; and is it not most probable that they take part in every chemical change that occurs outside the blood-vessels, as well as in the blood itself? Still further, may we not expect that among the multitude of new substances which synthetical chemistry is now constantly forming, some medicines may be discovered which may not only have power to control the excessive chemical changes of the textures in fevers and inflammations, but may be able to remove the products of insufficient chemical action even in those diseases which affect the non-vascular textures, as, for example, in cataract and in gout?

It remains that I should in a very few words tell you what was already known regarding this fluorescent substance, and on the rate of passage of alkaloids into and out of the body, before we began our work.

In 1845, Professor Brücke stated that the lens absorbed the blue rays of light to a very great extent, and that the cornea and aqueous humour did so to a less extent. In 1855, Professor Helmholtz examined for fluorescence the retina of the eye of a man who had been dead for eighteen hours. The first experiment showed that it was very feebly fluorescent. The colour of the light dispersed through the retina he found greenish-white.

In 1858, M. Jules Regnauld, using sun-light, found in man and the mammifera that the cornea fluoresced in a very slight degree. In the sheep, dog, cat, and rabbit, the crystalline lens possessed in the highest degree fluorescent properties. In these animals, and also in many birds, the central part of the lens, preserved by desiccation at a low temperature, retained this property. The central portion of the crystalline of many aquatic vertebrata and mollusca he found almost entirely without fluorescence. The vitreous humour possesses only a very feeble fluorescence, due to the hyaline membrane. The retina possessed a certain fluorescence which was not at all comparable in intensity to that of the crystalline lens.

In 1859, I. Setschenow, of Moscow, a pupil of Helmholtz, at his request, experimented on the eyes of men and rabbits. The fresh retina showed the same phenomenon as the dead human retina. It diffused a greenish-white light, which, examined by a prism, gives a spectrum in which the red is wanting. The vitreous humour in a thin glass vessel showed only traces of fluorescence. The lens, on the contrary, fluoresced very strongly, the colour of the dispersed light being white-blue, exactly like quinine, only the quinine was a little stronger. Examined by a prism, the dispersed light gave a spectrum in which the red was wanting, and in which the blue-tone predominated. The fluorescence begins as in quinine solutions between G and H, and is strongest at the outer edge of the violet rays, and extends into the ultra-violet to the same distance in the case of the lens as in the case of the quinine solution.

When the cornea was cut out, it fluoresced much feebler than the lens; the aqueous humour did not fluoresce at all.

The appearances in the three last media, he says, can be shown with the greatest ease, even in the eye of the living man. When the eye is brought into the focus of the ultra-violet rays, immediately the cornea and the lens begin to glimmer with a white-blue light. The cornea in the living eye is much more fluorescent than when dissected out, probably from the loss of transparency, consequent on contraction of the texture, and from evaporation.

Professor Donders has carefully investigated the time in which atropine and Calabar bean act on the iris in man.

A solution of atropine dropped on the cornea in fifteen minutes begins to act, and attains its maximum in from twenty to twenty-five minutes. In forty-two hours the pupil is rather smaller, and even after thirteen days the pupil was not quite its natural size.

The fluid extracted from the aqueous humour, injected into another eye, caused dilatation of the pupil.

A solution of Calabar bean began to act in from five to ten minutes; attained its maximum in from thirty to forty minutes. At the end of three hours it began to diminish, and disappeared entirely in from two to four days.

PUERPERAL INSANITY.—At Gloucester Assizes Eliza Kirby, the wife of a moulder, was tried for the murder of her child when a week old. She was of weak mind, and declared the child was the devil. Acquitted on the ground of insanity; she will be kept in confinement during the Queen's pleasure.

ORIGINAL COMMUNICATIONS.

MICROSCOPICAL RESEARCHES ON THE CHOLERA.

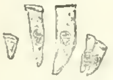
By LIONEL S. BEALE, M.B., F.R.S.,
Fellow of the Royal College of Physicians, etc.

No. II.

Of the Columnar Epithelial Cells detached from the Villi.

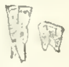
The columnar epithelial cells found in great number in the rice-water evacuations and small intestine after death from cholera do not always exhibit the same characters, nor are they of the same size in every case. In the following drawings (Figs. 1, 2, 3, and 4) cells of the smallest and largest dimensions and cells of medium size, taken from the first four cases I have examined, are represented. All these specimens are magnified with the same power. Case 3 was a child fifteen months old; and it will be observed not only that the epithelial cells are much larger than in the three other cases, but that the nuclei are larger in proportion. See also Fig. 6, in which these cells are seen under a power of 700 diameters.

Fig. 1.



Case 1.

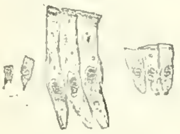
Fig. 2.



Case 2.

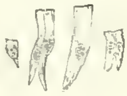
Figs. 1 and 2.—Epithelial cells from jejunum magnified 215.

Fig. 3.



Case 3.

Fig. 4.



Case 4.

Figs. 3 and 4.—Epithelial cells from jejunum magnified 215.

In almost all the cases of cholera I have yet examined there is evidence of chronic structural change in the *tissues* of the intestines, and I think we shall be led to conclude that in most of the cholera victims important morbid alterations have been going on for months, and in some instances for years, before death. In some cases it is probable that, had the individual escaped cholera, he must have succumbed to some other malady within a short period of time. The columnar epithelial cells often exhibit evidence of chronic change; they seem to be stunted, and in many instances the nuclei are much smaller than in health. In the intervals between their attached extremities one fails to find those smaller and younger cells which in the healthy state gradually grow up to take the place of those cells which are removed and give origin to new cells, which in their turn become developed. So also it is to be observed that the masses of germinal matter so numerous near the surface of the healthy villus are almost absent in many of these cases of cholera. And there are other and very striking changes in the structure of the affected villi which I shall describe fully in other communications.

The specimens, however, from Case 3 afford an exception to the above remarks; but until I have had further opportunities of examining the epithelium in fatal cases of children at the same age, I cannot venture to draw conclusions. For the present, therefore, I content myself with publishing the drawings. In this Case 3 the epithelial sheaths of the villi were very distinct and perfect (Fig. 5), but the cells did not exhibit the characters seen in the other three cases. They contained numerous oil-globules, some of which were of considerable size—a fact which perhaps justifies the inference that these particular cells were active and concerned in absorption shortly before death, which certainly is not usually the case in cholera. The above inference is confirmed by the characters of the villi existing in this particular instance. In most cases the fresh cells seem to be almost destitute of oil-globules, and many present a shrivelled appearance, as if they had not been very active for a long time before death. There seems, indeed, to be the same sort of difference between some of these cells in cholera and healthy columnar epithelial cells, that is observed between the epithelium of a cirrhose and that of a healthy liver or kidney.

Fig. 5.

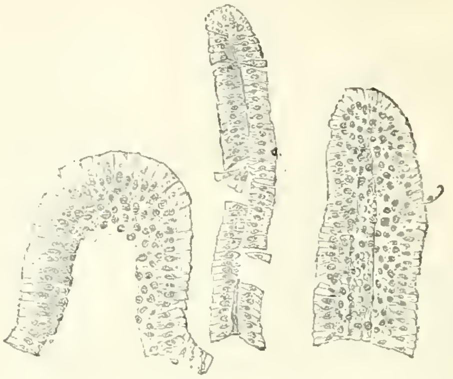


Fig. 5.—Epithelial sheaths from the villi, from the jejunum, about a foot from the pylorus. Case 3, age 15 months. Magnified 130.

Fig. 6.

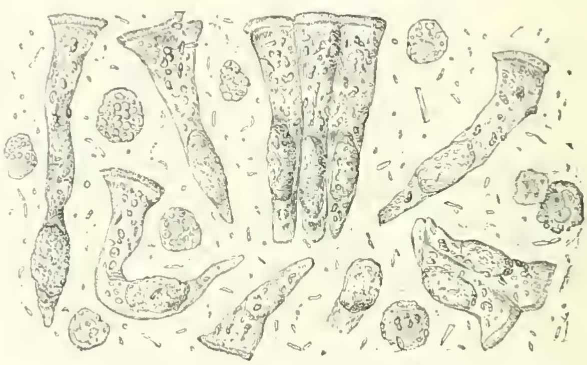


Fig. 6.—Detached columnar epithelial cells and small cells from the jejunum, about a foot from the pylorus. Case 3. The cells contain numerous altered oil-globules. Between the cells are seen bacteria, which were alive, and exhibited active movements. Magnified 700.

Of the Bacteria in the Stools, Vomit, and in the Small Intestine in Cholera.

Amongst the epithelial cells and upon their surfaces, if not in their substance, are multitudes of bacteria. Bacteria are found in the dejections during life, in the vomit, and in every part of the alimentary canal two hours after death.

It is probable that these organisms are developed in the intestine in vast numbers during life.

Fig. 7.

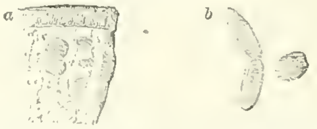


Fig 7.—Summit of columnar epithelial cell, showing bodies within like bacteria germs. *a*, thick summit of the cell, exhibiting longitudinal striæ, supposed by many to be pores, along which nutrient matters pass from the intestine and gain access to the interior of the cell. *b*, free bacteria. Magnified 1800.

In Fig. 7 some of the smallest are represented as they appeared under the $\frac{1}{25}$ object-glass. The bodies seen near the summit of the columnar epithelial cell are either germs of the same kind of bacteria or altered oil-globules.

The falling off of the epithelial cells cannot be attributed to the influence of bacteria, nor is it probable that these organisms are concerned in the production of cholera. Bacteria are found often enough in undigested or in imperfectly digested food. In dyspeptic infants they occur in vast numbers in every part of the alimentary canal; and in temporary stomach derangement the matters rejected by the stomach or passed per anum contain them in enormous quantity. They have been observed by Dr. Gibb even in milk immediately it was removed from the breast of the mother, and must have been developed while the milk yet remained in the mammary gland. They are always present in the fluids of the mouth, and are not uncommon in the contents of the stomach, though it is doubtful if they multiply in a perfectly healthy condition of the gastric mucous membrane. It is not very surprising that bacteria should be present in the cells of columnar epithelium in certain cases, seeing that their germs are always present in the old cells of squamous epithelium in the mouth. They invade these columnar cells from without, and live at their expense, just as they invade the epithelial cells of the tongue, and as simple fungi invade the cells of higher plants and animals when these cells begin to decay or lose through disease their healthy power of resisting invasion.

Bacteria are constantly found in every part of the living body where a tissue is no longer permeated by the fluids whose office it is to maintain it in a state of integrity. Soon after the currents of fluid have ceased, especially where the organic material is soft and easily decomposed, bacteria make their appearance, and grow and multiply rapidly. Nor is there a tissue or organ in the inmost parts of the body in which these organisms may not within the course of a few hours make their appearance. The germs are there; but so long as the normal state of things continues, these germs are prevented from being developed.

These simple living organisms are without doubt destroyed in the healthy condition, although their germs may resist destruction. If the latter were to get into the healthy blood, they would not multiply, but towards the close of many exhausting diseases, both in animals and man, after the blood has undergone important changes, they are found in great numbers. It is, however, doubtful if in any case they can be regarded as the cause of the disease or the *materies morbi*, and it is far more probable that a change takes place before these organisms can multiply in the blood, and that a condition of things becomes established which is favourable to their growth and multiplication.

There is then, I think, no good reason for supposing that the bacteria in such numbers in the alimentary canal in cholera have anything to do with this disease or with the falling off of epithelium from the intestinal or other mucous membranes. Bacteria are developed in organic matter which is not traversed and protected by the normal fluids of the body, and they invade the cells and textures in cholera after these cells and textures have undergone serious prior changes, just as they would invade textures removed from the body altogether. Nor would it be in accordance with known facts to infer that cholera was due to the invasion of some peculiar form or species of bacterium.

Such hypotheses as this I believe to be absolutely untenable, and think they may be positively dismissed as mere fancies likely to mislead us in searching for the true cause of the disease. The idea of "*fermentation*" in the present day is so different from that generally entertained five-and-twenty years ago, that the word ought never to be used in modern scientific writings without being defined. The mere *multiplication of particles* is not peculiar to ferments. It is an attribute possessed by yeast in common with everything that has life, and therefore in this sense the word may be applied to every kind of cell-multiplication in nature. If the act of multiplication of the virus of small-pox or scarlatina be termed "*fermentation*," surely the multiplication of pus or mucus must be an example of fermentation, and if so every kind of cell-increase may be called "*fermentation*." If, however, this word is to be applied to the process in which carbonic acid and alcohol are evolved during the multiplication of a fungus in a saccharine solution, it is utterly inapplicable to the changes occurring in any disease affecting man or the higher animals. To speak of small-pox, or fever, or cholera, etc., as due to ferments, conveys no real information whatever. By giving such pretended explanations of phenomena of which little or nothing is really *known*, inquiry is terribly discouraged, and real progress effectually checked. The explanation offered requires explanation as much as the phenomenon itself. The explanation is not an explanation. It is a mere word, the meaning of which requires to be explained.

Cholera seems to be so constantly associated with the removal of columnar epithelium from the villi, that we have been led to look upon this as one of the *essential* phenomena of the disease. Although there may be no actual diarrhœa, this epithelium is found in quantity in the intestine after death. It may be said that this removal of epithelium occurs immediately after or only just before death, but the great number of columnar epithelial cells and entire sheaths of the villi so frequently found in the rice-water evacuation, giving to it its peculiar character, proves that such a notion is not tenable. Can cholera exist without the villi being denuded of their epithelium,—is a question which, as far as I know, has not yet been answered, but which must be answered before we can form a correct notion of the nature of this most wonderful disease. I do not think there is any other morbid condition in which this striking change is observed—at any rate, to the extent or with the frequency it is met with in cholera. It seems, however, likely, that where those changes in the blood occur very quickly indeed, so as to cause death by sudden stagnation of the blood in the capillaries of important organs, there might not be time even for the removal of the epithelium from the villi, just as we may have death from small-pox or scarlatina without any eruption.

With reference to the denudation of the villi, it must be borne in mind that the throwing off of epithelium is not confined to the villi of the intestine, or to that of the intestinal mucous membrane generally. The process affects the mucous membrane of the gall-bladder and larger gall-ducts; that of the bladder, ureters, and pelvis of the kidneys, as well as that of the Fallopian tubes, uterus, and vagina. In short, there seems a tendency to the removal of epithelium from the surface of all the soft, moist mucous membranes; not, it must be remembered, of the epithelium which is specially concerned in *elimination*, but rather of that which lines the *ducts* of glands and cavities which may be included in the category of the ductal portion of the different secreting glands.

On the other hand, there is no evidence of the increased formation or more rapid removal of the secreting epithelium in the various glandular organs. The follicles of the mucous membrane of the stomach and intestine, those of the salivary glands and pancreas, the tubes of the liver, kidney, and other glands still retain their epithelium; nor have I been able to demonstrate in these varieties of glandular epithelium any appearances peculiar to cholera. Indeed, so far as I have yet been able to observe, it would be extremely difficult to distinguish many secreting cells taken from the bodies of cholera victims from perfectly healthy cells.

In the next paper I shall venture to discuss what takes place in *elimination*.

ON THE TREATMENT OF DIARRHŒA AND CHOLERA

By C. J. B. ALDIS, M.D., F.R.C.P.,
Medical Officer of Health, St. George's, Hanover-square.

I desire to make a few remarks upon the treatment of the present epidemic, as I consider it to be a duty to give, even hastily, the results of my experience, which, although extensive, is not so satisfactory as I could wish. I cannot, however, come to the conclusion, as some have done, that medicine is of no use whatever, and that opium is absolutely dangerous, in cholera. I was dreading the introduction of a host of so-called "specifics" which were recommended during the former epidemics, but I suppose that the display of drugs was so great then as nearly to exhaust their number. Still a more insidious method is now in vogue—namely, the undermining of our confidence in all remedies, and so rendering many persons perfectly pusillanimous in treatment. There is so much casuisty in Medical science at the present time, and so much of the Aristotelian mode of reasoning instead of the Baconian, that we are running the risk of being choked with syllogisms instead of being enlightened by facts. Some say that Nature never assists in curing a disease, but surely the diarrhœa of dentition may be considered as critical; yet it is prudent to moderate or check it, if necessary, on the principle that we may have too much of a good thing. If we assist Nature, we must do so with our eyes open, and not blindly, recollecting that each case must be treated upon its merits. I remember treating a lady of title, who suffered from Asiatic cholera, upon Dr. Ayre's plan. I gave her one grain of calomel with two drops of laudanum, made into a pill, every five minutes, with either a dessertspoonful of iced-water or brandy-and-water. She quite recovered, and remains well to the present time. But her Medical attendant, who left me in charge of the case, was also taken ill with symptoms of cholera, and sent for me. Here the full state of the abdomen, although he had been vomiting and purging much, induced me to give him an aperient of rhubarb, which brought away a large quantity of what he termed "pig-wash," when he soon recovered.

In July, 1865, I was sent for to see a woman, a patient of the St. Paul and St. Barnabas Dispensary, whose countenance was much shrunk, with dark areola round the eyes, pulse exceedingly feeble, cramps, blueness of the skin, vomiting, and choleraic diarrhœa. She was taking chlorodyne, with calomel and opium, which seemed to be giving her so much relief that I advised their continuance, and she recovered. It was this case which led me to suppose that an outbreak of cholera would ensue in London, and I mentioned it at a meeting of the Social Science Association held on Aug. 17, 1865, the Bishop of London in the chair, while seconding a resolution proposed by Mr. Edwin Chadwick, for I conceived this to be one of those isolated cases of cholera which usually precede the disease in its epidemic form. I learned the value of the treatment by calomel and opium at St. George's Hospital during the epidemic of 1831-2, when I saw the other modes of treatment then recommended. The most minute post-mortem examinations were made of those who died, but I ventured to say in my work on Hospital Practice, published in 1835, that pathological appearances had thrown no light upon the subject, so much so that it appeared to me to be far better policy to try and prevent the occurrence of the disease by sanitary measures than to cope with so formidable an enemy.

Since that period I have treated cholera and diarrhœa in four Dispensaries. We had many cases at the St. Paul and St. Barnabas Dispensary in 1853-4, which was founded on account of the outbreak of cholera in 1848-9. I have generally given calomel and opium, with mist. cretæ, aromatic confection, and opium, and with advantage, for Dispensary patients generally apply in an early stage of the disease. There is one thing I believe to be most necessary—that is, that a Medical man should be in constant attendance when the patient suffers from collapse. He alone, who has thoroughly watched the case, can tell what is useful to the patient, and if obliged to go, he can communicate to his successor what appears to agree with the constitution of the person attacked.

A violent attack has been made by some upon the treatment of the premonitory symptoms by chalk and opium; some patients prefer chalk rubbed up with mucilage and a little water to the cinnamon water as recommended in the Pharmacopœia, which causes sickness. This is merely a peculiarity, for most people prefer cinnamon or peppermint-water.

At St. George's Hospital, in 1831-2, the diarrhœa mixture consisted of chalk, to which opium was frequently added. In the epidemic of 1853-4 a mixture, consisting chiefly of chalk and opium, was given to 3000 patients at the Surrey Dispensary with much benefit. At Guy's, in 1854, I am told that a mixture consisting of gum acacia, saccharum album, creta præparata, āā ℈j., tinct. lavand. co. ♏xx., sp. ammon. arom. ♏xxx., tinct. catechu ♏xxx., tinct. opii ♏v., was used. Dr. Dixon, Medical Visitor to the Bermondsey vestry, uses now a similar mixture; and if a return were now made to the *Medical Times and Gazette*, I dare say that it would be found that the old anchors chalk and opium have not been abandoned.

In conclusion, I may quote from the supplementary report on the results of the different methods of treatment pursued in epidemic cholera by the Treatment Committee of the Medical Council, 1865. "The order of percentage of failure to stay the disease in its earlier stages is as follows:—

	Per Cent. of Failures.
" Chalk mixture	71·4
Eliminants	66·6
Stimulants	58·0
Calomel	50·0
Sulphuric acid	8·8
Chalk and opium	4·9 "

Expertis crede!

1, Chester-terrace, Chester-square.

Scarcity of Monthly Nurses.—We commend the following to the Female Medical Society. A Sydenham correspondent of the *Standard* points out a good opening for "woman's work." He says that during twelve days he has walked 333 miles in search of a monthly nurse, and has seen a daily average of eight, and found them all engaged up to February.

THREE CASES OF STRICTURE OF THE URETHRA TREATED BY HOLT'S DILATOR.

By Dr. FAYRER,
First Surgeon Medical College Hospital, Calcutta.

Case 1.—Brojo M., a Hindoo, aged 30 years, a resident of Hooghly, was admitted on January 28, 1866. He has had discharge from the urethra for the last three years. Has observed diminution in the size of the stream of urine for the last year. At present the stream is of the size of a No. 1 catheter. Sometimes it passes in drops. Had retention of urine twice last month; was relieved without the aid of the catheter. Has had hydrocele of the right side for the last three years. Catheterism was tried, but not successfully. The hydrocele was tapped and injected with tincture of iodine. The scrotum kept raised. He was ordered three grains of quinine three times a day.

January 29.—The right testicle swollen. The sac refilling. Had slight fever yesterday. Bowels costive.

The next day, No. 3 catheter was tried, but without success.

On February 1, No. 3 catheter was again tried, without success. Hydrocele smaller; no pain in it.

3rd.—No. 3 bougie passed with much difficulty. There was much bleeding from the urethra. No fever. He was ordered morphia gr. ½ h. s.

No attempt was made to pass the instrument again till the 11th, when it was tried without success.

13th.—Holt's director passed, and the stricture dilated afterwards by No. 9 dilator. No. 12 catheter was passed afterwards without any difficulty. There was a little bleeding. Pulse 80. In the evening his pulse was 88. He did not complain of much pain. Slight oozing of blood from the urethra. Passed water in a good stream. Urine clear. Morphia gr. ¼ h. s.

14th.—Pulse 96; skin hot; tongue moist. No. 11 catheter passed. Quinine mixt. gr. v., tinct. opii ♏xx., ter die.

15th.—No. 9 catheter passed without difficulty. No shivering. No pain in the perineum. No bleeding. Slight purulent discharge from the urethra. Pulse 84. Passes urine in a good stream.

16th.—Pulse 88. No. 9 catheter passed with ease. No bleeding. Still some discharge from the urethra. No pain during micturition. Sulphate of zinc lot. to be injected into the urethra.

17th.—No. 8 catheter passed this morning with a little difficulty. Appetite failing. Purulent discharge less.

19th.—Nos. 10 and 11 catheter passed easily. No purulent discharge from the urethra. Passes urine in a natural stream. No pain in micturition. No fever. Appetite good.

No. 10 catheter was passed easily for five or six days successively. No more purulent discharge from the urethra.

26th.—No. 12 catheter passed easily. Passes urine in good stream. Hydrocele still contains some fluid. Water drawn off to the extent of one pint, and the sac again injected with tinct. iodin. ʒiij.

The next day he had slight fever.

A day or two after he left the Hospital quite cured of the stricture, and the hydrocele rapidly subsiding.

Case 2.—Ram Churn C., a Hindoo, age 35 years, resident of Calcutta, was admitted on March 2, 1866. He had an attack of gonorrhœa ten years ago, which resulted in gleet, and continued for three years. The stream of urine gradually became thinner, and a swelling appeared on the right side of the perineum below the scrotum. This burst, and a quantity of pus was evacuated, and was followed by discharge of urine through the opening during micturition. Four or five months after a similar swelling appeared below the former, and terminated in the same manner. A third one appeared on the left side of the perineum, and the opening resulting from its bursting formed another passage for the flow of urine. At the site of these openings there are three swellings from which pus continues to be discharged. These sinuses are now of three years' standing, three-fourths of the urine passing through the urethra, and one-fourth through the fistulæ. About seven months ago, the passage of urine through the urethra was completely obstructed, and it almost entirely passed through the fistulæ. This continued for twenty days, when he says the passage was somewhat restored. Since then the scrotum has been increasing. The scrotum is now red, swollen, and œdematous; it is also thickened. There is some swelling of the prepuce. The perineum is much thickened. Passes urine mostly through the perineum. On introducing the catheter the urethra is not only strictured, but is somewhat tortuous. Has had fever for three or four days following the inflammation of the scrotum. Fomentations and poultices were ordered to his perineum. The scrotum to be suspended.

March 3.—No. 6 catheter introduced with some difficulty. On making an incision in the perineum in the median line, pus and urine escaped. Urethra not opened. Two free incisions made on the swellings on each side, and two on the scrotum. Some fluid issued from the right side, but the urinous smell was not well marked. The cellular tissue was not sloughing.

The next day he had fever. Pulse 120. The scrotum much shrunk. The wounds looking healthy. Passed urine more freely. A part of it still dribbles through the sinuses.

For the next two or three days he had fever. The urine continued to pass more freely through the urethra, and less through the perineum. Wounds looking healthy.

On the 10th and 11th, No. 6 catheter was passed.

On the 13th, the stricture was dilated by Holt's largest dilator. No. 9 catheter afterwards passed. Morphia gr. ¼ h. s.

14th.—No. 9 passed this morning. Pulse 104. Skin slightly warm. Passes water through the sinuses as well as through the urethra.

16th.—No. 9 catheter passed easily; passes urine mostly through the urethra; one-fourth of it passes through the perineal sinuses.

22nd.—No. 9 catheter passed easily; sinuses looking healthy and granulating.

25th.—A full-sized catheter passes easily; the sinuses are nearly closed, and the perineal wounds all but healed. He passes urine naturally, and in a full stream.

Case 3.—F. F., an East Indian, aged 39, a resident of Calcutta, admitted on March 14, 1866. He had an attack of gonorrhœa twenty-one years ago, which was not cured, and was followed by a gleet. Two years subsequently he had a second attack, not so severe as the first. The gleet continued after this, too. Simultaneously he had syphilis, a single sore and a bubo. These were not followed by any secondary constitutional manifestations. Fifteen years ago had a third attack of gonorrhœa. Has had more or less constant discharge from the urethra for the last twenty-one years. First noticed a diminution in the size of the stream of water ten years ago. The stream was sometimes forked and twisted, but always passed about the size of a No. 6 catheter. Has been in the habit of having catheters passed often to keep the stricture from contracting. Nos. 6 and 7 used to be passed without much difficulty. The last time he had No. 5 catheter passed four years ago. No instruments were passed since then. Passed water in a fine stream till a fortnight ago, since when it has been passing in drops. Never had fever as the result of the passage of instruments. The stricture is at the anterior portion of the triangular ligament, and extends even behind this. No. 7 catheter passed this morning, after dilating the stricture with Holt's dilator. On this occasion the dilatation was not perfect, owing to the extreme toughness of the stricture. 6 p.m.: Pulse 118; has fever, which came on with shivering at 2 p.m.; had much difficulty in passing urine; passed some small clots from the urethra. Mist. febrif. ℥j.; pot. acet. gr. x.; tinct. hyoscyami ♏ xv., quâque tertiâ horâ. Fomentation. He had no return of fever for the next three days; passed his water in a pretty good stream.

On the 18th the stricture was split more effectually with Holt's largest dilator. No. 10 catheter passed immediately afterwards. In this instance the director entered well into the bladder, and the dilator seemed to thoroughly divide the stricture. There was very little bleeding. Tinct. opii ♏xl.; quiniæ sulph. gr. x.; aquæ ℥j., stat. In the evening he had fever, but not so strong as on the former occasion. Feels difficulty in passing water. Mist. feb. ℥j.; pot. acet. gr. x.; tinct. hyoscyami ♏xv., quâque tertiâ horâ. Fomentations to hypogastrium.

19th.—No. 9 catheter passed easily; no fever now. There was a little bleeding from the urethra during the day; passed water in a better stream.

20th.—Nos. 10 and 11 catheter passed easily. There is still a feeling of roughness along the urethra; passes water freely.

21st and 22nd.—Nos. 10 and 11 catheter passed easily; no pain; no fever; no discharge from the urethra.

25th.—Full-sized instrument passes easily; no pain; no discharge; no constitutional disturbance; appears to be quite recovered.

Remarks.—These three cases are all very satisfactory, and bear testimony to the good results that may be expected from this operation. The last case particularly is interesting, as the stricture was very tough, rigid, and unyielding, and it required the exertion of considerable force to pass the dilator through it. The result was very satisfactory; no great constitutional disturbance, and rapid restoration of the urethral canal to its original calibre. The second case is also interesting, as it was complicated with perineal sinuses, which gradually contracted after the stricture had been split and the urethra subsequently kept dilated. The first case, an ordinary stricture, rapidly yielded to the treatment.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

◆

THE LONDON HOSPITAL.

CASES OF CHOLERA—NOTES ON TREATMENT.

We are glad to say that the epidemic has much abated since our last report, as the following table, obligingly supplied to us by Mr. Cappe, shows:—

Statement of Cases admitted into the Cholera Wards of the London Hospital for the week ending August 16, 1866.

	Cholera.		Choleraic Diarrhœa.		Cases of Diarrhœa treated as out patients, Aug. 9 to 16.
	Males.	Females.	Males.	Females.	
Aug. 10, 32nd day .	5	4	4	—	212
,, 11, 33rd ,, .	4	6	—	7	194
,, 12, 34th ,, .	6	9	2	1	182
,, 13, 35th ,, .	3	6	1	—	173
,, 14, 36th ,, .	2	3	3	3	180
,, 15, 37th ,, .	3	8	1	2	147
,, 16, 10 a.m. .	3	5	2	1	159
	26	41	13	14	1247

Ages.	Cholera.		Choleraic Diarrhœa.	
	Males.	Females.	Males.	Females.
1 to 10 . . .	7	10	4	2
11 ,, 20 . . .	—	8	3	5
21 ,, 30 . . .	9	9	2	3
31 ,, 40 . . .	5	8	4	1
41 ,, 50 . . .	3	4	—	1
51 ,, 60 . . .	1	1	—	2
Upwards . . .	1	1	—	—
	26	41	13	14

	Cholera.	Choleraic Diarrhœa.	Total.
Recoveries	36	22	58
Deaths	40	1	41
Remain	81	27	108

From the Outbreak.

	Cholera.	Choleraic Diarrhœa.	Total.
Admissions. . . .	431	123	554
Recoveries	108	84	192
Deaths	242	12	254
Remain	81	27	108

Total out-patients treated since the outbreak, 7981.

The treatment pursued has been in general much the same as that during the former weeks. Dr. Fraser, however, has tried the treatment by camphor. The preparation used was that introduced by Rubini, and of this ten drops were given every fifteen minutes. We are sorry to say, however, that we cannot speak favourably of this remedy. The fact that some of the patients thus treated died is no scientific evidence against the use of the remedy, as, unfortunately, no remedy seems to cure bad cases of cholera. But the patients dislike this treatment. It causes a distressing sensation at the epigastrium, it makes them sick, and when they do not swallow it, it becomes solid in their mouths.

On Wednesday Dr. Fraser directed a new course of treatment for the patients admitted under his care on that day. It is a plan recommended by Mr. Newhouse, of Birmingham. The following is the prescription for the mixture:—

℞ Ol. terebinthinæ ℥jss.; tinct. capsici ʒjss.; tinct. lavand. ʒij.; creasoti gtt. xij.; sp. cinnam. gtt. xviij. M. ft. mistura.

℥ss. or ℥j. to be taken *largely diluted* in milk, and to be continued in ʒij. or ʒiij. doses, as occasion requires. It has been given in much smaller doses, in less than ʒij. doses every two hours. The next item of treatment is to rub the patient's abdomen, thighs, and legs with cajeput oil. In the intervals of rubbing, the abdomen is to be covered with spongio-piline sprinkled with the oil.

Dr. Andrew Clark still treats some of his patients with castor oil, some without drugs, and continues the employment of warm baths and the saline lemonade as a drink.

Dr. Davies still gives calomel.

SUDDEN DEATH—CHOLERA (?).

Unfortunately the history of this case is a very meagre one. It is known that the patient was as well as usual at 8 a.m., but in what condition he was betwixt 8 and 10 nothing is known. He had been very intemperate indeed.

Chas. W., aged 55, was brought to the Hospital August 2. He was then dead. A woman saw him, in the New-road (Whitechapel), suddenly put his hand to his belly. He next "made a run," and fell. He was brought to the Hospital, and, when admitted, Dr. James Jackson saw him. Blood was oozing from his mouth and nose, but he was quite dead. Death occurred in less than one hour from the time when he was first seen.

The post-mortem was made by Dr. Sutton and Dr. James Jackson. The brain was wasted; the arachnoid was thickened, but there was no effusion of blood in any part, and, in short, there was nothing in the brain to account for death. The heart was healthy; the lungs were congested and extremely œdematous. The stomach contained some partially digested food, but was otherwise healthy.

On opening the duodenum a somewhat thick, creamy-looking, fluid substance was seen, and this portion of the intestine was filled with the matter; the jejunum also contained similar matter, except that it was thinner. The fluid in the ileum was much thinner, and approaching in character to rice-water. On looking at the mucous membrane of the ileum, it was observed to be remarkably congested, and this in patches; the jejunum and duodenum were not congested; the large intestines contained a large quantity of ordinary fæcal matter; the kidneys were healthy.

TEMPERATURE OF CHOLERA PATIENTS.

At a recent visit to this Hospital, Dr. Gairdner, of Glasgow, suggested that the temperature of cholera patients should be taken by inserting the thermometer in the rectum as well as by placing it in the axilla. Mr. Frederick Mackenzie has since made several examinations in this way. We can, however, as yet give but a brief note of his observations.

In a woman who was in extreme collapse, the temperature in the axilla would not exceed 90·2°, while in the vagina the temperature was 102·4°. These observations were taken twice. The woman appeared at this time in imminent danger. Her respirations = 42 in a minute. Nineteen hours after, the temperature in axilla was 96°; in the vagina it was 100°; respiration 28; no pulse. She was less livid: but still her extremities were very cold. On the following afternoon the temperature in axilla was 93·8°; in the vagina 97·4°. She had a very small pulse, almost imperceptible, = 84. She afterwards became delirious, and it was impossible to continue to take correct observations.

In cases since admitted in collapse, a similar condition has been observed, though not to the same extent.

GUY'S HOSPITAL.

NOTES ON THE TREATMENT OF CASES OF CHOLERA.

(Cases under the care of Dr. BARLOW, Dr. REES, and Dr. MOXON.)

Since our report last week, which contained particulars of cases admitted up to Wednesday, August 8, only three cases of cholera have been taken into the Hospital. One other case was brought to the Hospital, but the patient was dead, and her body was sent away.

We have again to thank Mr. Brown, B.A., and Mr. Hartree, B.A. (not Hartridge, as we wrongly stated last week), for the chief of the particulars we now report. The cases are taken with great care and in much detail by these gentlemen.

The two patients who remained in the ward at our visit on the 8th are still in. One of them, the man admitted on August 4 under Dr. Rees' care, and who was treated by one inhalation of oxygen, is up, and is believed to be well. The other patient, whom we called W., is still in bed, and now has an eruption of roseola cholerica. The eruption is chiefly on the cheeks, but the arms and legs are also slightly affected; there is very little on the chest and abdomen. Dr. Barlow, who was in the ward when we saw the patient, told us that in his experience the appearance of this eruption was an unfavourable sign. There are several admirable wax models in the Museum showing the eruption, by Mr. Towne, the distinguished artist to the Hospital. The woman seems to be scarcely more than semi-conscious. There is a plentiful secretion of urine, but it has to be drawn off by the catheter.

It will be remembered that this woman was treated by the subcutaneous injection of a watery solution, or rather a mixture, of Quassine with water. There is now on the right arm, on the back part of the forearm, a reddened brawny swelling, which pits on pressure, and about four by one and a half inches in size. The other places of puncture are also swollen, but to a much slighter extent.

The three new cases have been under the care of Dr. Moxon, the following being notes of the cases, which we give chiefly to show what was done for the patients in the way of drugs.

A woman who said she was 35 was brought in on the afternoon of the 8th. Scarcely any history was got from her, and it is doubtful whether she was only 35; she looked very much older. She was collapsed, her pulse was feeble and intermittent, and the temperature in the axilla was only 96°. Her face felt warm.

Dr. Moxon ordered two grains of the permanganate of potash to be given in water every four hours. This was the treatment up to the 11th, when the mistura hæmatoxyli of the Guy's Pharmacopœia was ordered. The following is the formula of this mixture:—

℞ Mist. cretæ ℥xij.
Extracti hæmatoxyli ʒij.
Vin. ipecac. ʒij.
Vin. opii ʒj.
℥j. 4tis horis.

This patient died on the 11th. She had purging nearly up to her death, and shortly before she died she vomited a large quantity of beef-tea, etc., which she had taken during the day.

The second case was that of a boy 12 years of age. His father died of cholera on Sunday, and he himself began to be ill on the 9th, at 5 a.m., with diarrhœa and vomiting; at 7 a.m. he had cramps in the legs. When admitted on the same morning, his temperature was only 96 in the axilla; respiration 34. He was blue, and had rice-water purging and vomiting. In this case four grains of the permanganate of potash were given every four hours. He, however, only took three or four doses, and vomited one of them. At 2 p.m. a pill of acetate of lead (gr. jss.) and opium (gr. $\frac{1}{6}$) was ordered to be given every half-hour. This boy died at 8.30 p.m. Before death the purging had almost ceased, and the respiration was 40.

The last case was that of a man 25 years of age. He was admitted 5 p.m. of the 9th, but had been ill since the 6th. On the 5th he was well; on the 6th he had slight looseness of the bowels, and on the evening of that day he drank "more spirits than was good for him." On the evening of the 7th the purging was very bad, and next morning he began to vomit, and in the afternoon he had cramp in his legs.

On admission, 5 p.m., 9th, pulse, 92; temperature, 96·1; respiration 34; cold; lips blue, and face rather dark. The pil. plumbi c. opio of the Guy's Pharmacopœia was ordered to be given, one every four hours. Each pill contains two and a half grains of acetate of lead, and one-third of a grain of opium—a larger quantity of opium than was intended by the prescriber. The patient suffered much from sickness, but this ceased after one dose of effervescing mixture with hydrocyanic acid.

On the 10th, at 3.30 p.m., one of the pills was to be given every hour, and this was done up to 10 p.m.

On the 11th he passed water, and on this day his motions were fæcal.

To-day, Wednesday, August 14, the patient is believed to be doing well.

Dr. Barlow, who has treated the cases under his care by simple means—*e.g.*, by effervescing mixture with hydrocyanic acid—said that if he had more severe cases to treat (cases of *white* diarrhœa) he should inject starch, beef-tea, and brandy into the bowels. The following are the quantities for one injection:—Starch one ounce, beef-tea six ounces, brandy one ounce. If an adult, forty minims of tincture of opium is to be added, but to the first dose only. In collapse, however, no opium would be added even to the first dose. The injection was to be repeated every two hours. In the case of "brown" diarrhœa, Dr. Barlow adopts an astringent treatment.

ST. GEORGE'S HOSPITAL.

CASE OF CHOLERA—DEATH—AUTOPSY.

(Under the care of Dr. WADHAM.)

The two cases we report this week are the only cases of cholera which have been admitted into this Hospital during the present epidemic. Although these patients died in the Western district, they probably did not acquire the disease there, as will be seen by the history of their cases. A patient died on Sunday last in the Middlesex Hospital, but he lodged in Spitalfields and worked in Oxford-street. He was seized with diarrhœa in the latter place on Saturday, was taken to the Middlesex Hospital the same afternoon, and died there next day. Both patients were taken in and both treated by Mr. Jones, the House-Physician. To this gentleman we are much indebted for the facts we are about to state.

A cattle-drover, aged 58. This patient said he lived at Staines, but on Saturday last he left Norwich and walked to London, getting there on Tuesday. On Saturday he had diarrhœa, and on Tuesday he was found lying helpless in Hyde Park. He was admitted by Mr. Jones at 5 p.m. The patient was then in deep collapse. He was purged and sick, livid, cold, and pulseless. His voice was scarcely audible, and he had cramps (not severe) in his limbs. The man was so much exhausted that it was scarcely practicable to get a detailed history from him.

Five grains of calomel were given to the patient at once, and two grains every two hours after the first dose. Effervescing mixture (ammonia) with chloric ether was also given.

All sickness ceased at 10 p.m., and the purging at 11 p.m. At 5 a.m. next day (Wednesday) the vomiting and purging returned suddenly, and the patient quickly died.

The post-mortem examination was made on Wednesday afternoon by Mr. Pick. Both lungs were congested, especially at their bases, where they were œdematous also. They weighed together 27 oz. The left side of the heart was contracted and empty; the right side contained a decolorised but not a black clot. The liver was congested; the gall-bladder had in it a considerable quantity of bile. The intestines contained a thick fluid, slightly bile-stained. The urinary bladder was contracted and empty.

CASE OF CHOLERA—TREATMENT BY THE SUBCUTANEOUS INJECTION OF OPIUM.

(Under the care of Dr. WADHAM.)

The next case was that of a boy 11 years of age, who was admitted about the same time as the drover—viz., 5 p.m., August 14 (Tuesday). This boy lived in Chelsea, but worked at Bow. On the 13th he had diarrhœa, and on the 14th was so ill that he was sent home by omnibus. He got to Chelsea, and on trying to crawl home fell in the street, and was then seen by a Medical man who sent the boy to St. George's Hospital.

When seen by Mr. Jones downstairs, the patient had a fair pulse, but the eyes were sunken. A dose of aromatic confection with opium had been taken and rejected. When he had been taken upstairs, violent vomiting and purging set in. When Mr. Jones next saw him the boy was pulseless. Brandy-and-water was given, but this also was vomited. A single dose of calomel (gr. iij.) with opium (gr. j.) and an effervescing mixture, with aromatic confection and aromatic spirit of ammonia, was given. A mustard plaster was put on the belly, and the boy was allowed to suck ice. He was not livid.

The pulse returned in about half an hour, but it again failed, the boy became cold, and his hands stiffened. The draught was then omitted, and the subcutaneous injection of liquor opii was tried. Mr. Jones injected five minims at 9.30 p.m. At this time the pupils were large, but at a future observation—viz., at 10 p.m.—they were small. At the same time the symptoms were less urgent.

At 11 p.m. he was more restless, but was injected again, and up to 1.30 a.m. of August 15 was under the influence of opium. His bowels were not moved until 3 a.m. Betwixt 8 and 9 a.m. he had several motions, still rice-water. At 9.30 he was again injected.

At 11 p.m. (August 15) he was still under treatment.

The effect of the opium injection, Mr. Jones tells us, was very well marked in raising the temperature of the body, in improving the character of the pulse, and in controlling the sickness and diarrhœa. As he recovered from the influence of the drug there was a decided tendency to the recurrence of the purging and sickness.

KING'S COLLEGE HOSPITAL.

CASTOR-OIL TREATMENT OF CHOLERA.

(Cases under the care of Dr. JOHNSON.)

The case we are about to report is that of the eighth case of cholera admitted into this Hospital during the present epidemic. All the patients have been under Dr. Johnson's care, and all have been treated by castor oil. Not only are cases of cholera admitted into the Hospital treated in this way, but doses of the oil are given to the applicants for diarrhœa—to such patients as at most other Hospitals would receive a dose of an astringent mixture. The result of treatment of casual cases cannot, of course, be easily estimated.

Since the following patient was taken in, two other cases of cholera have been admitted. These patients are also under Dr. Johnson's care, and they also are being treated by castor oil. As they had only come in on the day of our visit, we defer giving particulars of them until next week.

We have again to thank Mr. Willcox for his courteous help, and for permission to use the notes he has taken.

Mary M., aged 49, 23, Castle-street, Leicester-square, admitted Saturday, August 11, 11 a.m. She was taken ill on Wednesday, the 8th, with purging, which ceased in the evening after taking a rhubarb draught.

On the night of the 10th she was seized with purging and vomiting, and had violent cramps in her legs and hands; she was purged ten times before 5.30 a.m. of the 11th, but she had no motion from that hour up to her admission, but at 5.30 a.m. her nephew noticed that her eyes were sunken, and that her expression had changed; vomiting, however, continued; she took a bitter powder from a druggist, but vomited it.

She has passed no urine since last night; her eyes sunken; extremities cold; nails slightly blue; fingers shrivelled; voice weak and high-pitched; cramps in hands; pulse 140, but almost imperceptible; respiration 32; temperature 96$\frac{1}{5}$.

She took a dose of castor oil just before coming upstairs, but vomited it directly; as there was evidence of fluid in the intestines, another dose was given when she was received upstairs, and this dose was retained.

3 p.m.—The extremities feel much warmer, and the temperature in the axilla is 95$\frac{2}{5}$. She has vomited four times, but has had no purging, although she had taken two more doses of oil, one of which, however, was returned.

12th, noon.—She has taken one dose of oil since the last report. She was purged twice yesterday; motions dirty buff-coloured. At 9.30 p.m. last night her temperature rose from 95 to 97$\frac{3}{5}$, and at 12 she passed a yellow motion. This evening her temperature was 98$\frac{1}{5}$.

13th.—Looks better; temperature 97$\frac{2}{5}$; pulse 68.

15th.—She is now convalescent.

GERMAN HOSPITAL, DALSTON.

CASES OF CHOLERA.

(Under the care of Dr. SUTRO and Dr. HERMANN WEBER.)

We continue our report of the cases of cholera treated at this Hospital, giving particulars up to Wednesday last.

Of the eleven cases remaining under treatment at the time of the last report (p. 117) Nos. 1, 2, and 3 have recovered.

4. C. F. continued to vomit occasionally up to August 4; the diarrhœa persists in a moderate degree until now, but the motions are well tinged and mixed with much urine; has been in the so-called typhoid state up to August 7, aggravated by the formation of a large abscess on the chest, in consequence of the subcutaneous injections of camphor and oil of turpentine; the abscess was opened on August 7, and the patient has since progressed favourably.

5. J. L., who had been treated with the same injections as the preceding patient, has much resembled her in his further progress. The abscess formed in his case was, however, much larger, discharging, when opened on August 6, more than a pint of rather thin pus. Since the patient has been gradually

improving, but is still in a weak and emaciated condition. He has had peeling off of the epidermis near the right angle of the lower lip in large flakes, and conjunctivitis of the right eye. An eruption like roseola appeared on the arms on August 6, at first in isolated slightly elevated spots, many of them becoming confluent after some hours' standing; the principal seat was on the arms, but the trunk and legs were not quite free.

On the 7th the hue of the eruption was somewhat changed, being intermediate between that of measles and that of scarlet fever, disappearing for a moment under pressure.

On the 8th the eruption was still standing, but less distinct, appearing more diffused; it has left brownish pigment spots (unchanged by pressure), which are but slowly disappearing.

6 and 8.—Recovered.

9. C. E.; vomiting did not return; motions were well tinged with bile, but remained thin; did not pass any urine; face became red, eyes bloodshot; tongue dry from August 3; had much the appearance of a fever patient, but in spite of this the temperature never rose to 98° F.; and the pulse at no time reached 100.

On August 6 his breathing became very heavy, and the patient restless, constantly throwing himself about with a fierce but vacant look, without being unconscious; and in spite of the red face and the dry tongue, and a rather strong pulse, and warm extremities, the temperature in the axilla sank to 95° F.; and on August 7 even below 94° F.

Death occurred on August 8, at 6.30 a.m.

Post-mortem Two Hours after Death.—Strong rigor mortis. Both lungs congested; the lower and posterior portions œdematous and rather softened; bronchi filled with frothy mucus; their mucous membrane congested; left lung, 22 oz.; right, 26 oz. Both ventricles of heart filled with fibrinous coagula and half-coagulated blood; minute pericardial and endocardial ecchymoses; transverse striæ distinct, but single striæ far apart, with the appearance of being somewhat raised. The mucous membrane of stomach and upper part of duodenum exhibited many ecchymotic spots; the remainder of the intestines partially denuded of epithelium. Liver, 68 oz., congested; gall-bladder in active desquamation, filled with thin and rather light-coloured bile. Both kidneys as in Bright's disease of some months' standing; left 9½ oz., right 7 oz. In urinary bladder 20 oz. of acid urine, sp. gr. 1012, containing much albumen and fatty cells and casts. The blood collected from the heart and large vessels yielded, according to Mr. Evan Lewis' analysis, 2 per cent. of urea, and was neutral. The brain, too, contained urea.

Dr. Weber remarked that it was not improbable that the kidneys, to judge from their appearance, had been already diseased before the attack of cholera, and that the fatal result might be due to the disease of these organs.

10. Recovered.

11. G. M. Reaction occurred on August 1; first urine (slightly albuminous) on August 2; vomiting ceased on August 3, when motions became also well tinged. Gums slightly affected on August 4, when calomel was discontinued. The intestinal action became quite normal on August 12.

12. C. H. Collapse diminished on August 2; reaction well established on August 3, when vomiting likewise ceased. The cough and sputa, which had entirely ceased with the commencement of the collapse, reappeared on August 4, and have since then become as abundant as before the attack. The intestinal functions are now almost normal, and the patient is convalescent, as far as the attack of cholera is concerned.

13. D. H., female, aged 44; diarrhœa since the night of July 23; admitted into Hospital on August 1, with slight but distinct collapse. Mild case. Received a single half-ounce dose of castor-oil; was otherwise treated only dietetically. Recovered August 9.

14. D. K., male, aged 19; residing in a healthy house in Bermondsey; had visited an infected house in Whitechapel on July 29; had loss of appetite and general feeling of illness since July 30, but diarrhœa did not occur before August 4, after midnight, when it at once became very profuse, and was soon followed by vomiting, cramps, and collapse, with suppression of urine, aphonia, deafness, cold face and extremities, temperature in axilla of 95° F., and a scarcely perceptible pulse of 54. Calomel and camphor pills every half-hour from August 4 in the morning. Some reaction took place on August 5, but the excretions began to change colour only on August 6; vomiting ceased on August 7; first urine passed on August 8, after which the progress continued favourable. Discharged on August 15.

There have been sixteen other cases, almost all of well-marked, but of so mild a type as not to require any other but the dietetic treatment (rest, warmth externally, ice internally, and iced beef-tea and milk). Only two of the cases of a more severe type were placed on the calomel and camphor treatment, under which the collapse has disappeared, and the patients are apparently progressing favourably.

THE URINE IN CHOLERA.

Dr. Hermann Weber mentioned, with regard to the urine, that even in the mild cases the first urine passed had usually been albuminous and rich in tube-casts; that the albumen and the casts, however, had in most cases disappeared soon; that almost invariably the urine passed during the first days after the cessation of the suppression contained a substance which, by the addition of concentrated sulphuric and nitric acids, became violet or purple, and in some rare instances almost black, while it exhibited in others a beautiful play of colours; that, however, the presence of this substance in the urine had rarely continued during more than three days; that the quantity of the urine was, after the suppression had ceased, at first very small, but became generally soon more abundant, and from the second to the fourth day mostly exceeded the average in a great measure, having in some cases been as much as 90 to 120 ounces in twenty-four hours, and this latter with a specific gravity of 1020, without containing sugar, pointing to an immense elimination of excrementitious matter; that the specific gravity had varied very much, being in one mild case on the second day of reaction as much as 1062 (without containing sugar) with a quantity of about 22 ounces in twenty-four hours, while in another of moderate severity it had been only 1025 with a total quantity of 18 ounces. The quantity of phosphates had been in some instances much increased during several days; the free acidity had been at the beginning in the majority of cases great, and in a few excessive, while in some the reaction had been alkaline or neutral during the first three or four days.

In the past week no case of cholera has been admitted into University College or into Westminster Hospital. Few have been taken into Bartholomew's. Up to this morning (August 16) three patients with cholera have been received into St. George's Hospital. One was a poor fellow who had walked up from Norwich in search of work, and was found dying from exhaustion and diarrhœa in Hyde-park. Another was a boy who worked at Bow but slept at Chelsea. The third was an inhabitant of Wandsworth. There have been two or three cases of severe diarrhœa with cramps received into the Great Northern Hospital.

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Medical Times and Gazette.

SATURDAY, AUGUST 18.

◆

PROGRESS OF THE CHOLERA EPIDEMIC.

The public will have learnt from the Registrar-General's daily return of deaths that the epidemic is declining in London, and the general review of the week ending Aug. 11 confirms the favourable conclusion. The following comparative table of the deaths from cholera and diarrhœa registered in each of the last three weeks shows that the decrease was common to each group of districts, although the greatest relief was experienced in East London, where the pestilence has raged most severely :—

	Persons to an acre (1866)	Diarrhœa.			Cholera.		
		July 28.	Aug. 4.	Aug. 11.	July 28.	Aug. 4	Aug. 11.
London . .	39·0	349	354	264	904	1053	781
West Districts	47·5	48	46	31	12	12	8
North ,, .	50·7	78	79	51	20	46	38
Central ,, .	185·4	44	42	31	15	32	23
East ,, .	97·6	123	125	101	818	916	673
South ,, .	19·2	56	62	50	39	47	39

Glancing over the deaths last week from cholera in each district, we notice a decline on the previous week in Kensington from 5 to 3, Westminster 4 to 1, St. James's 3 to 2, Islington 19 to 12, Hackney 20 to 17, Strand 4 to 2, Clerkenwell 3 to 0, St. Luke 3 to 1, East London 12 to 8, West London 8 to 6, Bethnal-green 166 to 108, Stepney 135 to 90, Mile-end Old Town 140 to 68, Poplar 260 to 124, St. George (Southwark) 4 to 2, St. Mary (Newington) 1 to 0, Lambeth 5 to 2, Camberwell 3 to 1, Greenwich 23 to 12. The following districts exhibit a slight increase :—Chelsea from 0 to 1, St. George (Hanover-square) 0 to 1, Marylebone 1 to 2, Hampstead 0 to 1, Bloomsbury 0 to 3, City of London 2 to 3, Shoreditch 16 to 19, Whitechapel 174 to 178, St. George-in-the-East 85 to 86, St. Saviour (Southwark) 3 to 7, Bermondsey 2 to 4, Wandsworth 3 to 7, Rotherhithe 2 to 3. In Charing-cross and St. Olave no death occurred in either last week or the week preceding ; in Lewisham 1 death was registered both weeks ; and in Holborn the last five weeks have not furnished one death from cholera.

10,898 persons have died from all causes in London during the last five weeks, of whom 3116 were carried off by cholera and 1338 by diarrhœa ; but these deaths have been so unequally distributed over the Metropolitan area that the proportion of deaths from cholera and diarrhœa to the population living in the five groups of districts has ranged from 4·6 per 1000 annually in the western districts, to 54·6 per 1000 in the eastern districts. Taking cholera alone, the mortality rate in the five weeks has averaged ·9 deaths annually from that disease to every 1000 persons living in the west districts, 1·7 per 1000 in the north districts, 2·1 in the central districts, 47·0 in the east districts, and 1·8 in the south districts. The inhabitants of the central districts are packed twice as closely together as the people of the eastern districts, and thus we see that density without regard to other circumstances does not carry in this instance a high death-rate.

The physical character of the eastern districts, their low elevation, and the unwholesome moisture generated by channels of foul water, like the tidal Lea and the canals which abound in the neighbourhood—these, in combination with poverty and more than heathen ignorance, lend ready and sure means of propagation for the deadly cholera poison when once its germs have been implanted.

"No greater mistake," the Registrar-General says, "could be made than to relax the efforts for combating the disease, or for relieving the distress which it has already wrought." On the contrary, all past experience teaches that it is just when an epidemic has turned the corner and is going downhill that the influence of Medical science can be brought to bear with the greatest success. It would be the essence of folly not to seize the present favourable moment for increased rather than diminished exertions, and it is above all things essential that in relieving the distress which springs from bereavement there should be an earnest attempt made to awaken in the sufferers a sense of the extent to which their own apathy and their uncleanly habits have brought down so terrible a calamity upon them.

THE SANITARY ACT, 1866.

In the *Medical Times and Gazette* for June 23 we gave a full account of the provisions of what was then called the Public Health Bill, which has since become law, and is to be called the "Sanitary Act, 1866." The first part of the Act deals with the "Sewage Utilisation Act, 1865," and treats of the power of the "sewer authority" of a district to construct sewers, and to compel drainage of houses into them, and of the rights of house-owners to drain into them. Part II. contains "Amendments of the Nuisances Removal Acts," the chief of which are—the giving power to the chief police officer of a district to act if the "local authority," now called the "nuisance authority," make default ; the giving any ten inhabitants of a place power, by requisition in writing, to cause any manufactory to be proceeded against as a nuisance ; the declaring the overcrowding of workrooms and factories to be a nuisance, and the same of chimneys, except of dwelling-houses, if they emit black smoke. It is now made the duty of the nuisance authority to inspect its whole district, in order to ascertain and remove nuisances, without waiting for complaints. Houses, clothes, and carriages may be ordered to be disinfected upon the certificate of any legally qualified Medical Practitioner. Sick persons may, under certain circumstances, be removed to Hospitals. Dead bodies may be ordered to be buried, and a proper place *may* be provided for the performance of *post-mortem* examinations. Ships and barges are dealt with in the same manner as fixed habitations. Houses let in lodgings may be required to be registered, and the number of persons who may occupy them may be fixed. District Hospitals may be erected at the public cost. Persons ill with "any dangerous infectious disorder" may be fined for exposing themselves, or for entering a public vehicle without due notice ; and the owner of any vehicle, or of any lodgings lately tenanted by a person ill of such disorder, may be fined for neglect of disinfection ; the same for transmitting clothing, rags, etc., without due precaution. For instance, the landlord of an inn may be fined any sum not exceeding £20 for putting any guest into a room lately tenanted by a person "suffering from some dangerous infectious disorder" and not "disinfected to the satisfaction of a qualified Medical Practitioner."

The Act is a very good one. It is good in this respect, that the "nuisance authority" will be forced to do its duty ; and if it do not, the Secretary of State may cause that duty to be done by some one else. For the first time is there any real legislative help given towards the general suppression—say, of scarlet fever. It will be more than ever the interest of house-owners to suppress nuisances and keep their tenants healthy. Any person who so exposes himself as to give such a disease, and any householder who allows a new lodger to enter a room where he can take the disease, will be liable to penalty ; any one who "exposes" any infectious clothes will also be liable ; there will be new facilities for the removal of the sick, for the erection of new baths and washhouses, and apparatus for disinfection, and for providing carriages for the conveyance of the sick. The periodic removal of manure is also provided for under a heavy penalty. Lastly, the Act extends to Ireland.

We hope next year to see a movement for providing for the more speedy removal of dust and refuse from houses, and for scavenging our filthy streets. Meanwhile, every Medical Practitioner should get and read the "*Sanitary Act* 1863."

Death from Swallowing Carbolic Acid.—At Liverpool last Friday the relative of a patient in the Hospital who had died of cholera went in a state of half intoxication to see the body in the dead-house. Perceiving a bottle of carbolic acid that had been left in the room, he mistook it for rum, and swallowed a quantity. His death was instantaneous.

THE WEEK.

DR. BEALE'S MICROSCOPICAL RESEARCHES ON CHOLERA.

We need hardly direct the attention of our readers to the admirable researches of Dr. Beale into the microscopic pathology of cholera, of which we publish a second instalment in this week's *Medical Times and Gazette*. It is perfectly certain that work like this must lead directly to practical results. If, as the first solid inference, it would appear from the destruction of the intestinal epithelium that a large proportion of severe cases are in their very nature as irremediable as so many severe burns, at all events the Physician will protect his patient from fruitless experiment, and society must bestow double energy on the work of prevention. Possibly this may be a happy thing for the human race. In the next place, what Dr. Beale says of evidence of pre-existing disease or malnutrition in many cholera victims points emphatically in the same direction. His observations on the presence and significance of bacteria are interesting, but those on the universal denudation of epithelium from all the soft surfaces of the body are still more so, and we suspect that the more minute scrutiny which he promises us will afford little support from the scientific side to the popular theory of elimination and the practice founded on it.

THE REGISTRAR-GENERAL'S RETURNS.

We took occasion last week to refer to the appointment of a Government Commission to investigate the present cholera epidemic, and to remark on the much greater value attaching to the researches of energetic men acting in their own fashion and untrammelled by "etiquette," the results of whose labours are, through the press, at once made public, instead of being kept from the light until they become only of historical significance.

In dealing with an epidemic which is not a prospective, but an active enemy, at work *now*, it is of the utmost importance that the "latest intelligence" should be available for public use, so that the operations of the sanitary force may be at once directed in any channel where occasion arises. We have therefore every reason to be thankful for the prompt and judicious action of the Registrar-General, who, directly the epidemic showed a strong front, determined to issue, *daily*, full particulars of all the deaths registered in the London districts. Practical men want precise statements when they can be turned to account, and do not care overmuch for disquisitions which come as "accessories after the fact." On the part especially of the London Medical Officers of Health, to whom these daily returns have been regularly supplied, we tender our best thanks to the Registrar-General and his colleagues for the assistance which these returns have supplied. They can be obtained every evening at 7, at the Queen's Printers' Office, Printers-street, Fetter-lane.

PRACTICAL HINTS FOR CHOLERA TIMES.

How to Carry the Sick.—Persons ill with cholera should be carried to Hospital in the recumbent posture, in a litter or stretcher, and should not be raised into the upright posture. We have seen a very convenient, comfortable, cheap, and light litter of stiff canvas, designed by Messrs. Brown, Brothers, of 165, Piccadilly, with hair pillow and ash poles, price 25s. Officers of Health and others organising a system of relief for cholera patients may be glad of the hint.

How to Cleanse Water-Butts.—As we have said so much on the importance of cleansing water receptacles, we need make no apology for discussing the best manner of effecting it. Leaden cisterns should be swept out gently. One friend of ours thought he had made a discovery, inasmuch as he used to have his leaden cistern scoured out with Epsom salts till it was quite bright. This, of course, was wrong, as the fresh metallic surface is more liable to be attacked by the water. Slate cisterns may be scrubbed without ceremony. Wooden butts, if not pitched, may be scorched out with a handful of shavings and a bundle of brimstone matches; but if pitched, or, in fact, whether pitched or not, probably the most convenient plan is to use quicklime. A lump of quicklime may be put into the butt with about a bucket-full of water, or lime may be made first into a cream with water and the butt be well scrubbed out with it.(a)

JOTTINGS ON THE CHOLERA.

In this, as in former epidemics, all the old foibles of our Profession, and of the benevolent part of the public, come to light. There are the same letters to the newspapers, and the same claims of entire success for totally opposite systems of treatment. At present there is superadded a kind of attempt at terrorism; letters are written with the signature of "A Fellow of the Royal College of Physicians" (who has the good taste to conceal his name), denouncing the administration of opiates and astringents, and endeavouring to set up a kind of outside authority in public opinion to coerce the practice of members of the Profession. Meanwhile the work of charity, so called, goes on swimmingly; thousands of pounds are subscribed, bank notes and gallons of port wine are lavished by the Mansion House Committee; we hear of appeals for new orphanages, and of every other mode of relieving the fatherless children and widow. But we neither hear nor see enough of means for saving the lives of husbands and fathers.

Mr. James Greenwood, the "Amateur Casual," visits the infected districts, and describes vividly the dirty streets. Had he entered the houses and yards, he might have described the dirty houses, dirty yards, dirty closets, butts, and sinks. Mr. Chadwick writes imploringly to the newspapers on the claims of cleanliness as a preservative. Would it not be a wise act of humanity in the Mansion House Committee to say to the local authorities—Cleanse your streets and your people, and we will relieve them; but we will send neither money nor wine till the scavenger has gone before us?

We know that the Medical authorities, and the better informed of the clergy, desire a brigade of scavengers for the streets, of limewashers and disinfecters for the houses, of charwomen to scrub the floors, of washers to cleanse bedding and furniture, and believe that there lies the secret of suppression.

Then there is the water. Although it is highly probable that the disease, however introduced into East London, is detained and propagated there by dirt and poverty, yet there is evidence enough of some other influence at work. In the first place, there is the almost simultaneous invasion by cholera of a district identical with that supplied from a particular reservoir. Secondly, the deaths of several persons who were neither dirty nor poor, early in the epidemic, before general infection of the air was probable. We need only mention the late Dr. Ansell and the Vestry Clerk of his district. Again, in so many instances persons who have died in other parts of London have worked all day, and therefore eaten and drunk, in Poplar, though sleeping elsewhere. The case of the man who jumped into the Thames to put an end to himself, and, though he was rescued from drowning, yet died in Bloomsbury—an isolated case—from cholera, is also striking. Certainly past experience shows that contaminated water, if not *the only*, is yet a common source of cholera. Would it not then be a humane experiment to disinfect the filter beds of the East London Water Company? The Company may fairly say "Our water stands chemical tests fairly; there is no proof against us; we cannot spend our shareholders' money in a mere experiment; but if the public choose to supply the funds we do not object to make the experiment." At any rate, the Mansion House Committee might send a brigade of journeymen coopers to cleanse every water-butt.

(a) It is but fair to add that we derived this information from a working cooper, Mr. Riches, of 4, Great Wyld-street, Lincoln's-inn-fields.

Pure water, and plenty of it, might save many a gallon of port wine. It would be something to send soap, that the school children in Bethnal-green might get a good wash.

ACCOMMODATION IN COUNTRY TOWNS FOR CHOLERA PATIENTS.

Mr. W. A. Russell, of St. Alban's, has written to the *Times* newspaper giving a narration of occurrences which we should hardly have thought possible in an English country town within an hour's railway journey of London. Mr. Russell publishes the case as a warning to other towns to provide at once for the probable visitation of cholera. But surely there is not a Union Workhouse in the country except at St. Alban's where a man dying from cholera could not be received and placed apart from the other inmates. The whole thing seems to us inexplicable. The only bright point in it is the humanity which Mr. Russell displayed in providing accommodation for the dying man on his own premises. But to have a tramp in the last stages of cholera coolly billeted on you by the police and local magistrates is a test both of temper and benevolence to which, we should think, none even of our longsuffering Profession were ever subjected before, at least in this country. The following is Mr. Russell's account of the matter:—

> "On Saturday morning last, at 10 a.m., a man was brought to my surgery, supported by a policeman and another man. I was told he was found in an opposite lane, and appeared very ill. I at once pronounced it a case of cholera. Being our market-day, my surgery was filled with pauper and other patients, whom I at once dismissed, and turned my attention to the patient, whom I found, as I believed, in the last stage of the disease and in a most hopeless condition. Having administered the necessary medicine and stimulants, I ordered the policeman in charge at once to procure a vehicle and convey him to the Union Infirmary, and accordingly wrote a note to the master requesting his admission, and that prompt measures should be given to his case by application of warm bottles of water to his chest and feet, and that the Medical officer might be requested to give his immediate attention. Afterwards, according to the printed instruction I had received, I saw the clerk to the Guardians of the Union, and reported the case and the course I had pursued. I was then told by him and a Deputy-Chairman of the Local Board he could not be received on the premises, and was referred to the police to find suitable lodging (during this time the man was gradually getting worse). I made the desired application at the police-station, where I also accidentally met the mayor of the town, who with great courtesy gave instructions for every possible effort to be made to procure a room. They, however, failed to do so. My next step was to seek an interview with the Bench of Liberty magistrates, who were sitting at the time, with Lord Verulam (Lord-Lieutenant of the county) in the chair. My reply to the request for a removal of the man from my premises was a kind and courteous commiseration for the case from the noble Earl, but, as before, without any order for his future reception. The relieving-officer I had also previously many times communicated with, and he was most indefatigable to provide some abode for the invalid, but also without success. At last I was obliged to make up a bed in my own coach-house for the poor man, and it was not until 9 p.m. I obtained the least assistance (eleven hours after coming to my surgery!), when two poor women were sent to act as nurses during the night. In the intermediate time one of my sons, who is a pupil at the Middlesex Hospital, superintended the case, assisted by another son, who is a pupil in my surgery. My own cook was employed the whole day in providing suitable nourishment, hot water, poultices, &c. All, however, proved unsuccessful. The poor fellow, an engine-driver in search of employment from Hereford, sank and died at half-past 1 on Sunday morning. Immediate application was made for interment, but it was only as the inhabitants were going to church, at 11 a.m., that it was able to be effected. I put aside, as you may imagine, the consequent alarm and discomfort in a family of thirteen residents, and simply and respectfully draw the attention of other towns to this case, in the hope that speedy and decided means may be adopted to provide a suitable building, so that the privacy of a whole family may not be broken up."

FROM ABROAD.—ITALIAN REGISTRATION RETURNS—POSTPONEMENT OF CONGRESSES—RESECTION IN PERIOSTITIS.

Amidst the bustle of war the Italian Government has found leisure to publish a very useful document—the Population Returns of the Kingdom of Italy for the Year 1864—a quarto volume of between 500 and 600 pages, which enters into a detailed exposition of the vital statistics of every portion of the united kingdom. The entire population of this amounted in 1864 to 22,291,180 inhabitants. 177,282 *marriages* were solemnised during the year; and on examining into the condition of the contracting parties in this respect, it is found that, while among the men there were 16 widowers to 84 bachelors per cent., among the women there were but 10 widows to 90 spinsters. In frequency the marriages which take place in the country (8·28 per 1000 inhabitants) exceed those that take place in towns (7·61), the mean (8·02) being 1 per cent. less than in the year 1863. Italy, with 1 marriage for 122 inhabitants, exceeds in this respect France, Spain, and Norway, in which countries there is a marriage in every 130; is nearest England, with 1 marriage for 125, and below Saxony, with 1 to 117, and Russia with 1 to 95 inhabitants. The mean duration of marriages was found to be 21 years 8 months—*i. e.*, 21 years and 3 months among the rural populations, and 22 and 23 years in the civic populations. *Births.*—There were 845,454 living children born, two-thirds in the rural and one-third in civic districts, the males exceeding the females by 26,232. There were 802,376 legitimate, and 43,078 natural, births—*i. e.*, 5·10 per cent.—the highest number (7·41) being found in Calabria, and the lowest (2·25) in Sardinia. In this matter Italy is better, with her 1 illegitimate birth to 18·66 legitimate births, than any other country, except Holland, where they are 1 to 22. Taken together, there took place 3·95 births for every inhabitant, it being found in Italy, as elsewhere, that a greater number of births took place in the regions in which the mortality was greatest. The legitimate births occurred in the proportion of 4·59 for every married couple, Sicily exhibiting the greatest amount of fecundity (5·32). In 1864 there were also 14,209 (8269 male, 5910 female) children born dead, giving 16·81 born dead per 1000 births, the numbers being, however, 22·11 per 1000 in the urban, and only 14·65 in the rural districts. The *deaths* in 1864 amounted to 659,063, being a diminution of 4·03 per cent. of those of 1863. The rate of mortality to the population was 2·98 per cent.—3·17 in the towns, and 2·89 in the country. The deaths of males to those of females were as 107 to 100. The relation of the deaths to the births descended from 80 per cent. in 1863 to 78 in 1864. Of the deaths 54 per cent. took place under 15 years of age, 12 per cent. in nubile adults, 21 per cent. in married persons, and 13 per cent. among widowed persons. Deaths from violence are returned at 6827 (5475 male, 1348 female)—viz., 4082 from accident, 646 suicide, 5 duelling, 2006 homicide, and 88 execution. The *suicides* amounted to 2·96 per 100,000 inhabitants, Spain being the only country having a less number than Italy, and most countries having a far higher proportion. The 646 suicides took place among 515 men and 130 women. More than a fourth of the suicides (174) preferred drowning, 142 firearms, 99 hanging, 9 asphyxia, and 42 poison. The greater number of suicides (202) occurred in summer, and especially in the months of July and August.

War and the cholera have naturally given rise to the postponement of the Medical congresses that were to have been held this autumn. That of the German Naturalists and Physicians, to have been held in Frankfort, has been indefinitely postponed; and the French Medical Congress, which was to have been held this year at Strasburg, is postponed until 1868. The prevalence of the cholera in Paris and in the north-east of France, as also the political troubles in Germany, which would certainly prevent the Practitioners of the neighbouring Rhenish provinces from attending it, are assigned as amply sufficient reasons for the postponement. Perhaps next year, after the "rectification of the frontiers," some of these gentlemen may be able to attend in their new capacity of French citizens.

M. Verneuil, having published in Paris the account of Mr. Holmes's operation of subperiosteal resection in a case of phlegmonous periostitis, and characterised it as a new and original mode of treating the affection likely to prove of great value, has been taken to task by the *Union Médicale* for ignoring a priority which "intensely interests our scientific national honour." It seems that M. Letenneur, of Nantes, has had a precisely similar case; but as neither dates nor particulars are given, this assertion of priority seems to be at least rather premature. M. Hergott, of Strasburg, however, exhibited at the Medical Society of that city a lad 13 years of age, whose entire calcaneum had been removed on account of necrosis following acute periostitis. In less than eight months the bone was entirely reproduced, and the patient was able to walk and run without difficulty. Then, again, M. Ollier removed the entire humerus in a scrofulous subject 15 years of age, suffering from suppurative osteitis.

THE JAW FROM THE TROU DE LA NAULETTE.

We recently announced that a new puzzle had been found for the ethnologists and anthropologists in the shape of a lower jaw from one of the Belgian bone-caves. We have been favoured with a sight of a cast of this bone of contention, and we will endeavour to describe it for the benefit of our readers. In the first place it is only a fragment of a jaw, but it presents all the essential parts for specific diagnosis. It consists of about three parts of the body of the bone and a small portion of the left ascending ramus. The teeth are wanting, but the alveoli are all in remarkably good condition. From the full development of the sockets and the size of the bone, it is evident that it belonged to an adult. The bone is of considerable thickness, the symphysial portion being much thicker than in ordinary European specimens. The points of agreement with human structure are the following:—The alveoli describe a parabolic curve; the molars are of large size compared with the premolars; there is no diastema between the canine and the contiguous teeth; the lower border of the bone presents the usual human characteristic in its perfect curve. The following are the differences between this bone and that of an ordinary European:—In the first place there is a total absence of chin. The anterior symphysial surface is slightly sloped backwards. The posterior symphysial surface projects further and more abruptly backwards than in the European or in any other human jaw we have seen. There is an absence of the tubercles for the insertion of genio-hyoglossi. The alveolus for the canine shows that that tooth must have been of larger size than in the typical human subject. Of the three true molar teeth, the third or posterior molar was decidedly the largest, and had an implantation by three fangs. The first and second molars were of ordinary size, and were implanted by two fangs. In several of these respects the jaw may be matched amongst Australian specimens, but it presents wide differences from the jaws of Western Europe of the present period. In the following points it exhibits decided pithecoid analogies—the large size of the third molar and canine teeth; the abrupt projection backwards of the posterior symphysial surface; the great thickness of the anterior portion of the bone, and the entire absence of mental eminence. The bone was found by Dr. Edward Dupont in the cavern of La Naulette, on the banks of the Lesse river, in a perfectly stratified deposit of sandy clay, under two layers of stalagmite, at a depth of three and a-half metres (about 11 feet 4 inches) below the surface. In close contiguity with this jaw, and under similar conditions, were found an upper incisor and canine, presumably human, an ulna, certainly human, a piece of reindeer bone presenting a circular perforation made by some sharp instrument, and numerous remains of Elephas primigenius, Rhinoceros tichorhinus, and Hyæna spelæa. The strata were perfectly undisturbed. We will not speculate upon the history of this remarkable specimen. Human we believe it to be, but of a type of humanity far inferior to any white race now existing. Were the supposition tenable that it is the bone of an ape, we should feel inclined to attribute to it the dignity of "the missing link." We hear that the Curator of the Anthropological Society is preparing a memoir on the subject.

REPORT OF THE

THIRTY-FOURTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

(By our Special Correspondent.)

(Continued from page 156.)

At the close of our last report we related the general proceedings of the second meeting of the Association. After these were concluded, Dr. Sibson opened a discussion on the "Influence of Hospitals on Mortality," to which we shall refer again in speaking upon the discussions on special subjects. We proceed now to lay before our readers the Addresses in Medicine and Surgery—the first by Professor Bennett, the second by Mr. Bowman, F.R.S. To say that these addresses were of the best of their kind were almost unnecessary. Before they were delivered they excited expectation so positive that even lesser efforts had been successes; but when they *were* delivered, the success achieved surpassed even the expectation.

THE ADDRESS IN MEDICINE.

Professor Bennett spoke as follows:—

Gentlemen,—In discoursing before such an audience as I have now the honour to address, on the science and art of Medicine, nothing would be more gratifying for me than to dwell on the unquestionable benefits which mankind has derived from the practice of the healing art—praise and hold up for imitation the great men whose genius and labours have assisted its progress—describe the improvements which have been made in recent times—expatiate upon some doctrine which, at the present moment, strongly excites attention—or repel the covert sneers or open attacks which have been made upon its dignity, honour, or utility. Able addresses of this kind, however, have been so frequently brought before you; the names of Harvey, Hunter, Jenner, and Bell have done such good service; graphic illustration, sound reasoning, and vivid eloquence have been so well and forcibly employed on these topics, that I trust you will forgive me if, on this occasion, I venture to regard the future rather than the past; and, while admitting that much has been done, contend that more remains to be accomplished. I propose, then, to inquire, from the present aspect of Medicine, theoretical and practical, how we can best assist its onward progress, and establish more firmly its claim to scientific eminence and public confidence.

And here allow me to observe that my position as a teacher of physiology in the University of Edinburgh obliges me to review annually the incessant labours of the histologists, naturalists, chemists, physicists, physiologists, and pathologists, who are seeking to determine the laws which regulate vitality in all its phases. From such a survey, it is now manifest that the theory of Medicine during the last twenty-five years has been completely changed, that most of the principles which governed its practice as an art are no longer applicable, and that during this period our science has advanced with such astonishing rapidity as to have imposed upon those who kept pace with its progress a task of no ordinary difficulty and labour.

On the other hand, as a Physician in active practice, and as a professor of Clinical Medicine engaged in teaching the art at the bedside, I am surprised at the indifference with which this great advancement in the science is regarded by the majority of Medical men. I see an army of practitioners scattered over the country, without organisation or central government, engaged in efforts to cure disease and alleviate suffering. In this they are mainly guided by a knowledge, partly traditional, partly acquired by themselves, called experience, which is not only often opposed to the exact observations and careful inquiries of modern times, but is too frequently most contradictory in itself. The greatest differences consequently prevail among intelligent Medical men as to the best methods of treating many important diseases; theory and practice—advanced science and past authority—scepticism and blind faith—often being arrayed against each other.

What, then, seems to me desirable in the actual condition of Medicine is to bring the scientific and practical departments of the Profession into harmony with one another, and to produce such co-operation among Practitioners that their methods of treatment should assume more of a fixed and uniform character. To assist us in arriving at this end, I propose shortly to describe what seems to me the actual stand-point or condition of Medicine, both as a science and as an art; and, in doing so, point out how one necessarily influences the other. I shall then consider how far, by greater union among its cultivators than has hitherto prevailed, professional advancement may be best secured.

PRESENT STATE OF THE SCIENCE OF MEDICINE.

1. It must be admitted that the descriptive anatomy of the human body is perfect—a fact in itself of the highest importance in the consideration of Medicine as a science. It is in determining its ultimate structure, by means of magnifying instruments, that the greatest progress has been made in recent times; and it is now determined that vital phenomena are essentially dependent on the minutest particles of which every tissue consists. The organs and textures, in fact, are but aggregations of fine molecules, an acquaintance with the properties of each of which can alone lead us to a knowledge of the whole. All attempts to restrict vital action to a cell, a nucleus, or to any particular element of structure, appear to me to be opposed by an overwhelming series of facts; the truth being that growth, contractility, and spontaneous movement are as capable of being demonstrated in a molecular vibrio one twenty-thousandth of an inch in diameter, as in the largest cell or muscular fibre. Neither is vital action confined to a so-called molecular or germinal mass, but may exist in perfectly hyaline intercellular substance, as in cartilage, where those changes primarily occur that transform it into bone. It follows that those views whereby, according to some, organic matter is always evolved from within, while, according to others, it is always superimposed from without, are too exclusive, nature sometimes acting in one way and sometimes in another—here within, and there external to cells.

So far, then, as our present magnifying instruments will allow us to judge, the ultimate structure of a living body is composed of molecules. These possess independent physical and vital properties, which enable them to unite and arrange themselves so as to produce higher forms. In this way nuclei, cells, fibres, tubes, and membranes are produced, the union of which in their turn constitutes the various tissues and organs of the body. Not unfrequently the breaking down of one substance is the necessary step to the production of another; so that, either directly or in solution, the histolytic or disintegrative molecules of one period may become the histogenetic or formative molecules of another. This theory of organisation not only reconciles the conflicting views of those who still found their notions of development upon the powers of a cell, of a nucleus, or of intercellular substance, but seems to me consistent with all the known facts yet discovered in the organic world.

As an illustration of this process, we can trace with tolerable accuracy the structural history of food as it passes into, through, and out of the body. Thus, an organic mass—say a piece of bread or beef-steak—first undergoes the histolytic process of disintegration, partly by the mechanical action of the teeth, stomach, and intestines, and partly by the solvent action of the salivary, gastric, and other juices, until it is reduced to a molecular pulp called chyme. From this pulp a fluid is prepared, which, passing through the villi, enters the chyle-ducts, and in the lymph-glands and thoracic ducts, by a histogenetic or formative action, produces the blood-corpuscles. These become coloured in the lungs, circulate for a time, and in their turn undergo histolytic solution, and thereby serve to elaborate the liquor sanguinis. This viscous fluid, drawn out through the capillaries, supplies the various tissues, molecule by molecule, with the histogenetic or constant formative material which keeps up their substance. Such substance, having served its purpose, is constantly undergoing a histolytic or disintegrative process—is again reduced to a finely molecular fluid, and once more joins the liquor sanguinis of the blood. From this it is finally removed through various channels by the process of secretion and excretion, which in their turn only present still further evidence of this law of molecular organisation. Thus the bread or beef-steak, having entered the frame, may be shown structurally to have undergone successive histogenetic and histolytic changes; enjoyed, as it were, life for a time, and ultimately been discarded as inert or dead matter. Compositions and decompositions, however, are not only structural but chemical, and to these we must next pay attention.

2. The great impulse communicated to animal chemistry in recent times dates from the labours of those who, by careful analysis, have followed the chemical transformations which plants and animals undergo during their development, growth, and decay. These have shown the relations which exist between the atmosphere, the soil, and the plant—what the latter takes from the two former, and what it gives to the animal who feeds upon it. In the same manner that plants can only grow in those soils which contain the substances necessary to form their tissues, so animals can only be nourished upon those compounds which contain the chemical elements they themselves require. All this being ascertained, what next interests us is the relation which exists between the supply of food and waste of the tissues during their exercise.

Viewed chemically, food may be regarded as a mixture of albumen, fat, and mineral matter, all of which pervade the economy, although the first is most abundant in the fibrous tissues, the second in the adipose and gland tissues, and the third in the bones and teeth. These substances, prepared by the molecular disintegrative process formerly alluded to, are but little changed chemically before passing into the tissues. But in leaving them in order to be excreted, remarkable chemical combinations and decompositions occur, whereby they produce different compounds, such as carbonic acid, water, urea, numerous organic salts, and so on. The nature of these chemical actions within the body is not yet fully understood; so that, although we know the composition of the ingesta and egesta, how the one is transformed into the other by the animal is not so clear.

The view put forth by Liebig—namely, that food should be regarded as nitrogenous and non-nitrogenous — the former being sanguigenous or flesh-forming, and the latter respiratory or heat-giving—has long appeared to me erroneous on histological grounds. Every tissue requires both principles. Even chemists themselves have shown by experiment that the idea of the tissues being oxidised during action, and yielding a proportionate degree of refuse like a steam-engine, is not correct. Recently Messrs. Fick and Wislicenus of Zurich went to the summit of the Faulhorn, one of the Swiss Alpine peaks, an ascent which occupied eight hours. During this period, as well as for eighteen hours previously, and for six hours subsequently, they only ate hydro-carbonaceous food, yet a chemical analysis of all the renal secretion passed showed that during and shortly after the ascent the urea excreted was only slightly increased. These facts are irreconcilable with the prevailing chemical theory, for had muscular exertion increased the oxidation of albuminous material, urea should have been largely augmented, but it was not so; muscular energy in this experiment having been carried on, without fatigue, at the expense of the carbonaceous substance of the tissue.

Indeed, numerous observations now being prosecuted prove that much has to be accomplished before the chemistry of food becomes the physiology of food, and before the slice of bread or beef-steak can be traced in its progress through the body with the same exactitude chemically as it has been structurally. Even when this is accomplished, we shall have much to learn which chemistry cannot teach us, for, as has been pithily observed, although in the laboratory a pound of flesh is enormously superior in nutritive power to a pound of cabbage, yet to a rabbit the cabbage is the superior food, whilst to a dog the cabbage is no food at all.(a) It follows that though chemistry can teach us much, nutrition, like all other vital processes, can only be rightly studied by the physiologist.

3. The researches of naturalists, it is now admitted, have thrown much light on the laws of germination and reproduction, and have demonstrated to us the nature of several obscure diseases. The observations of Bassi as to the cause of death in certain epidemics affecting the silkworm led to the discovery of the vegetable parasites causing favus, pityriasis, mentagra, and many other diseases of man; while the observations

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(a) Lewes, p. 115.

of Sars, Von Siebold, Steenstrup, and others, have determined the laws which govern the production of animal parasites. These in turn are related to several interesting facts and generalisations, all of which have tended to augment our knowledge of the animal economy. Need I allude to the doctrine of alternate generation by Steenstrup, of parthenogenesis by Owen, of the origin of tapeworm by Von Siebold, of the economy of the hive by Dzierzon, of pisiculture by Coste, of the formation of the coral reefs and islands of Florida by Agassiz, and the origin of species by Darwin—all of them noble examples of physiological generalisation, several of which have already found important practical applications, while not a few have been of direct service to Medicine?

4. A study of natural philosophy has led in recent times, perhaps more than that of any other branch of science, to an elucidation of the functions of living beings. What are physical and what are vital actions has long been a subject of discussion. The attraction which the sun exerts upon the earth, that which the earth has upon the magnetic needle, and that which one chemical substance has for another, though differing entirely in their nature, are called physical; but the attraction which the intercellular substance of cartilage exerts upon the lime salts dissolved in the blood, or that by which any other tissue selects and draws from the liquor sanguinis what enters into its substance, is called vital. Again, the conduction of electricity along a wire is physical; the conduction of nervous influence along a nerve is vital. We know nothing of the nature of any of these actions, which constitute ultimate facts in science; but inasmuch as they are not identical, we call those which occur in living beings vital. Some of these are altogether peculiar, such as growth in particular directions, muscular contractility, nervous excitability, and mental acts. We observe, however, in a living being, that these properties are more or less dependent upon, mixed up with, and give direction to, physical properties. It is the determination of what is due to the one class of phenomena and what to the other, as well as their mutual relations, that has for some time engaged the attention of what is called the physical school of physiology.

And here it must be confessed that just in proportion as the physical have been made to encroach upon what were supposed to be vital actions, our knowledge has advanced. It has now been proved that much of what was mysterious must be considered due to gravity, imbibition, endosmose, or chemical, electrical, and mechanical operations. Now, as the laws regulating these physical forces are better known to us than such as govern the vital ones, not only in this way can we comprehend them better, but when required to modify them by art, we are enabled to do so with more effect. We cannot, therefore, too strenuously urge forward all that physical research can do for us, although still conscious that while in this way we may learn much, physics, no more than chemistry, will ever wholly clear up the mysteries which surround the great fact of life.

It is curious, however, to observe that while chemistry has succeeded in manufacturing in the laboratory many of the excretory products of the body—such as urea, taurine, allantoin, formic, oxalic, lactic, butyric, and other organic acids—so the histologist, by the mechanical union of oil, albumen, and mineral matter, has succeeded in forming artificial molecules, nuclei, cells, membranes, and concretions, very similar to what we find in the animal. True, in both cases we must take the proximate principles, which can only be formed by nature; but, these given, we learn much of the structural mode of formation and of the chemical decompositions occurring in the animal from what physical experiment has taught us.

Of the numerous ingenious instruments now invented which have enabled us to determine with rigorous exactitude the time, area, and intensity of phenomena in the living body, whether applied to the velocity of the circulation, force of the pulse, production of electrical currents, rapidity of the nerve-force, altered curves of the crystalline lens, and many other most important facts, I have no time to speak. I have requested my assistant, Dr. Rutherford, to bring with him to this meeting the very ingenious myographion of Du Bois Reymond, with which he will show, what may prove interesting to many present, how the rapidity of the nerve-current can be accurately determined. The inspection of such an instrument, an idea of its construction, and the witnessing one of the experiments which have given such reputation to the name of Helmholtz, will do more than any feeble description of mine, to convince you of the great talents and ingenuity of those who now prosecute our science in this direction.

5. Experiments upon the lower animals, I need scarcely say, have added largely to our knowledge of the vital functions. On the propriety of this kind of research I agree with what was stated by Dr. Sharpey in the able address which he read to this Association in 1862—viz., that "when we consider the countless myriads of the brute creation that are daily slaughtered for man's sustenance, or are left to perish from hunger or the severity of season, or fall a prey to their natural enemies, to say nothing of the multitudes killed for sport, surely it is not too much to claim that an infinitesimal share of this vast sacrifice be applied towards the extension of human knowledge and the alleviation of human suffering." It is unnecessary, however, to dwell upon the brilliant results which have been derived from this method of investigation. I would only point out that a reluctance to engage in it when necessary has vitiated the most important conclusions, of which we have an excellent example in the ideas formed by Sir Charles Bell as to the functions of the anterior and posterior columns of the spinal cord. Having cut the anterior and posterior roots of the spinal nerves in a living animal, and shown that thereby voluntary motion and sensation connected with the parts which received nerves from them were paralysed, he supposed that the columns of the cord were continuations of these roots, and that section of them would also destroy motion and sensation. But when Brown-Séquard cut across the posterior columns in a living animal, which he did with a knife made for the purpose, it was found that, so far from sensation being prevented, pressure on the leg of the animal gave rise to increased pain. The cause of this is now thoroughly understood from the admirable histological researches of Mr. Lockhart Clarke, who has demonstrated, among numerous important facts for which science is his debtor, that the nerve-tubes of the spinal roots, instead of turning up towards the brain, as had been generally supposed, pass directly inwards to the grey matter, and are there so distributed that no single section of those columns can destroy their power of conducting influences to the brain. Indeed, experimental and histological research have been so well combined in recent times as to throw a flood of light over the functions of the nervous system. In proof of this I need only refer to the labours of Bernard as to the influence of the vaso-motor nerves over animal heat.

6. Lastly, the pathologists, who seek to discover from an inspection of diseased organs after death the relations existing between morbid conditions and the symptoms or phenomena they occasion during life, have also added largely to the science of Medicine. In the same manner that the healthy body has been explored to obtain a knowledge of its structure, so has the diseased body been scrutinised to ascertain the changes produced. As the descriptive anatomy of man is perfect, so is his morbid anatomy, and pathological is as far advanced as physiological histology. Indeed, they may be said to constitute one science. If the organic chemistry of the healthy processes is imperfect, the pathological chemistry of the body is still more so, the latter necessarily being dependent on the former. Such, however, is the activity with which morbid phenomena have been investigated during the last quarter of a century, that in no department of the science, probably, has greater progress been effected.

The meanings of the old terms, inflammation, tubercle, cancer, and so on, are still discussed, but the morbid processes themselves are now well known. These consist of congestion of the blood-vessels, and, as a result of this, serous effusion, exudation of the liquor sanguinis, or extravasation of blood. Each of these products undergoes subsequent changes, whereby they are again, absorbed into the circulation, either directly, as in the case of serous effusion, or through cell-growth, as in the case of exudation, or by disintegration, as in the case of internal hæmorrhages. Not unfrequently morbid growths occur, which may originate from irritation of the existing textures, which they more or less resemble, or they may spring up in exudations giving rise to tubercle, pus, and cancer. The tissues also atrophy or degenerate, and in this last case may undergo the fatty, albuminous, pigmentary, or mineral transformations. Concretions of various kinds are deposited in cavities, and obstruct ducts, giving rise to formidable lesions. There may be animal and vegetable parasites. Lastly, the blood itself may undergo alterations from an excess or diminution of its structural or chemical constituents, or it may be contaminated by noxious poisons derived from without, or generated within the body.

A knowledge of these morbid states has now made great progress, and our general ideas of their nature have in consequence undergone a remarkable change. It has been shown that the same general laws which regulate growth and other vital functions in health, also influence them when so disordered as to constitute disease. The same theory of organisation which has changed our views of physiological processes, has had a similar influence on pathological ones. It is not so much the peccant humour or the vascular action of our forefathers to which we attribute structural effects, as it is to the altered chemical, electrical, or vital condition of the ultimate molecules of the tissues themselves. This being the organic cause of disease, our efforts are no longer engaged in the mere study of symptoms, and the grouping them together in accordance with artificial nosologies, but in endeavouring to determine with accuracy the character of the lesion itself, and the precise texture and organ which is involved.

Only a limited idea, however, can be formed of the position of scientific Medicine from viewing what has been accomplished by these six methods of investigation separately. It is their union, the assistance that one gives to the other, and the necessity which exists for knowing them all, that require attention in founding a proper basis for Medical education. So long as it was supposed that diseases were groups of external symptoms, and that the removal or alleviation of these symptoms was the chief object to be attained, the rules of art flowing from past experience were easily acquired. But now that every Practitioner strives to ascertain the nature and seat of the morbid change, not only must these be previously understood, but he must be capable of using all those means whereby they can be detected. A knowledge, therefore, of certain sciences, and of the laws which regulate their course, and their relations with one another, has now become imperative as an introduction to practice.

This mutual relation of the sciences has led to generalisations of the highest importance to our knowledge of vital action both in health and disease. Thus, it having been shown by Grove that the various physical forces—such as heat, light, electricity, gravity, and chemical action—are all correlative, it soon became apparent not only that there was a similar relation between the vital forces—such as those governing growth, nutrition, contractility, and excitability—but also between these and the physical forces. It has further been shown that just as matter is indestructible, only changing its condition, so there is a conservation of force which only alters its form. In the same manner that heat, light, electricity, gravity, and chemical action are capable of being perpetuated in an incessant round one to the other, so we must regard growth, contractility, sensibility, and even the exercise of the mind, as only varieties in form of that chemical force generated in nutrition, as this in its turn is only an altered manifestation of some other force.

It is by studies in this direction and in this spirit that we shall do most to advance the science of Medicine, in proof of which I would for a moment refer to the assistance which the sciences have given to one another in advancing our knowledge of disease, and its detection in the living body. How anatomy and physiology aid pathology, and how this in its turn confirms and extends physiology,—of this we have an excellent example in the discovery of leucocythemia, which has proved to us that the views of Hewson, which were so long neglected and held to be doubtful, as to the functions of the spleen and lymphatic glands, are correct, and that they do, as he maintained, form the corpuscles of the blood. Again, many alterations of texture, which morbid anatomy has made us acquainted with, would only have been suspected but for the help which physical science has furnished in various ways, more especially by chemical tests and analyses, and numerous ingenious instruments. Need I refer to what we now accomplish by means of percussion and auscultation, and to the use of the microscope, speculum, laryngoscope, ophthalmoscope, sphygmograph, thermometer, etc.?

The present stand-point of scientific Medicine, therefore, may, I think, be summed up as follows :—

1. That the descriptive anatomy of the human body is perfect, and has been thoroughly worked out.

2. That the structural and general anatomy of the human body is very nearly so.

3. That physiology, though greatly advanced, has yet much to teach us as to the functions of the human body, and is at this moment apparently waiting—(1) for the organic chemists who are investigating the transformations which food undergoes in passing through the economy; and (2) for the physicists who with newly invented and delicate instruments are investigating the vital functions with a care and exactitude only recently arrived at.

4. That pathology has demonstrated to us the structural alterations produced by morbid states, but is still very deficient in a knowledge of the chemical alterations these occasion. It must necessarily be dependent, however, on the progress of physiology, so that the laws which regulate many diseased processes have yet to be ascertained.

5. That the diagnosis of diseases, owing to our combined knowledge of physiological and morbid states, and the cultivation of physical exploration in conjunction with observations of symptoms, is rapidly becoming more exact, and losing its conjectural character. What John Hunter effected for Surgery, by placing it upon a scientific basis, is now the object of the well-informed Physician with regard to the practice of Medicine.

PRESENT STATE OF THE ART OF MEDICINE.

I now turn to the practical side of Medicine, by which is to be understood an available knowledge of all those means which contribute, directly or indirectly, to the cure of disease, prolongation of life, or alleviation of suffering.

The long discussions that formerly occurred as to whether the Practitioner should be guided by dogmatism or empiricism—theory or observation—deduction or induction—have lost their interest. There are more observers than reasoners, although it may be questioned whether a really perfect observation is not more rare than a sound theoretical conclusion. It is now recognised that science must prevail in the schools, practice at the bed-side; and that the more we acquire of both, so much the clearer is it seen how good observation corrects and perfects theory, and how science improves and extends observation. Both have added largely to our resources. Thus it will be admitted that the doctrines of the circulation of the blood, of the independent functions of nerves, the reflex function of the spinal cord, cell-growth, and so on, have been directly serviceable in practice. It by no means follows, however, that great physiological discoveries are immediately available in this way. The practical value of the discovery of Harvey was not recognised for several years after its publication, and the recently established doctrines of the functions of the pancreas, of the lymphatic glands, and of the glycogenic functions of the liver, have not taught us as yet how better to regulate digestion, influence the formation of the blood, or cure diabetes. But that every physiological truth adds largely to our conceptions of the correct treatment of maladies, is a proposition I must not occupy your time with attempting to demonstrate.

On the other hand, many of those remedies which have been proved to be directly curative of disease—such as quinine, sulphur-ointment, lemon-juice, cod-liver oil, and so on—are entirely the result of empirical observation. With regard to these, it is our constant aim to determine the *rationale* of their influence. Up to this moment, notwithstanding, there is an uncertainty about the action of numerous powerful drugs in daily use, which is a constant reproach to us, and which we should make a strong effort to remove. It cannot be correctly said, in face of the researches and additions constantly made to our knowledge, that we have been altogether supine on this subject. But it is unquestionable that no vigorous attempt is being made, nor does any organisation, so far as I can perceive, hold out a prospect that any is likely to be made, of advancing our knowledge in this direction. In the excellent paper read at the annual meeting of the Association by Dr. Handfield Jones in 1862, the conflicting opinions which prevail with regard to the action of some of our most valuable drugs, more especially of digitalis, opium, and quinine, were pointed out. The settlement of these differences is certainly within the reach of scientific investigation, and all that is required are capable workers to solve the difficulties they present. Numerous other agents, however, might be mentioned, the power of which is great, though as yet we know little of their effects. Among these is electricity, the operation of which upon the nerves and muscles has recently been studied by the physical school to a great extent, without, as yet, furnishing us with any exact principles for its application. Duchenne and Remak, it is true, have made many valuable observations, but their views are much opposed to each other. The first considers that an interrupted current should be applied directly to the muscles, while the latter believes that a powerful continuous current sent along the nerves is most beneficial. This and many similar questions require to be solved by investigation.

There are few, however, I fear, who have clearly placed before themselves the great difficulty, labour, and sacrifice of time which therapeutical inquiries necessitate. Indeed, it may be questioned whether any one man, however talented, is capable of such investigation. The wisest among us is apt to be biassed by accidental circumstances. A case, or series of cases, which have done well under a particular management, the unexpected recovery of an apparently hopeless disease following the administration of a particular medicine, or the fascination which lingers about some plausible theory, may all tend to mislead. The influence of one mind should be corrected by that of another; and the best knowledge in all the departments of the science and art of Medicine should be concentrated on the solution of the question proposed. A committee, therefore, would be requisite, which should combine the skill of the anatomical operator, the analytical power of the chemist, and the varied knowledge, theoretical and practical, of the histologist, physiologist, physicist, pathologist, and therapeutist, as well as of the physician, whose knowledge of diagnosis is unimpeachable. It would be also advisable to temper the energy and sanguine character of youth with the caution and reasoning power of age. A physiological laboratory, with every necessary instrument, appliance, and chemical, together with a hospital, would be necessary adjuncts.

But when such a committee have completed their labours, published their report, and made their suggestions, even with the assistance of one or more Hospital Physicians, the cooperation of a large number of Practitioners becomes necessary to give it that general and varied trial which is necessary to test its value. No one Practitioner, even with the assistance of a large Hospital, can hope to examine and carefully record such a number of cases of any one disease as will render his trials of great value. Such, at the same time, is the want of union among Medical Practitioners, and so difficult is it to impress them with the advantage of working in concert to advance Medicine, that several years may elapse before any investigation is finally completed and receives the authoritative sanction of numbers.

And here I would observe that there is only one way in which, as it seems to me, any particular treatment can ever become, for the future, really authoritative and entitled to the confidence of the Profession at large. It is, that the facts connected with it should be carefully observed, and the results so recorded that they may be easily compared with similar results obtained by other methods. For this purpose the age, sex, general vigour of the body, and other facts necessary to be known, under the circumstances, should accompany any general statement as to the good effects of the remedy or treatment, so that all may judge of its value for themselves. This would be the crowning proof of its utility, for it need scarcely be pointed out that even the general adoption of a remedy and a particular practice, or an universal belief in its efficacy, is no guarantee that it is really the best that can be followed. Of this, the practice of bleeding and an antiphlogistic treatment for acute inflammations, and that of a six-weeks' course of mercury for the removal of syphilis, both of which prevailed about thirty years ago, offer illustrations.

It is a fact which cannot be disputed that the mortality of a strictly antiphlogistic practice in acute pneumonia was one death in three cases, and that simply by leaving off a lowering treatment the mortality was diminished to one in seven. In the same manner it has been satisfactorily proved that a general non-mercurial treatment of syphilis cures the disease on an average in two-thirds of the time, and with only one-half the number of secondary cases. Whether there are any cases of pneumonia that still demand blood-letting, or some cases of syphilis that still require mercury, is a question not yet decided, but there can be no doubt that we owe to statistical research the important results to which I have referred. Tabulated facts and numbers, therefore, which correctly estimate the amount of benefit obtained, are what is necessary, instead of vague generalisations, mere opinion, and too often unfounded assumptions. To this end co-operation among members of the Profession is necessary, but the difficulty of attaining it may be estimated by the result of a trial in this direction which was commenced by the Association in 1862.

At the annual meeting of that year in London, a committee was appointed, who recommended that various subjects should be proposed for investigation by this Association. Certain members of that committee each agreed to prepare a schedule, to be circulated with the Journal, to receive the returns, and report on or publish the results. Accordingly, four such schedules were so circulated, and you may feel curious to know the effect of this appeal to upwards of 2000 Medical Practitioners.

Eighteen schedules were returned to Dr. Fleming, of Birmingham, containing 100 cases in which tapeworm was treated by the male shield fern.

Twenty-one schedules have been returned to myself, containing 152 cases of acute pneumonia, mostly treated on the restorative plan.

Nine schedules were returned to Dr. Harley, containing 23 cases of jaundice, treated by benzoic acid, mercurials, and podophyllin.

Three schedules were returned to Dr. Handfield Jones, containing 3 cases of non-syphilitic psoriasis treated in various ways.

The only report published is that by Dr. Fleming, who informs us that the cases returned to him "establish beyond doubt the great efficacy of the oil of the male shield fern in tapeworm, and its superiority to the other known remedies of this disease. Further," he says, "our report points very decidedly to the most efficient mode of exhibiting the drug; and the whole inquiry has, as I have reason to know, rendered excellent service to therapeutics by making the virtues of the oil of male fern more widely known and employed throughout the Profession."(b)

It will therefore be seen that this report of Dr. Fleming has been of great advantage, and so far fully justifies the proposal of the Association. One hundred cases, also, where the problem is so simple as the expulsion of a worm, may perhaps be regarded as data amply sufficient to establish the therapeutic virtue of the remedy. Where, however, the problem to be solved is more complex, as in the three other cases, it must be admitted that the returns are by no means sufficient, and that this effort to obtain extensive data for determining the best treatment of acute pneumonia, jaundice, and psoriasis, has as yet been unsuccessful.

Notwithstanding, I still entertain the hope, that through this great Association of Medical men something may be done to settle doubtful modes of treatment. If instead of 21 schedules, for example, as to the treatment of pneumonia, yielding 152 cases, it were possible to get 200 schedules with 1500 cases, I think all the vexed questions concerning the treatment of that disease might be permanently solved. Even this only supposes that one-twelfth of our number should fill up a schedule with such cases of the disease as they may encounter for twelve months.

For any scientific investigation, funds must be raised to remunerate the talent and toil which an extended and useful inquiry will necessarily involve. With such aid, properly applied, we have good evidence that much may be done. The recent Government Report on the Cattle Plague, for instance, points out how the co-operation of various individuals may be so directed as to exhaust a Medical inquiry. The annual sanitary reports of Mr. Simon, conducted on a similar plan, exhibit a series of investigations which are invaluable to the Medical man. A like series of reports on diseases, or as to the actions of remedies on the healthy or certain morbid states of the economy, there can be no question, would not only greatly tend to the advancement of Medicine, but would gradually exert an authority which would be generally respected. When, also, we regard the advanced condition in which we find the science of Medicine, there can now be little fear that such inquiries would conduce to the exclusive systems of treatment into which some men were formerly led.

It was in every way worthy of the position held by Professor Acland, of Oxford, that he should have proposed to the Medical Council that a sum of £250, to test the properties of drugs, be granted out of the contributions levied from the Profession. But notwithstanding it constitutes one of the duties of that Council to publish from time to time a Pharmacopœia, the application was refused on the ground that it constituted no part of its business to make such investigations. Exactly the same thing may be said by the government, by the corporations, by scientific societies, and indeed by each Medical Practitioner. In this way we arrive at the familiar paradox, "That what is everyone's business is nobody's business."

From all the consideration that I can give this subject, the present stand-point of practical Medicine appears to be—

1st. That the empirical method of treating disease has reached its utmost limits, and that little further improvement is to be anticipated from it.

(b) *Brit. Med. Journ.*, January 15, 1864, p. 26.

2nd. That the great advance which has taken place in the science of Medicine has led, and is leading, to various modifications in the rules of Medical practice which only lately were in general use.

3rd. That these modifications principally consist in putting more confidence in the powers of nature, having recourse more frequently to the assistance of diet and other hygienic influences, and in employing more sparingly blood-letting and other so-called heroic remedies.

4th. That the value of many remedies in certain diseases is unquestionable, and that their judicious employment confers invaluable benefits upon mankind, but the utility of others is disputed or little known, and with regard to these a careful investigation is imperatively required.

5th. That scientific researches constitute the means to which we must look for the future progress of Medicine, but that experience has demonstrated the impossibility of carrying them out satisfactorily without funds to remunerate the investigators.

6th. That all applications of scientific treatment require the co-operation of Medical men at large, and that no trustworthy results are likely to meet with general confidence in future, unless founded on extensive data, and formularised by a correct statistic.

FUTURE PROGRESS ONLY TO BE SECURED BY COMBINED LABOUR.

From the foregoing survey of what appears to me to be the actual condition of the science and the art of Medicine two considerations are suggested,—1st, That the greatest development and encouragement should be given to all those methods of investigation, the united results of which constitute what may be called Medical knowledge; and 2nd, That the determination of how far this knowledge is useful, when practically applied to the cure or relief of diseases, demands the more cordial union and co-operation of the Profession at large.

I would only observe, on the first head, that if, as we have endeavoured to show, science ought to be made the foundation of Medicine, then so far from clinging to a past authority, we ought boldly to re-investigate everything that does not repose upon an exact and solid basis. Hitherto more weight has been given to expressions of opinion or of belief than to what can be proved or demonstrated. Hence the opposing views of even eminent authorities on the plainest procedures, not only as exhibited in their diagnosis and treatment of disease, but in their evidence on all litigated questions. Should we not make an effort to settle these differences? But past authority is here wholly incapable, for such is its inherently conflicting character that no one can suppose it to be available for solving any existing difficulty whatever. What, then, is required is fresh research and correct reasoning, and every one acquainted with the resources we possess must feel persuaded that if combined and put into operation they are amply sufficient for the purpose. Indeed I trust it will be apparent from what has been previously said that the different branches of Medical science are now so advanced as to be capable of solving difficulties which formerly they could not. All that seems requisite is, that their cultivators should unite to obtain the end in view.

Some maintain that our Profession ought to be a learned one, and the Medical Council have recently resolved that while a knowledge of Greek shall in future be imperative on students, an acquaintance with natural philosophy and logic shall be altogether optional. It is with the greatest deference I venture to think that such a decision has not been made with a full comprehension of the tendencies of our science, or of its future requirements. It may be doubted also whether the habits of mind acquired by cultivating a literary taste and an appreciation of the classic authors are such as will best fit the intellect for grappling with those difficulties which the severe study of vital action in health and disease involves. To this end mathematics, logic, and physics are absolutely essential.

With regard to the second head, I would remark that the British Medical Association numbers among its members many who are eminently well qualified to unite both in scientific investigation and in practical observations. Will they do nothing in their collective capacity to solve satisfactorily one doubtful point as to the action of a medicine or the treatment of a disease? At this moment we are called upon to cope with a formidable epidemic, the numerous individual observations that have been made concerning which still leave us in doubt whether it be or be not infectious, what is its pathology, and whether it is better treated by laxatives or astringents. What a noble spectacle would it present if the 2000 members of our Association would only now agree during the ensuing year to direct their energies to an investigation into the nature and treatment of Asiatic cholera! Might not a central committee be appointed, which, operating through the many branches scattered over the country, would secure chemical, histological, and pathological research, combined with accurate, uniform, and extended observation? Would any of us grudge a small contribution that might serve to remunerate the labours, talent, and consumption of time involved in such an inquiry?

Whatever you resolve on, gentlemen, to me it is certain that we have arrived at that epoch in the history of Medicine which demands that truth in science and truth in art should no longer be kept asunder; that the traditions of old and less enlightened times should give way to the advancing spirit of inquiry that characterises the age we live in; and that the separate, and, because separate, too frequently opposing, efforts of individuals should merge into the catholic endeavour of solving, by union and mutual help, those questions which it has been demonstrated have baffled solitary research. The whole scope and tendency of the modern science and art of Medicine indicate that future progress can alone be secured by combined labour; and I can conceive no more worthy, as there is no more appropriate, object for the consideration of this Association, than the manner and methods by which this great work could, through its agency, be prosecuted and accomplished.

(To be continued.)

GENERAL CORRESPONDENCE.

TURPENTINE IN CHOLERA.

LETTER FROM DR. J. W. MUDGE.

[To the Editor of the Medical Times and Gazette.]

SIR,—As I notice from the various reports of cases published in your journal, and from the general statements of your correspondents, that the treatment of cholera continues as unsatisfactory as hitherto, and that medicines which have always failed to give relief continue to be employed as sedulously as ever, I am induced to mention a method which I was led to adopt a few years ago (1861), and under which a greater percentage of recoveries resulted than from any I had previously tried.

Turpentine beaten up with yolk of egg, combined with a small portion of tincture of lavender in a menstruum of cinnamon water, as below, is the remedy I have used:—

℞ Ol. terebinthinæ ʒiv., vitell. ovi ij., tinct. lavandulæ ʒij., aquæ cinnamomi ℥iijss. M. ft. mist. One ounce every hour while urgent symptoms continue, to be repeated oftener if rejected by vomiting, which, however, seldom happened in my experience. As little fluid as possible was given, large draughts of cold water having always appeared to me to do harm, and to increase vomiting, purging, and exhaustion.

Sinapisms to the epigastrium, or a blister large enough to include the sternum, are valuable agents. Small quantities of arrowroot with brandy and teaspoonfuls of jugged chicken broth, at an early period, have formed an essential part of the restorative treatment, which requires great care and judgment. Opium, though in my experience of great value in the preliminary diarrhœa, is inadmissible in the advanced stage of confirmed cholera.

During a service of twenty-six years, I have tried, or seen tried, almost everything thought likely to do good. Turpentine, as above prescribed, has seemed to me the best, and if others should be induced to try it they need not, at any rate, fear any evil results. I have generally found from four to six doses sufficient. For children the dose was proportionately reduced. I am, &c.

J. W. MUDGE, M.D.,

August 11. Surgeon-Major Madras Army.

FRACTURE OF THE NECK OF THE THIGH-BONE.

LETTER FROM MR. AUGUSTUS EVES.

[To the Editor of the Medical Times and Gazette.]

SIR,—I was much interested in Dr. F. J. Brown's letter on the subject of treatment of fracture of neck of the femur in the *Medical Times and Gazette* of August 4. I am fully aware of the imperfection of the present method, although from it I have seen some patients recover with considerable locomotive powers, but I believe generally the œdema and pain have been persistent even in the more fortunate cases; as for the rest they have been confined to bed for life—they were generally very old people. But the question I wish to ask Dr. Brown is whether the plan he recommends is perfectly safe. I tried it once, some years back, in the case of a woman between 50 and 60, and a very large sloughing ulcer developed itself in the nates. I had great difficulty in saving the patient's life; however, by removing the apparatus and using a water cushion, with opium, tonics, and good living, she recovered ultimately, and with a somewhat useful limb. Since that time I have never tried the plan again, but should be very glad to do so could I be assured that a debilitated person might be kept in the one position described by Dr. Brown for 100 or 140 days.

Perhaps it may be said that the splint, etc., does not increase the danger, that without it the pressure from constant recumbency will produce bedsores. Still, will not that tendency be dangerously increased by the almost impossibility of any movement when the treatment by long splint is adopted?

I write merely for information, and shall feel much indebted to Dr. Brown for any further remarks on the subject which he may kindly offer. I am, &c.

Augustus Eyes,
Consulting-Surgeon to the Cheltenham
General Hospital.

Cheltenham, August 14.

SUCCESSFUL CANDIDATES FOR THE ARMY MEDICAL SERVICE.

[To the Editor of the Medical Times and Gazette.

The Director-General of the Army Medical Department presents his compliments to the Editor of the *Medical Times and Gazette*, and begs to enclose a list of the candidates of her Majesty's British Medical Service who were successful at the competitive examination in March last, and who have passed through a course at the Army Medical School, showing the combined results of the examination.

Army Medical Department, August, 1866.

Names.	Studied at	No. marks.
Notter, J. L.	University of Dublin, T.C.D.	4571
Comerford, H.	Queen's College, Galway	4440
Brown, H. T.	Queen's University, Ireland	4345
Wright, J. H.	King's College, London	4060
Jennings, W. A.	Queen's College, Galway	3923
McCutchen, I. N.	University of Dublin, T.C.D.	3845
James, H. A. L.	University of Edinburgh	3830
McCrystal, E.	Queen's College, Belfast	3735
Buchanan, R. F.	University of Dublin, T.C.D. and Coll. of Surgs. Ireld.	3575
Rooney, J. P.	Peter-street School, Dublin	3554
Hanagan, J. H.	Cecilia-street School, Dublin	3480
Patterson, J.	Peter-street School, Dublin	3420
Martelli, W. G.	Ledwich School, Dublin	3405
Forbes, W. A.	Stevens' Hospital, Dublin	3355
Hodder, F. W.	Toronto University	3304
Stevenson, W. F.	University of Dublin, T.C.D.	3126
Thompson, W. A.	University of Dublin, T.C.D.	3045
Hobbs, H. A.	St. Thomas's Hospital, Lond.	3022
Macpherson, R. M.	University of Edinburgh	3000
Eaton, R. C.	Richmond Hospital, Dublin	2940
Burnett, W. F.	College of Surgeons, Ireland	2930
Lambert, R. B.	Peter-street School, Dublin	2595
Ryan, M. J.	Richmond Hospital, Dublin	2575
Boult, E. F.	United Hospital, Bath, and King's College, London	2525

Cholera on the Continent.—According to official reports, the number of persons attacked by cholera in Stockholm is 477, and the deaths 278; at Gothenburg there have been forty-four cases and twenty-two deaths. The epidemic has appeared at Upsal and in other towns. The *Levant Herald* says:—"The cholera continues to rage virulently at nearly all the ports on the Lower Danube, the deaths at Galatz alone averaging, it is said, sixty daily. The disease having declared itself on board her Majesty's gunboat *Tyrian*, stationed in the river, she proceeded down to the Bosphorus, but, notwithstanding the change, she has lost her Doctor and three men.—*Guardian*.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, June 6th, 1866.

Dr. Barnes, President.

The following gentlemen were elected Fellows of the Society:—Dr. P. Boulton; Dr. R. C. Croft; Dr. Maddever, Rothesay; Dr. Tannahill, Glasgow; Dr. Yeaman, Glasgow; Mr. A. G. Chattaway, Leominster; Mr. A. L. Peacock, Devonshire.

Dr. Greenhalgh exhibited several specimens of Medicated Cotton Wool which had been recently made at his suggestion by Messrs. Bell and Co., of Oxford-street. He used them chiefly for application to the neck of the uterus and vagina. Being prepared with glycerine, they could be used much stronger and applied for a longer period, and are much cleaner than the greasy pessaries and suppositories in ordinary use. The specimens exhibited consisted of

Cotton wool with iodine and iodide of potass.
,, ,, atropine.
,, ,, morphia.
,, ,, iron and morphia.
,, ,, tannin.
,, ,, matico.

He had pursued the following mode of application:—A portion, about the size of a half-crown piece, secured by a piece of thread, is applied through the speculum to the affected part, over which a larger piece of cotton wool, similarly secured and freely saturated in glycerine, is to be placed, and retained *in situ* from twelve to twenty-four hours, when it can be withdrawn by the threads either by the patient or Practitioner.

Dr. Wynn Williams exhibited a specimen of a large Abdominal Cyst, which he had removed from an unmarried female forty years of age. The case had been supposed to be one of ovarian disease, and a month previous to the operation seventeen quarts of fluid had been withdrawn by tapping. Death unfortunately took place twenty-four hours after the removal of the mass; and a post-mortem examination showed that the tumour had no pedicle, and was unconnected with the uterus or its appendages.—The specimen being of an exceedingly interesting nature, it was referred to a committee for further investigation and a report thereon.

Dr. Sansom exhibited a Uterine and Vaginal Douche.

Dr. Graily Hewitt exhibited a specimen of Uterus during Menstruation; also a coloured drawing of the specimen while in a recent state. The specimen exhibited very perfectly the condition of the uterus during menstruation. One ovary contained a Graafian follicle quite recently ruptured. The subject of the case was a girl aged 15, who died forty-eight hours after being severely burnt.

Dr. J. Braxton Hicks exhibited some Sticks of Anhydrous Sulphate of Zinc, which he recommended to the notice of the Society, having himself found them very useful and safe in the treatment of those conditions of the canal of the cervix uteri requiring styptics: such as produced cervical leucorrhœa, menorrhagia, &c. He considered that they were much more efficacious than fluid injections, because the stick could be allowed to remain in the canal, whereby a much more prolonged contact was obtained. They were made for him by Johnson and Sons, Basinghall-street, City.

Dr. Graily Hewitt read a paper on

MENSTRUATION IN PREGNANCY.

The following case was related illustrative of the occurrence of menstruation in pregnancy, and as a contribution to the knowledge of this subject. A. B., aged upwards of thirty. Several pregnancies previously. Last child born June 23, 1865; suckled one month. Catamenia September 15 to 25; in October absent; on November 7 a discharge of blood, with slight watery discharge, alternating for a week. December 7, "poorly," as usual, for six days. January 8, 1866, felt quickening. March 1, pregnancy distinctly diagnosticated. Delivery of a female child, apparently about a fortnight short of full time, on May 17. The author considered it probable in this case that there was a twin conception, one ovum perishing and giving rise to the flooding observed in November. It might be that some other cases of apparent menstruation in pregnancy have a similar source;

but in regard to the majority of the cases of menstruation in pregnancy, and excluding cases of irregular hæmorrhage, he believed the source of the blood to be the decidua vera, as in ordinary menstruations, the unusual condition in such cases being the absence of adhesion of the two membranes, the decidua vera and decidua reflexa. The decidual chamber may, in other words, persist to a later period than usual, in which case there is no difficulty in accounting for the exudation of blood from within it, and its appearance externally.

Mr. Robert Ellis read a paper

ON ANÆSTHESIA BY MIXED VAPOURS.

In opening this subject Mr. Ellis said it would be taken for granted that the administration of mixed anæsthetic vapours possessed certain advantages over that of pure chloroform, counteracting the depression produced by the latter agent, and giving great security to the anæsthetic art. But the difficulty consisted in the due application of these vapours, and up to this time the anæsthetic fluids had been simply mixed together, and their resulting vapours administered. It was then shown that the whole theory of anæsthetic mixtures, and especially of those recommended by the Chloroform Committee, was based on an error; this being the idea that the vapours of each fluid would rise from the mixture in the same proportions as those of its constituents. A large number of experiments were detailed, the object of which was to prove in the clearest possible manner that this notion was wrong from the commencement. Anæsthetic mixtures were shown to give off their respective constituents in vapour as nearly as possible in the order indicated by their boiling points. Thus ether came off in largest quantity, and alcohol in the least; and it was found that it was not possible to construct any formula for an anæsthetic mixture which would give off a definite and unvarying constitution of vapour from first to last. The patient consequently would be inhaling a mixture of vapours of different character at each moment of evaporation, and no reliance could thus be placed upon these compounds. The author, therefore, denounced the whole practice and theory of anæsthetic mixtures in the fluid form as uncertain in their effects, and not to be depended upon for practical employment. Mr. Ellis, however, believing in the great value of a true system of anæsthesia by mixed vapours, was led to the discovery of a simple means by which this anæsthetic method might be carried out in practice. In the instruments exhibited to the Society the following principles were completely carried out:—1st. The anæsthetic fluids were evaporated in distinct and separate chambers, and their vapours were combined in an air-chamber on their way into the lungs. 2nd. The proportions of each vapour were regulated by a most simple mechanical contrivance. 3rd. It was impossible to give an overdose of either ether or chloroform in consequence of the peculiar adjustment of the receptacles for those fluids. Without entering into the details of construction of these inhalers, the author drew attention to two very important features in his invention, which he believed likely to influence for good all future forms of chloroform instruments. The first of these was the method of only liberating a certain number of minims per minute of chloroform or ether. This was effected by an adaptation of the self-acting law of capillary attraction. And the other was the evaporating surface of a frilled description, by which he could saturate the inspired air with the powerfully stimulant vapour of alcohol. He estimated at a high rate the value and importance of these adjustments, and invited the close attention of the meeting to their excellent performance. The fluids employed by the author were pure chloroform, ether, and alcohol; and so great was their economy of use that, in anæsthesia for such an operation as ovariotomy, extending over half an hour, scarcely two drachms of chloroform were used—an allowance of less than four minims per minute, or only three-quarters per cent. of chloroform in the inspired air. In midwifery practice, in which the author claimed for his system many special advantages, he seldom used more than from sixty to ninety minims of chloroform per hour.

Dr. Sansom thought the observations of the author most valuable, as urging upon the attention of the Profession the necessity of a proper dilution of chloroform. From his own experience he was assured that by the ordinary rough means adopted to administer chloroform it was common to allow an atmosphere of from ten to thirteen per cent. to be inspired. Dr. Sansom explained his theory of narcotism, especially the action of narcotics upon the calibre of the arteries. A typical anæsthetic would be one which would not, on the one hand, like chloroform, rapidly abrogate the functions of the sympathetic and paralyse the heart, nor, on the other hand, "over-stimulate"—*i.e.*, by contracting the arteries, throw a large volume of blood upon the venous system. Chloroform acted best when freely diluted, but, unlike the author, Dr. Sansom considered that this dilution could be effected without special apparatus. Ether was ineffectual for dilution, because, from its volatility, it nearly all evaporated away from its mixture with chloroform; and its excitant as well as nauseating properties were objectionable. But from great numbers of experiments (many of which Dr. Sansom detailed) he was convinced that in chloroform diluted with an equal bulk of absolute alcohol we have an excellent anæsthetic, which gives off a proportion of chloroform vapour in a given time almost exactly half of that which is given off by chloroform pure and simple. As to Mr. Ellis's instrument, though most ingenious, he thought, as anæsthetics were for the many and not for the few, we should recommend such a process as will render anæsthesia safe, and be encumbered as little as possible with mechanical complications.

Mr. Ellis, in reply, stated that he could scarcely sufficiently forcibly dwell on the fact that the fluid anæsthetic mixtures gave off uncertain and varying compositions of vapour—a fact clearly demonstrated by many of the experiments he had detailed, and that, therefore, they were not to be relied upon. Especially in midwifery practice this grave error, in consequence of the duration of inhalation, was most manifested. He could by no means agree in the remarks of Dr. Sansom as to administering as high a percentage of chloroform as four per cent. He was, by his system, perfectly well able to obtain speedy, and to sustain prolonged, anæsthesia with an allowance of barely one per cent., the security and well-doing of the patient being, in his opinion, in exact proportion to the diminution of the dose of chloroform. The vapours of ether and alcohol mixed with it seemed in an extraordinary manner to enhance the activity of the chloroform, and safely to sustain its force. He begged in conclusion to exhibit to the Society a perfectly new form of his inhaler. This instrument he had especially designed for his use in midwifery. It was simple in construction, and of equal safety in use with the more powerful inhaler. Its principal feature was a beautiful little reservoir for chloroform, which, acting on the principle already alluded to, dropped that fluid over an evaporating surface, at any rate per cent. desired by the operator. The instrument was thus effectually protected against an overdose.

Dr. Battye read a paper on

AN EXAMINATION OF CERTAIN UTERINE AFFECTIONS IN THEIR RELATION TO PHTHISIS PULMONALIS; WITH CASES.

The author's attention to this subject had extended over fourteen years, during which time he had collected numerous examples of various forms of uterine leucorrhœa coexisting with affections of the lungs. He brought eleven cases before the Society, minutely describing the symptoms and termination of each. It was shown that as soon as the leucorrhœa was cured or relieved, the chest symptoms also either entirely disappeared or lessened in extent and force. He strongly urged early special attention during the treatment of phthisis to uterine discharges when present, as such caused a constant drain on the constitution. As to treatment, he seldom used local remedies, but trusted to acids, vegetable bitters, and cod-liver oil. The salts of iron were found by him to be very valuable in the chronic forms, having a special effect on the lung condition as well as on the uterine discharge.

Disease amongst Stocks.—A fatal epizootic, attacking sheep and pigs, is reported from the Yorkshire wolds.

The late Duke of Grammont-Caderousse, who died in Egypt of consumption, left the great bulk of his fortune to Dr. Déclat, his Medical man. For some years previous to his death his relatives had obtained from the tribunals a certain control over the manner in which he spent his fortune, and there was no doubt that it was to be revenged on them that he left his property to the Doctor. The relatives, however, disputed the validity of the will before the Civil Tribunal of the Seine, which has just decided that, in accordance with the 909th article of the Code Napoleon, Doctors who shall have attended a person for the illness of which he dies are incapable of receiving any legacy made in their favour during the progress of that malady.

OBITUARY.

MR. E. A. HADOW.

It is with sincere regret that we notice the death of Mr. Edward Ash Hadow, for many years Demonstrator of Chemistry in King's College, London.

Mr. Hadow studied at the Bristol School of Medicine, and subsequently at King's College. He obtained the Diploma of the College of Surgeons and passed the first M.B. Examination in the University of London in the year 1853. Soon afterwards he determined to devote himself exclusively to the study of chemistry. His love for this science was very early manifested. While a schoolboy he set up a laboratory in the coach-house at home, and many a time it was discovered that he had spent the whole of the night in the prosecution of his earliest experiments. His researches upon the composition of gun-cotton, which established his reputation as an experimental chemist, were made before he had completed his curriculum.

To many he is known as joint editor with Mr. Dawson of his friend Mr. Hardwick's "Manual of Photography;" but his admirable investigations into the constitution of the platinum bases are those which will secure for him the widest reputation.

While his colleagues lament the loss of a highly valued friend, we feel that death has deprived us of one whose singular devotion to chemistry, whose clearness and originality of thought, and whose mature experimental knowledge promised to do much for the advancement of his favourite science.

Mr. Hadow died of pneumonia, after a prolonged illness, on the 11th inst., in the 35th year of his age.

MEDICAL NEWS.

University of Aberdeen, 1866.—During the past year the following Candidates, after the usual examinations, have received Degrees in Medicine and Surgery. The following Candidates received promotion to

The Degree of M.D.

Frederick Page Atkinson, M B., C.M. (hon.), Kew, Surrey; Anthony Charles Colborne, M.B., C.M. (highest honours), London; John Dawson, M.B., C.M., M.R.C.S., Yarmouth, Norfolk; William Honner Fitz-Patrick, M.B., Liverpool; John Smith Fowler, M.B. (hon.), C.M., Aberdeen; Alex. Riddoch Gray, M.B., C.M, Aberdeen; John Knox, M.B., L.R.C.S.E., Bakewell, Derbyshire; John Robert M'Lintock, M.B., C.M. (hon.), Perth; Patrick Manson, M.B. (hon.), C.M, Aberdeen; James Murray, M.B., C.M, Aberdeen; Alexander Ogston, M.B., C.M. (highest honours), Aberdeen; Charles Edward Saunders, M.B (hon.), C.M., Cuckfield, Sussex; James Dear Smith, M.B., C.M., Mayo; Francis Snaith, M B., C.M., Boston, Lincolnshire; Wm. Heath Strange, M.B., C.M., London.

And the following Candidates, after the usual examinations, received Degrees in Medicine and Surgery:—

The Degree of M.B.

Wm. Scott Aitken, Greenock; Edwin Atherstone, M.R.C.S., Cape of Good Hope; John Attygalle, M.R.C.S., Ceylon; Joseph Carbery, Calcutta; Richard Carter, M.R.C.S., and L.S.A., Newbury, Berkshire; Alexander Dyce Davidson, M A., Aberdeen; George Edgelow, M.R C.S., and M.R.C.P., Teignmouth, S. Devon; Alfred John Freeman, M.R.C.S., Southsea, Hants; John Murray Gibbes, M R.C.S., Sidmouth, Devon; Wm. Robert Gordon, Banffshire; Benjamin Graham, M A., Morayshire; Robert Grant, M.A., Banffshire; Charles Edward Hocken, M.R.C.S., London; Joseph Forbes Keith, Aberdeen; Alfred Swaine Lethbridge, Devonshire; Richard John Lupton, M.R.C.S., L.S A, L.R.C.P., Bradford; George Maconachie, Forgue; Wm. Macrae, M.A., Stornoway; Andrew Arthur Macrobin, M.A, Aberdeen; Wm. M'Donald, Cromdale, Morayshire; Donald M'Ewen, Forres; Alexander Edward M'Rae, Aberdeen; Douglas Moir, Aberdeen; Lewis Wayne Morgan, M R.C S., L S.A., Pontypridd, Glamorganshire; David Nicholson, Aberdeen; James Mathias Phillips, M.R.C S., Tarbach, Glamorganshire; Henry Rayner, M R.C.S., and L.S.A., Hythe, Kent; Robert William Tibbits, M.R.C.S., L.S.A., Bristol; Charles Meymott Tidy, M.R.C.S., L S.A, Hackney; Frederick John Wadd, London; John Charles Ogilvie Will, Aberdeen; James Williamson, Aberdeen; Charles James Wills, M.R.C S., L.S A., L.M, Brighton; John Whyte, Culaird, Inverness; James Yates, M R.C S., L.S A., L.M., Oldham, Lancashire.

The Degree of C.M.

William Scott Aitken, Edwin Atherstone, William Sharp Birnie, Joseph Carbery, Alexander Dyce Davidson, George Edgelow, John Murray Gibbes, William Robert Gordon, Benjamin Graham, Robert Grant, Joseph F. Keith, Alfred S. Lethbridge, Richard J. Lupton, George Maconachie, William Macrae, Andrew Arthur Macrobin, Patrick Manson, William M'Donald, Donald M'Ewen, Alexander Edward M'Rae, Douglas Moir, Lewis Wayne Morgan, David Nicolson, James Mathias Phillips, Henry Rayner, Charles Meymott Tidy, Frederick John Wadd, John C. O. Will, James Williamson, Charles James Wills, John Whyte, James Yates.

Of the above-mentioned Candidates, William Scott Aitken, Alex. Dyce Davidson, William Macrae, Henry Rayner, Charles Meymott Tidy received their Degrees in Medicine and Surgery with highest academical honours; George Edgelow, Andrew Arthur Macrobin, Donald M'Ewen, David Nicolson, James Williamson, John Whyte received their Degrees in Medicine with academical honours; and James Yates received his Degree in Surgery with academical honours.

At the same time, John Thomas Hughes was certified as having passed all the examinations, and is entitled to receive his Degrees on attaining the necessary age.

And at the late Graduation Term, the following were declared to have passed part of their examinations:—

Alfred Henry Antonisz, John Arthur, Charles Bennett, Henry Child Buckley, James Cameron, James C. G. Carmichael, James Allan Coutts, George A. Craig, John M. Crombie, James Trigue Crowden, Frederick Adams Davson, Alexander G. Duncan, James Farquhar, Alexander Forbes, Robert Grant, James Ironside, Alexander Hunter Mair, Charles M. Matthew, Robert G. M'Calman, James F. P. M'Connell, John Sturrock Mitchell, Alexander Reid, John Robb, George Robertson, David Shirres, George Alexander Simpson, Joseph H. Smith, John L. Thomas, David Tulloch, William Abram Walker, Richmond C. Willock, Henry Wm. Williams, Alexander G. Wood.

Royal College of Surgeons of England.—The following Members of the College having been elected Fellows at previous meetings of the Council, were admitted as such on the 9th inst., viz.:—

Charles Henry Carter, L R.C.P.E. and L.S.A., of Pewsey, Wilts, diploma of membership dated December 13, 1839; William Dawson Blades, L.S.A., of Kirkby Stephen, Westmoreland, August 4, 1840; John Charles Hall, M.D. Edin., of Sheffield, January 11, 1839; and Henry Smith, of Her Majesty's Indian Army, July 7, 1837.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to practise on Thursday, August 9, 1866:—

Robert Pollock, Lounsdale, Paisley: John Henry Croft, Guy's Hospital; Joseph Eagleton, Wolverhampton; William Powell Keale, Bristol; William John, Haverfordwest; George Moore, Birmingham; George Samuel Watson, St. Marylebone Infirmary; Frederick William Salzmann, Brighton; James Augustus Hayden, High Wycombe; James Mathias Phillips, Taibach, Glamorganshire; Joseph Lindsay Kingston, 2, Barking-road, Canning-town.

The following gentlemen also on the same day passed their First Examination:—

Edmund W. Parkinson, St. George's Hospital; Allen Sewell, University College; Joshua Duke, Guy's Hospital; Louis C. A. Carré, Guy's Hospital.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Pringle, H. T., M.B Glasg, has been appointed Assistant Medical Officer to the Glamorgan County Lunatic Asylum.

Woodman, S., L.R.C.P. Lond., has been elected Surgeon to the Ramsgate and St. Lawrence Royal Dispensary.

BIRTHS.

Browne.—On the 14th inst., at Kew, the wife of Chas. Wm. Browne, Esq., Surgeon, of a daughter.

Foster.—On the 7th inst., at Edgbaston, Birmingham, the wife of B. W. Foster, M.D., of a son.

Salter.—On the 8th inst., at Malmesbury, Wilts, the wife of Dr. Salter, of a son

Scot.—On June 17, at Murree, Punjab, East Indies, the wife of Dr. T. Goldie Scot, H M. 79th Regiment (Cameron Highlanders), of a son.

Sykes.—On the 13th inst, at Queen's-road, Dalston, the wife of Dr. George Sykes, Surgeon to the Queen's Own Light Infantry Regiment of Militia, of a daughter.

Ward.—On the 13th inst., at The Poplars, Twickenham-common, the wife of Dr. Martindale C. Ward, of a daughter.

MARRIAGES.

Bowman—Turley.—On the 9th inst, at St. Paul's, Herne-hill, by the Rev. R. W. Atkins, brother-in-law of the bride, assisted by the Rev. M. Anderson, incumbent of St. Paul's, John Davison, eldest son of the late Rev. J. Bowman, vicar of Buttershaw, Yorks, to Georgina Alice, second daughter of the late E. A. Turley, Esq, M.D., of St. John's, near Worcester.

Clarke—Hawkins.—On the 9th inst., at St. Mary's, Bryanston-square, by the Rev. H. H. Bridgwater, assisted by the Rev. G. W. Botham, cousin of the bridegroom, Myrry Clarke, Esq., of Jamaica, to Margaret Ann, only daughter of Dr. Hawkins, of King's Lynn. No cards.

Dalton—Tellick.—On the 11th inst, at the Old Church, Brighton, by the Rev. H. M. Wagner, vicar, P. Henry Dalton, of Sackville-street, Piccadilly, and 8, St. Margaret's-place, Cannon-place, Brighton, M.R.C.S., and youngest son of the late Thomas Dalton, Esq., of London, solicitor, to Frances, youngest daughter of George Tellick, Esq. No cards.

Desfontaines—Aveline.—On the 9th inst., at the Catholic Church of St Mary Magdalene, Turnham-green, by the Rev. Father Ryan, Jules Adrien Lemire Desfontaines, Esq., of Chiswick, to Emily Marian, youngest daughter of the late Pendock William Aveline, Esq., Surgeon, of Brighton, formerly of Camberwell. No cards.

Harker—Dawson.—On the 14th inst., at Lancaster, by the Rev. Robt. Dawson, B.A., of Devizes, brother of the bride, John Harker, Esq., M D., of Lancaster, to Lucy, fifth daughter of Edward Dawson, Esq., of Aldcliffe Hall, Lancaster.

Hastings—Wells.—On Thursday, the 9th inst., at St George's Church, Campden-hill, Kensington, by the Rev. Giffard Wells, assisted by the Rev R. Allen, Hugh Hastings, Esq., M.D., to Diana Giffard Wells, niece of Jonah Smith Wells, Esq., Holland-park, Notting-hill, London, and fifth daughter of the late Richard Wells, Esq., Perth, Western Australia.

Kerr—Graham.—On the 9th inst., at St. John's Episcopal Church, Edinburgh, by the Rev. David F. Sandford, John Kerr, Esq., H.M. Inspector of Schools, Elgin, to Elizabeth Jackson, elder daughter of the late Dr. Thomas Jackson Graham, R N., of No. 4, Clarendon-crescent, Edinburgh. No cards.

Laing—Saville.—On the 8th inst., at the parish church, Hound, Hants, by the Rev. John Addison, M.A., vicar, Alexander Laing, Esq., M.D., H.M. Indian Service, to Mary Irving, second daughter of Henry Saville, Esq., Adjutant Army Hospital Corps, Royal Victoria Hospital, Netley.

Moore—Clarke.—On the 7th inst., at St. Matthew's, Ipswich, by the Rev. T. B. Moore, M A., uncle of the bridegroom, Harry Gage Moore, L.R C.P. Lond., son of E. H. Moore, Esq., of Lymington, to Agnes Mary, second daughter of Henry Clarke, Esq., of Ipswich. No cards.

Rainy—Shirrefs.—On July 31, at Torryburn House, Kintore, by the Rev. A. Rainy, Drumblade, Dr Al. Rainy, of Middlefield, and Golden-square, Aberdeen, to Agnes Georgiana, second daughter of Lieut.-Col. Shirrefs, H.M.I.A. No cards.

Sillifant—Amer.—On the 14th inst., at St. Mary's, Islington, by the Rev. — Brown, Horatio Sillifant, Esq., M.D., of Thornhill-square, to Elizabeth, eldest daughter of William Amer, Esq., of Lincoln's-inn-gate, Carey-street, W.C., and Hemingford-villas, Barnsbury, N. No cards.

Young—Schmitz.—On the 7th inst., at St. Mary's, Spring-grove, Middlesex, by the Rev. Canon Brooke, John Young, Esq., M.D., Professor of Natural History in the University of Glasgow, to Eliza Leonora Schmitz, eldest daughter of Dr. Leonhard Schmitz, Head Master of the London International College, Spring-grove, Middlesex, W. No cards.

POOR-LAW MEDICAL SERVICE.

. The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Croydon Union.—Mr. J. S. Johnson has resigned the Fifth District; area 4366; population 10,835; salary £100 per annum.

Dolgelley Union.—The Llanegryn District is vacant; area 23,632; population 1895; salary £46 per annum.

Sedbergh Union.—Mr. W A. G. James has resigned the Dent District; area 19210; population 1630; salary £18 per annum.

St. Ives Union.—Mr. Thomas Johnson has resigned the Somersham District; area 14,842; population 4480; salary £70 per annum.

APPOINTMENTS.

Brentford Union.—James G. Mackinlay, M.R C.S.E., L.S.A., L.R.C.P. Edin., to the Sixth District and the Workhouse.

Taunton Union.—Arthur Taylor, L.R.C.P. Edin., M.R.C.S.E., L.S.A., L.M., to the Pitminster District.

Tunstead and Happing Incorporation.—William F. Dix, M.R.C.S.E., L.S.A., to the Smallburgh District and the Workhouse.

Cholera has broken out in the valley of the Thames. Last week five persons died at Weston-green, near Thames Ditton—a man, his wife, an inmate, the woman who nursed, and the undertaker who buried them. Now, Londoners, look at your water!

Cholera on the Thames.—The Committee of Management of the Seamen's Hospital Society have commenced—under the supervision of their Surgeon, Dr. Rooke—a system of ship-to-ship visitation on the Thames, between London-bridge and Woolwich. It is proposed to include the City Canal, the Regent's Canal, and, if practicable, the Commercial Dock, in this inspection. It is observed that none of the cases that have been brought to the *Belleisle* have come from Continental ports, but, without exception, from coasting vessels or barges lying in the river or the docks.

Thames Water and Cholera.—A fatal case of cholera occurred a few days ago in Southampton-row, Holborn. The subject of the disease, an adult man, had three or four days previously, in a fit of despondency, thrown himself into the Thames off Blackfriars Bridge. He had apparently recovered from his submersion, when cholera attacked him, and ran its course in less than twenty-four hours. The case is more remarkable from being up to that time the only fatal case of choleraic attack in the Bloomsbury district.

Cholera in the West Highlands.—Several deaths have occurred from cholera at Fraserburgh, a fishing village between forty and fifty miles to the north-east of Aberdeen.

Dr. Berard, a practising Physician, and one of the principal proprietors of the *Gazette de France*, died of cholera on Sunday, almost suddenly, at his country house near Blois. He had taken a run to Paris, where, it is supposed, he must have caught the disease. He returned to Blois only on Saturday evening, complained on his arrival of feeling rather unwell, was attacked with unmistakable cholera symptoms in the night, and was dead in the afternoon of the next day.—*Guardian.*

Cholera at Belfast.—The *Northern Whig* states that three cases have occurred in Belfast. One had proved fatal after twelve hours' illness; the other two also promised to end fatally.

Cholera Bulletins.—The disease shows little signs of cessation in Brussels. For the fortnight ending August 1 there were admitted into the two Hospitals St. Pierre and St. Jean 417 patients, and occurred 225 deaths, 359 bodies of patients who had died of cholera also having been brought to the Hospital *morgues*. At Antwerp there have occurred more than 4000 cases since the epidemic began. It seems also that the disease is making the tour of all the Belgian provinces, attacking not only the larger towns, but the smaller ones and villages. These latter are quite unprovided with the necessary Medical appliances, and the panic which seizes the inhabitants is infinitely greater than that which prevails in the more populous localities. Those who can do so desert the neighbourhood, leaving the Doctor and parson to manage the best they can in administering relief. For example, La Roche, in the Ardennes, containing 1408 inhabitants, being attacked by the cholera, the duty of attending to the sick fell upon the Doctor, the Pharmacien, the rector and his curate, and the deaths had already reached 47 when an *élève* from Brussels came to their aid. This is only an example of what is taking place in almost every commune, some of these being visited far more severely, as at Messancy, where more than 100 persons succumbed in a population of 800. In Holland the disease is on the decline. It is said that since its invasion there have been 17,876 cases, with 10·912 deaths. As to Paris, the prohibition against publishing the returns is still maintained, but the *Gazette Médicale* of August 11 gives the following sombre picture of the general situation:—"The Paris epidemic continues to spread, especially committing its ravages amongst the lower classes. During the last week it has made much progress amongst persons in easy circumstances. The severity of the disease continues as before, but the number of patients and of deaths has considerably increased. The epidemic also seems disposed to become generalised in the departments, and most of those which have not yet been attacked with confirmed cholera are under the influence of cholerine. There is every reason to fear that the epidemic of 1866 will take on the dimensions of those which have preceded it." At Marseilles and Amiens the disease is still on the decline, the deaths in the latter city having descended on August 5 to as low as 3; but at Flers, near Amiens, it has appeared with virulence. Lyons thus far has remained entirely exempt.

The *Pall-Mall Gazette* announces that the grant made to Mr. Simon for the purpose of carrying out an investigation into the cause and prevention of cholera is the magnificent sum of £500!

Professor Matteucci.—This eminent philosopher was elected a Foreign Associate of the Académie de Médecine by the votes of 37 of the 51 members present, Professor Bunsen receiving the other 14 votes.

We regret to extract the following announcement from the *Guardian*. The wife of Mr. W. Hoar, a Medical man at Maidstone, was burnt to death on Wednesday, owing to her dress taking fire whilst she was visiting a poor sick man who was dying.

Charing-cross Hospital College of Medicine.—The annual distribution of the Prizes took place on Friday, August 3. The following gentlemen were the successful candidates:—*Anatomy*—Silver medal, Mr. A. H. Buck; certificate, Mr. V. H. Folwell; bronze medal, Mr. W. P. Adams; certificate, Mr. C. E. Little. *Chemistry*—Silver medal, Mr. T. C. Thornicraft. *Surgery*—Silver medal, Mr. W. Naughtin; certificate, Mr. J. K. Hyde; bronze medal, Mr. C. W. Calthrop; certificate, Mr. Adams. *Physiology*—Silver medal, Mr. Calthrop; bronze medal, Mr. Thornicraft; certificate, Mr. Little. *Medicine*—Silver medal, Mr. S. S. White; certificate, Mr. R. Alcock. *Materia Medica*—Silver medal, Mr. Wm. Powell; first certificate, Mr. Calthrop; second do., Mr. Wilkinson; third do., Mr. Alcock. *Botany*—Silver medal, Mr. Calthrop; first certificate, Mr. Gaubert and Mr. Thornicraft; second do., Mr. Wilkinson. *Midwifery*—Silver medal, Mr. Archer Farr; first certificate, Mr. White; second do., Mr. Fredk. Howse; third do., Mr. C. Barlow. *Forensic Medicine*—Silver medal, Mr. Farr; certificates, Mr. White and Mr. Barlow. *Practical Chemistry*—Certificates, Mr. Little and Mr. Adams.

River Pollution.—A case of great interest connected with river pollution has been lately tried before the Lord Justice Clerk in the Jury Court at Edinburgh. The pursuers are the Duke of Buccleuch, Viscount Melville, and the representatives of the late Sir James Williams Drummond, owners respectively of Dalkeith-park, Melville Castle, and of Hawthornden, who proceed against the owners of eight paper mills on the banks of the river North Esk, in Midlothian, on issues putting to the jury the question whether the discharges from these paper mills create a nuisance to the pursuers through the pollution of the stream which flows through their respective properties. Of the eight mills, five are situated above the grounds of Hawthornden (a favourite resort of tourists), and three are below that point. On the pursuers' behalf numerous witnesses were called to prove that, twenty or thirty years ago, the stream had been a good trouting river, that the water was fit and was used for domestic purposes, for the watering of cattle, etc.; whereas now fish could not live in the river, and the water was not only unavailable for domestic uses, but emitted putrescent odours, and was covered with froth, while in the bed there was a deposit of precipitated organic matter, which, whenever stirred from any cause, or when the river was low, gave off offensive effluvia. The Medical testimony of Dr. Christison, of the University of Edinburgh; Dr. W. A. Miller, Queen's College, London; Dr. Edward Franklin, Government School of Mines; Dr. Penny, Glasgow; and Professor Maclagan, Edinburgh, was adduced to prove the quantity of organic matter emanating from the paper mills, and the effects on the comfort and health of the inhabitants. Among the Professional witnesses for the defence were Dr. Letheby, Medical Officer of the City of London; Dr. Madden; Dr. Wright, microscopist; Dr. Odling, of St. Bartholomew's Hospital; and Professor Hofmann, of the University of Berlin. The general purport of their evidence was to show that the organic matters from the paper-mill discharges were inconsiderable, and that the oxidising power of the atmosphere and the flow of the river had a rapid effect upon them, so that the water practically recovered itself in the run between one mill and another. The jury, after three hours' absence, brought in a verdict for pursuers against all the defenders. The verdict was given by a majority of nine to three.

Composition and Quality of the Metropolitan Waters in July, 1866.—The following are the returns of the Metropolitan Association of Medical Officers of Health:—

	Total Solid Matter per Gallon.	Loss by Ignition.(a)	Oxidisable Organic Matter.(b)	Hardness.	
				Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	17·49	0·70	0·60	13·0	2·5
West Middlesex	16·77	0·80	0·76	12·5	2·0
Southwark and Vauxhall	17·10	0·58	0·49	13·0	3·5
Chelsea	16·60	0·68	0·60	13·0	2·5
Lambeth	18·39	0·75	0·72	13·0	2·5
Other Companies.					
Kent	27·86	1·00	0·02	18·0	8·5
New River	17·16	1·90	0·20	13·0	3·0
East London	18·16	0·80	0·40	13·5	3·5

(a) The loss by ignition represents a variety of volatile matters as well as organic matter, as ammoniacal salts, moisture, and the volatile constituents of nitrates and nitrites.

(b) The oxidisable organic matter is determined by a standard solution of permanganate of potash, the available oxygen of which is to the organic matter as 1 is to 8; and the results are controlled by the examination of the colour of the water when seen through a glass tube two feet in length and two inches in diameter.

H. Letheby, M.B.

The analysis of the metropolitan waters during the month of July shows that in every case there is less than the average proportion of saline and organic matters, and the reduction of the latter, which is the most important constituent of potable water, is most marked in the waters derived from other sources than the River Thames; for while the amount of organic impurity in the latter has ranged from 0·49 to 0·76 of a grain per gallon, that of the former had been from 0·2 to 0·4 per gallon; indeed, the quantity of organic matter in the Kent water has fallen from an average of 0·2 of a grain to 0.02; that of the New River from 0·46 to 0·2; and that of the East London from 0·53 to 0·4. These reductions in the quantity of organic matter are chiefly due to the care with which the processes of filtration are conducted; and if these analytical results are compared with those of a few years ago the improvement is still more remarkable. It is very probable, however, that the most perfect processes of purification, so far as they can be used at the works of the water companies, will never be sufficient to insure such a purity of water as the complete removal of those subtle agents of disease, which even the most refined appliances of the chemist have failed to discover. It may, therefore, well be that all discoverable traces of organic matter may be removed from water, and yet it may still contain enough of the minute germs of disease to manifest its morbific action wherever it is used. Experience, indeed, teaches us that it is not the quantity of organic matter in water so much as its quality which determines its dangerous properties; and if it be true, as modern pathological science has almost demonstrated, that the real agent of such diseases as infectious fevers, cholera, the rinderpest, and other allied zymotic maladies, are living germs, and not a gas or vapour, or dead organic miasm, it must rest with the physiologist rather than with the chemist to decide on the means which are best suited for their destruction; and it is more than probable that the chemist would be putting forward very dangerous propositions if, by relying on his science alone, he ventured to dogmatise on so difficult a subject. That which has been abundantly proved in respect of small-pox and some other infectious diseases is very applicable to the present inquiry, in so far as it relates to the more than possible existence of choleraic germs in the water we drink. The agents of those diseases are unquestionably living germs capable of remaining dormant for an uncertain, but nevertheless not indefinite period, and then springing into activity and multiplying themselves without limit directly they find the conditions necessary for their active development. But whether these germs are susceptible of oxidation, like common dead organic matter passing through its final stages of decay, is more than chemical science alone can determine. The analogies of physiology are against such a supposition, and they warn us not to receive it even as a possible fact. That which we do know, however, is that these germs are destroyed by the temperature of boiling water; that they are killed by all caustic substances, as chloride of zinc, chloride of iron, etc.; and that they cannot resist the action of certain agents, as sulphurous acid and its salts, carbolic acid, which act on them after the manner of specific poisons. We must, therefore, look to these agents rather than to processes of oxidation for reliable prophylactics; and in the case before us the only agent on which we can confidently rely is heat, for if the infected water be boiled the choleraic germs will be rendered innocuous. That the destruction of decaying organic matter in water is of the greatest importance there can be no doubt, for experience has proved that it also is productive of disease. It is, moreover, certain that organic matters of this description are rapidly oxidised by permanganate of potash, and by filtration through animal charcoal, and charcoal mixed with certain compounds of iron, but it is more than doubtful, even if it were practicable, whether such processes of purification should be used by the water companies at the sources of supply, seeing how many causes of pollution exist between those sources and the consumer. Besides which it must not be forgotten that only a very small part of the water delivered by the company is used for primary domestic purposes, the great bulk of it being employed for flushing closets, drains, and sewers, for watering streets, and for various manufacturing operations. It would, therefore, manifestly be an unnecessarily wasteful application of a tedious and expensive process, to do that at the works which can be so easily, so surely, and so much more economically done at the point of consumption. But after all the most important consideration at the present time is the means of obtaining a constant water supply, so that the prolific sources of contamination and of real danger to the community, the filthy butts and cisterns, may be entirely abolished. The very first step towards the attainment of this object must be made by the public themselves; for it is idle to expect a constant supply while there is the present imperfect condition of almost every household service. If, indeed, such a supply were at once given to us, it would assuredly fail, for all the water of the Welsh hills would be insufficient to maintain it. The daily supply of water to London is at the rate of about 30 gallons per head, whereas experience has proved in many instances that with a well-regulated constant service it need not exceed 20 gallons a head. As a matter of economy, therefore, as well as of public health, it is high time the consumer should make preparation for such a supply in the way that the Act of Parliament directs, and then there would be no difficulty in applying processes of purification at every point where the water is used for domestic purposes. At the present juncture, it is advisable that all water stored in butts or cisterns should be boiled before it is drunk, and, where it is practicable, it should be previously filtered through animal charcoal, or charcoal associated with proper compounds of iron; and, failing this, it may be treated with a little of Condy's solution of permanganate of potash, until it retains a very pale but decided tint of rose red. In all cases, however, it should be boiled.

THE FUTURE LONDON WATER SUPPLY.—This subject is to receive full consideration in the next Session of Parliament. In addition to minor schemes, two gigantic proposals are now before the public. One, that of Mr. Bateman, is to bring water from the Welsh hills, at a distance of 183 miles, at a cost of £8,600,000. The other is proposed by Messrs. G. W. Hemans, C.E., and R. Hassard, C.E. It is to turn the lakes of Haweswater, Ullswater, and Thirlmere, in Cumberland and Westmoreland, into great reservoirs, and to convey so vast a body of pure water to London that there would be ample left to supply certain towns in Yorkshire on the road, and the works would begin to pay from their commencement. The distance from London would be 240 miles, and the cost £10,000,000.

POISONING BY THE FUMES OF CYANIDE OF POTASSIUM.—An inquest was recently held at Hoxton on the body of a man who died from the inhalation of the fumes of cyanide of potassium. The deceased was a compensation-balance maker. On Thursday last he was found lying on his face in the doorway of his house leading into the garden. He was quite dead. He was a respectable man, and there was no suspicion of suicide. A vessel containing a quantity of cyanide of potassium was found in the parlour. He used that poison in his business, and it appeared as if he had heated it on the hob, and upon taking it up had inhaled a quantity of the fumes, and then rushed to the garden to get air, but had dropped dead in the gateway. Dr. C. E. Cockerton said that the post-mortem examination showed that the deceased had been in perfect health. The lungs were pervaded by a strong smell of prussic acid, the essential principle of cyanide of potassium. There was a similar odour in the stomach. The witness considered that the deceased might have inhaled a great quantity of the fumes of cyanide of potassium, and that his death was caused in that manner. The jury returned a verdict that deceased died from the accidental inhalation of the fumes of cyanide of potassium.

NEW ZEALAND "FOSSIL" BIRD.—Some months ago a notice of a gigantic petrified bird, which was said to have been recently discovered in New Zealand, appeared in the *Times* newspaper. It now appears, from some correspondence published in the *Nelson Examiner* of June 19, that the supposed fossil is a boulder of highly quartzose sandstone. Professor Owen was misled by the first statement, and surmised that the fossil might be the remains of a saurian reptile.

FEVER IN THE SCOTTISH TOWNS.—During the month of July the zymotic (epidemic and contagious) class of diseases proved fatal to 472 persons in the eight towns, constituting 22·7 per cent. of the whole mortality. This rate was exceeded in Glasgow, Greenock, and Dundee. Typhus caused 131 deaths, or 6·3 per cent. of the mortality. 7·7 per cent. of the deaths in Edinburgh, 9·0 per cent. of the deaths in Paisley, and 10·6 per cent. of the deaths in Dundee, were from that cause. Of the 113 deaths tabulated as typhus, 98 were registered as typhus, 16 as typhoid or enteric fever, 2 as relapsing, 1 as continued, and 14 as gastric fever. Measles caused 57 deaths, scarlatina 45, hooping-cough 42, small-pox 18, diphtheria 9, croup 16, metria 16, and erysipelas 14. Diarrhœa, dysentery, and cholera caused 117 deaths in the eight principal towns. This number, although a considerable increase on that for last month, is only one-half that for the corresponding month in last year. Two of the deaths were certified as having been caused by Asiatic cholera.—*Registrar General's Monthly Return.*

PORK AND POULTICES.—On Monday, at Worship-street, Henry Edwards, of Tapp-street, Bethnal-green, and occupier of the 97th arch of the Great Eastern Railway, was charged by Mr. Christey, inspector of nuisances, on behalf of the Vestry, with permitting a nuisance on his premises. Mr. Christey said the defendant had been for a long time in the habit of keeping swine. As they were allowed to run loose, they got within ten feet of the houses. When he called he saw six pigs there, but he had seen a great many more at other times, and they were kept in a filthy state. The defendant carried away refuse from the London Hospital, including rags used for poultices. He had a large accumulation of garbage of all kinds there, which his pigs ate; and the stench was dreadful. Five or six persons died of cholera in that neighbourhood last week. The defendant was summoned to this court for the same kind of offence in November, and fined £1 10s., and he then told the magistrate, in reference to one of his pigs, that he would sooner keep it under his bed than part with it. He set the parish officers and every one else at defiance, and kept a large dog in his yard, with a chain ten feet long to its neck, so that nobody dared go near. The defendant said the pig referred to unfortunately died four days after he was fined, and he had not kept one since. The pigs seen by the inspector had been all sold, and he had fresh ones every day. He had fetched the stuff stated from the Hospital, but it was his living, and somebody must take it away. He did not consider the place unwholesome. He not only lived near the place, but often slept in it himself. He had not fetched anything from the Hospital for three weeks—neither straw nor anything else, as they burnt it all now. He had no pigs at all there at present. Mr. Christey said the defendant had a constant supply of pigs there, fed on most shocking food, and asked for an order prohibiting such a terrible nuisance in future. The defendant had a notice served on him on the 30th ult., but to no purpose, and they were obliged to serve him with this summons eleven days after. Mr. D'Eyncourt said, as that was the case, the better course would be to take out a fresh summons against the defendant for the penalties of 10s. per day he had incurred in that interval. The defendant might do as he liked, but he had better do away with his trade, as penalties like these soon ran up to £20, and he might depend upon it that if, when the summons now to be taken out against him was heard, the whole had not been abolished, he would fine him 10s. for every day, and would faithfully keep his word.

DESTRUCTION OF RATS.—In a paper recently read at the Académie des Sciences, M. Cloëz gave an account of the success he had met with in destroying the rats which infested the *Jardin des Plantes* by means of sulphuret of carbon. His apparatus consists of a leaden tube, two millimetres in diameter, and a small tin vessel containing the sulphuret. Introducing the extremity of the tube into the hole, and admitting the sulphuret, the animal is instantly killed. A rat placed in an atmosphere of 25 litres of air with about one litre of the vapour of sulphuret of carbon is killed in about four minutes. The day after the experiment had been made the rats had disappeared, and 14 carcases were found.

THE following are the last week's Cattle Plague Returns.

Census Divisions.	1. Attacked.			Back cases reported in the week ended Aug. 4, 1866.	2. Result of reported Cases from the Commencement of the disease.				
	Week ended July 21.	Week ended July 28.	Week ended Aug. 4.		Attacked.	Killed.	Died.	Recovered.	Unaccounted for.
Metropolitan Dist.	..	1	1	..	7911	3429	3714	318	450
South Eastern Co.	..	..	..	..	4880	1705	2539	465	171
South Midland Co.	17	42	37	..	20829	8831	10070	1541	387
Eastern Counties	26	12	6	..	11489	5450	4851	789	399
South Western Co.	32	27	5	..	1839	734	827	207	71
West Midland Co.	31	63	55	..	14972	6451	6096	1519	905
North Midland Co.	18	18	8	2	19007	10974	6268	1226	539
North Western Co.	61	30	90	1212	73342	26319	35040	8491	3492
Yorkshire	10	12	13	..	34607	7949	18359	5938	2361
Northern Counties.	..	..	..	..	8636	4931	2613	974	118
Monmouthshire & Wales	11	3	6	..	8381	1176	5794	1112	299
Scotland	1	..	.	..	46861	6263	28088	10707	1803
Totals	207	208	221	*1214	252753	84212	124259	33287	10995

This Return shows that 221 attacks were reported to have occurred during the week ended August 4, being an increase of 13 on the previous week.

Correcting the total by adding an estimated average of attacks commencing during the week, but which may be subsequently included under the heading "Back Cases," the number for the week will be 243.

Fresh outbreaks took place in 40 farms or places where cattle are kept; the number of such outbreaks in the previous week being 46.

* Of these "back cases," 1205 refer to Cheshire, and extend over a period of about six months.

Note.—3 Inspectors, who reported cases last week, have not reported in time for this return, viz., for the county of Lincoln 1, Norfolk 1, and Stafford 1. These Inspectors reported 3 cases last week.

NOTES, QUERIES, AND REPLIES.

◆

He that questioneth much shall learn much.—*Bacon.*

Owing to the amount of space occupied by the Address in Medicine delivered at the meeting of the British Association, we are obliged to postpone several articles this week; amongst others, Dr. Edmunds' letter.

Bridgewater.—Mr. Henry Symes, M.R.C.S., has done good service by representing to the Secretary of State the defective condition of the drainage of Bridgewater. The new Sanitary Act will, we believe, if put in force, remedy the state of things of which Mr. Symes has complained. The same gentleman has also, in a letter to the *Bridgewater Mercury*, called attention to what he considers the insufficient food supplied to the inmates of the Bridgewater Union Workhouse.

The Pathology of Cholera.—Dr. A. E Sansom has favoured us with a paper on the pathology of cholera, for which we regret we cannot find room this week. Dr. Sansom believes that the poison of cholera is an organic germ, and that it attacks mainly the great sympathetic nerve. He writes:—"Now, these germs of cholera, when absorbed into the blood, incorporate themselves with, or modify the nutrition of, the great sympathetic system. Hence the anxious pain, the heavy weight, the oppression of the solar plexus. The intestinal irritation becomes now not peripheral, but central; by and by arrives a time at which the sympathetic can no longer minister to the ordinary processes of organic life, and collapse sets in. What is collapse? It is the cutting off of arterial supply—as if a ligature had been tightened round the great aorta. To account for the phenomena of collapse, there is no need to suppose a spasm of the minute pulmonary arteries. The arteries everywhere are contracted; in all the organs of the body there are arterial anæmia and venous congestion, for wherever there is arterial contraction there must be reflux of blood upon the venous system." He illustrates his theory by the following tabular statement:—

Cause.	First effect.	Second effect.
Irritation of sympathetic supplied to arteries of brain.	Contraction of arteries of brain.	Venous engorgement; accumulation of blood in base of encephalon, ending ultimately in loss of consciousness (*vide* Brown-Séquard's lectures on nervous system).
Irritation of sympathetic supplied to arteries of lungs.	Contraction of arteries of lungs.	Collapse of lungs; accumulation in right chambers of heart.
Irritation of sympathetic supplied to arterial system generally.	Contraction of arteries throughout the body.	Coldness of surface; paralysis of function; venous engorgement.
Irritation of sympathetic supplied to alimentary canal.	Contraction of muscle supplied to coats of bowel, etc.	Diarrhœa, spasm, etc.

CHOLERA.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Whilst so much noise is made by the great guns, a pocket pistol will scarcely be heard; yet the small report of the latter may be of some importance if attended to. I would suggest that facts rather than theories should guide us in the treatment of cholera. The facts are generally clear enough, whilst the theories to account for them are doubtful, and even dangerous, as when castor oil is recommended to the public as a remedy for cholera. Can Dr. G. Johnson estimate the number of cases per cent. of simple diarrhœa converted into cholera by purgatives? or does he believe that no case of diarrhœa can be converted into cholera by purgatives? His practice would lead us to suppose so. He has evidently faith in his hobby, and by this time must have had considerable experience in cholera, and doubtless can pretty well tell which patients will recover and which are not likely to recover as soon as he sees them. He knows, as we all know, the important part played by Nature in the cure of disease; and if a pistol may venture to form an opinion of a great gun's practice, his castor-oil recoveries must owe much to good constitutions. What I would suggest is, that Dr. Johnson should select his cases for treatment, taking only those for his own special treatment which he thinks will recover, and allowing those of whom he forms an unfavourable opinion to be treated upon the plan which he repudiates—viz. with calomel and opium, astringents and stimulants. Fairly tested in this way, I believe the castor-oil treatment would soon be abandoned, even by its parent. During the visitation of cholera in 1849 and 1850, I treated many cases of choleraic diarrhœa (cases never, or scarcely ever, met with at ordinary times) in children with small and frequently repeated doses of calomel—an eighth, or a quarter, or half a grain—every hour, or every two, or three, or four hours, according to the age or the urgency of the case, with uniform success. I treated an old man about 60 years of age for cholera—the only case which appeared in Bewdley, and that, I believe, imported—his was undoubtedly a real case of Asiatic cholera, with all the symptoms to the approaching collapse (I say approaching collapse, though I might safely say to the state of collapse). I gave him 72 grains of calomel in twelve hours, putting it upon the tongue, and washing it down with small quantities of water, with laudanum. The vomiting ceased, the purging diminished, the coldness and blueness passed away, a green evacuation from the bowels ensued, and the patient rapidly recovered, without salivation, without consecutive fever, without an unpleasant symptom, and lived in good health till about twelve months ago, when he died, more of old age than disease. After the green evacuation from the bowels, mist. cretæ, with confect. aromat. and tinct. opii, were given for a few days just to keep the bowels comfortable.

It may be said the above was an eliminative treatment; I will simply say it was a plan of treatment which emptied the gall-bladder of an accumulation of most unhealthy bile, and prevented death by arresting the flow of the watery parts of the blood through the intestines, and by supporting, with opium, as much as possible the powers of the nervous system, preparing at the same time the liver and the lungs for the work to follow during reaction.

There are three natural indications for the treatment of cholera.

1. To empty the gall-bladder of unhealthy bile (which may be the *materies morbi*), and so prepare the liver, at least, for the work to follow.
2. To arrest the exudation of the watery parts of the blood through the intestines, that the red particles may be kept moving.
3. To support the nervous powers of the patient, that he may live till the poison is got rid of.

Everybody must admit it is a great mistake to publish in the daily papers remedies for diarrhœa or cholera. Sound principles of treatment might be more usefully published. If for instance, the *Times* would but publish your general view of the remedies for diarrhœa from the *Medical Times and Gazette* of July 28 ult., it would do much more good than any writing up this or that cure for cholera. At present every one one meets with is of "this or that faction," and the public believe that the Profession know nothing at all about the disease. With regard to the indications I have mentioned for the treatment of cholera, calomel is the remedy for the first; it may be given freely and without fear of after effects, and when reaction takes place there it is in the system, ready to prevent "the capillary engorgement of the lungs (and liver), the accumulation of carbonic acid in the blood, and drowsiness, and the convulsions, and death." The second indication is met by the use of astringents, and the third by opiates and stimulants, of which, judiciously adjusted in quantity and dilution, brandy is the most valuable.

I have no doubt you are inundated with remedies at this time for the cure of cholera, but I could not resist the temptation to send you these few remarks suggested by a practical acquaintance with disease in the various forms to be seen in a large practice. With regard to calomel, I may add that it is of all common remedies the one I use least, except in such cases as English or Asiatic cholera and then I use it freely with the greatest confidence and satisfaction, but always combined with opium.

I am, &c.,

Bewdley, August 13. JOHN GABB.

CHOLERA MIST.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I cannot see the value of the suggestion of Mr. Hewitt in your last week's impression with regard to the blue mist described by Mr. Glaisher in the *Times* of August 7. If intended as a witticism, it is certainly very poor, but if to throw discredit on Mr. Glaisher's observations, it is still worse, as bringing forward no argument against it, unless Mr. H's. line of argument approximates to that of the Hibernian, thus: "Seeing is believing;" I have not seen the mist: *ergo*, I do not believe that it exists, and all the witnesses Mr. H. could bring who had not seen it would never negative the evidence of those who had.

I should have thought that in meteorological questions few people would be so bold as to make suggestions in so facile a manner as Mr. H., to account for appearances said to have been observed by Mr. Glaisher, who has made these his special study for years.

Doubtless Mr. H. no longer sees through a glass darkly, but all phenomena are naked and open to his eyes; or else, if it were not so, and things sometimes appeared a little misty, what consolation he must derive if he himself is provided with some "acute attack" to fall back upon occasionally.

I have never heard a blue mist described before as co-existing only with a cholera epidemic, but know that such a mist or fog is noticed periodically in Germany at a particular time of the year, and is there called "landrauch" or land smoke, causing the shadows of objects to be of an intense blue. Whether there is any difference between this and that observed by Mr. Glaisher I am not prepared to say.

The pathology of cholera not being as yet made out, any new theory in connexion with it should be rigorously sifted in order to ascertain its value; but I believe that those men who meet anything new, or opposed to their own ideas, with ridicule and insult will never throw any light on the *quæstiones vexatæ* of the day, or gain much credit for the Profession to which they belong.

Believing that most of your readers will agree with me in considering the suggestions irrelevant, I am, &c.

FREDERIC H. WARD.

PAYMENT OF MEDICAL PRACTITIONERS FOR SERVICES DURING THE CHOLERA EPIDEMIC.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I have read attentively the mass of instructions issued by the Lords of the Privy Council to the Medical Officers of the United Kingdom respecting the attendance on, care of, and treatment to be pursued in, cases of Asiatic cholera or choleraic diarrhœa existing in any part of a Union or parish; and the instructions to the Board of Guardians to supply Medical Practitioners, assistants, medicines, etc., etc., in all parts of the Union where symptoms of diarrhœa or cholera may prevail, also to issue from time to time reports of any cases which may happen to show themselves, with the number of cases attacked, dead, recovered, and under treatment; also the superintendence by the Medical Officer of the state of the dwellings inhabited by those labouring under cholera or diarrhœa, with instructions that proper and fit accommodation should be supplied for the reception of such patients as cannot be properly treated at home and may be with advantage removed; and that the Board shall appoint a legally qualified Practitioner, with or without assistant, as the case may require, to attend to the same.

Now, I cannot find in all these orders so fully laid down by the Lords of the Privy Council that a single word is said on the subject of payment to be made to any Practitioner for such services performed or for his visiting the infected districts, or his reports thereon to the Board, or for any medicines, disinfectants, or other appliances supplied to those attacked with choleraic diarrhœa, or for any extra work done during the prevailing epidemic. I would venture to suggest that it would be far more satisfactory to the Medical Profession generally if some remuneration, proportioned either to the number of cases reported of diarrhœa or to the amount of population in each Union, were distinctly recommended or enforced by the authorities than left to the discretion and approval of the Boards of Guardians.

I would further suggest that in every Union in England and Wales a proper legally qualified Medical Officer, or Officers, should be forthwith appointed to superintend and report on the sanitary condition of every district in the Union, with the amount of disease prevailing, the causes (so far as can be ascertained), and the removal of all nuisances in any way tending to promote or keep up the prevailing epidemic, such Medical Officer, or Officers, to be paid an adequate remuneration for their services and for their reports from time to time thereon to the Board, such remuneration to be submitted to the approval of the Lords of the Privy Council for their sanction and further consideration.

I venture to submit these remarks for the consideration of the Profession generally, and I think they will bear me out in the views I have suggested on the subject of extra Medical remuneration when an epidemic is prevailing, whereby an unusual amount of labour is thrown on the Medical Officers, requiring immense attention and constant Medical attendance. I am, &c. PERRY DICKEN, M.D.

Ashby-de-la-Zouch, Leicestershire, August 13.

CHEMICAL REMEDIES IN CHOLERA.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I observe with pleasure distinct indications of the commencement of an impression on the minds of a portion of the Profession, that if a remedy for cholera is to be discovered it must be of the nature of a chemical antidote and be sought for among disinfecting agents. One of the most recent indications in question which I have noticed is contained in a letter from Professor Maclean, of Netley Hospital, in the *Lancet* of 11th inst. "My colleague, Dr. Parkes," writes that gentleman, "is anxious to see some one with a large field of practice give a fair trial to what has been called the disinfecting method," and I fully concur with him. This plan has been tried on a small scale by Dr. Mackay, of the Madras army, with results that warrant a more extended trial. Dr. Mackay used the liquor calc. chlorinat. in small doses by the mouth and also by enema. Some little time ago it was incidentally stated in the *Medical Times and Gazette* by Dr. H. B. Montgomery, in the course of his controversy on the treatment of cholera in India with Dr. George Johnson, that Dr. Mackay and other India Medical officers had been very successful with Condy's fluid given internally, the number of deaths in twenty-three cases having been only one, or under 4 per cent.

These results, especially at the present time, are worthy of the most serious and immediate attention of all called upon to treat cholera. The treatment which has furnished them is not only supported by sound theoretical reasoning, but is entirely "out of the beaten path," and therefore by no means hopeless, particularly after the experience of it in Madras.

It would appear to me that the permanganates (Condy's fluid) are the disinfectants which have most to recommend them for internal administration. Exerting little action on the living tissues while they neutralise with great energy all morbid and decomposing matters, those salts seem to be everything that could be desired for internal disinfection. Considerable doses, say two drachms, of liquor potass. permangan., or a teaspoonful of Condy's crimson fluid diluted with water, according to the degree of thirst experienced by the patient, may, with the utmost safety, be given every ten minutes. Manganese, potash, and oxygen cannot possibly do any harm even in much larger doses. In order to render more active the oxygen of the permanganic acid, as well as to fulfil other indications, I should recommend a combination of sulphuric acid, say in the following proportions :—℞ Liq. potass. permangan. ʒij. (or Condy's fluid ʒj.), acid. sulph. dil. ♏x., aq. pur. ℥ij. to iv.

Strong confirmation of the benefits to be derived from the disinfectant treatment of cholera is afforded by the results obtained from that plan in the treatment of typhus and typhoid fevers by Dr. Hjaltelin of Iceland, to whom must be awarded the merit of having originated the internal use of disinfectants. A very interesting account of his practice in those diseases was published in the *Edinburgh Medical Journal* as far back as September, 1862. This is what he says of his results :—"I have had not less than 900 cases of typhus and typhoid fevers under my treatment, and out of this number have lost no more than 30 patients. In one parish there were 95 cases, of which only 2 died." It must be noted that Dr. Hjaltelin relied principally on chlorine, the permanganates not being known to him,

In conclusion, permit me to add that some little time ago there was published by Churchill a small treatise of mine on the "Alkaline Permanganates and their Medicinal Uses," which may perhaps to some extent serve as a guide to Practitioners desirous of making trial of those remarkable salts in the disinfectant treatment of cholera.

I am, &c.

London, August 14. JOHN MUTER.

TREATMENT OF CHOLERA.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—As we are now again visited with that most fatal and distressing epidemic (I mean cholera), and as very many of our brethren have kindly given their various modes of treatment for the relief of so fearful a disease, being anxious that the public should profit by their experience, may I be allowed to add to their numerous list, having treated many cases of cholera both in England and on the Continent, and with, I am happy to say, my share of success? I consider that the nervous system in general has greatly to do with this disease, as we find that very many of the most difficult cases to treat are those of persons who have been suddenly attacked, being before in perfect health, from having heard that a friend or relation had been suddenly carried off, and that they themselves have been immediately attacked with pains in the stomach, with and without diarrhœa or sickness. This I have more than once seen lately in my own practice in this locality, and I found on visiting the patients who had been thus suddenly attacked—throwing up everything, even to a little cold water—that upon telling them they must take a small powder (which they say it is impossible to keep down) and that they are certain to die if they throw it up, that in almost every case it has so been kept down, showing that they must have a will over the nervous system. I will as briefly as possible give my treatment, should you consider it worthy a place in your valuable journal. I immediately throw the powder into the mouth, which consists of calomel 3 grains, powdered opium ½ grain, with strict orders that nothing whatever is to be given for at least half an hour. Upon my return, if the pain, etc., is not abated, I repeat the powder, and continue so to do every two hours until the desired effect is produced. I then give half an ounce of castor oil, with ten to fifteen drops of tincture of henbane, which I repeat if necessary, examining and testing the excreta whether they be acid or alkaline, and I then commence the following formulæ :—(If alkaline) ℞ Acidi sulphurici aromatici, ʒss. ; tincturæ opii, ♏xx. ; tincturæ cardamomi compositæ, ʒj ; spiritûs camphoræ, ♏vj. ; aquæ menthæ piperitæ, ad ℥j. Ft. haust., to be taken after each liquid stool. (If acid) ℞ Confect. aromat., ʒij. ; cretæ præpar., pulv. gum. acaciæ, āā ʒj. ; tinct. catechu, ʒij. ; spt. camph., ʒj. ; spt. ammon. aromat., ʒss. ; ol. menth. pip., gtt. vj. ; ol. carui, ol. caryoph., āā gtt. iv. ; aq. vel decoct. hæmatoxyli ad ℥vj. M. ft. mist. ; one-sixth to be taken every two or three hours if required—that is to say, until the purging ceases. In great prostration, after all the other symptoms have abated, the following :—℞ Chlorodyn., ʒj. ; ol menth. pip., gtt. iv. ; aq. camphor. ad ℥iv. M. ft. mist. ; one-fourth to be taken every two or three hours. And finally, when the patient is in a state of convalescence, but complaining of great soreness and great weakness—℞ Tinct. cinchon. co., ʒiij. ; æther. chlorici, ʒj. ; sp. ammon. aromat., sp. lavand. co., āā ʒij. Ft. guttæ ; ʒj. to be taken occasionally in a little water. Having, of course, prior to all placed my patient in bed between the blankets, with a kettle of boiling hot water, thereby producing a vapour bath, and applied hot poultices to the abdomen, calves of the legs, soles of the feet, composed of equal parts of crushed linseed and mustard. After the vomiting has ceased and the evacuations are of more consistence, I order a little good old port wine, mulled, with a yolk of an egg beaten up in it, thickened with a little arrowroot, to be taken warm, and to be repeated every half-hour. I am, &c.,

J. WHITEHEAD, M.D., L.S.A.

7, St. James's-road, Holloway, N., and 10, Park-place,
Liverpool-road, Islington, N.

FEES TO MEDICAL WITNESSES IN CORONER'S COURTS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Will you have the goodness to inform me, through the medium of your valuable journal, what the law is with respect to the payment of Medical witnesses at coroner's inquests? If an inquest be adjourned, is not a Medical man entitled to a fee of one guinea for each time he attends such adjourned inquest, in addition to travelling allowance? Will you please say if the same law exists in Ireland as in England?

August 2. I am, &c. LEX.

*** The payments of Medical witnesses in the coroner's court are regulated by the Medical Witnesses Act, with which every Medical man should be thoroughly acquainted. A Medical man is not entitled to extra fees for an adjournment. The same law applies to Ireland as to England.

THE VACCINATION AMENDMENT BILL.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE

SIR,—I have read Mr. Griffin's letter on the subject of vaccination in your number of to-day. I regret with him that the Vaccination Amendment Bill has met with miscarriage in Parliament. As one of the public vaccinators, and experiencing daily the difficulty of carrying out the law, I feel how inadequate the present fee is to the trouble entailed on the Medical man. It is a very invidious position to be placed in, that of public prosecutor, which is really the case with every vaccinator who endeavours legally to compel refractory and prejudiced persons to have their children vaccinated. I therefore would suggest, as an adjunct to the present system, that not only should it be compulsory that every child should be registered at the time of birth, but that within six months afterwards he should be compelled also to register the successful vaccination of his child. I submit that such an amendment of the present law would materially lighten the onus resting on the public vaccinator, and would render the prosecution of those parties who at present evade or defy the law an easy matter. I am, &c.

EDW. PICTON PHILLIPS.

High-street, Haverfordwest, Aug. 11.

POOR-LAW MEDICAL REFORM ASSOCIATION.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I shall feel obliged by your giving insertion to the annexed correspondence. I rejoice to see that another Medical Inspector, Dr. Markham, has been appointed by the Poor-law Board—a sign that the Medical element is in the ascendant; and I trust the time is not far distant when the sick poor of England and Wales and their Medical officers will be treated with due consideration. I am, &c.

12, Royal-terrace, Weymouth, August 11. RICHARD GRIFFIN.

Subscriptions forwarded to the Association :—Elkington, George, Southam, 5s. ; Grimbley and Francey, Banbury, 10s. From the Bethnal-green Union, the following :—Welsh, C., 10s. ; Haycock, G., 10s. ; Brotherton, W. R., 10s. ; Lyell, B., 10s. ; Burgess, F. J., 10s ; Massingham, J. E., 10s. ; Defriez, J. E., 10s.

"12, Royal-terrace, Weymouth, July 24, 1866.

"Sir,—I perceive a Bill is now before the House, brought in by yourself and Mr. Earle, entitled 'A Bill to amend the Act providing Superannuation Allowances to Officers of Unions and Parishes,' etc.

"In the first clause of that Bill, it is stated, 'The Superintendent Registrar and the Registrar of Births and Deaths appointed to any Union or Parish shall be deemed an officer within the operation of the Statute, etc., etc.' I respectfully beg of you to add the words 'Medical officer;' and my reason for asking this boon is that, for the sake of the poor, you should be able to superannuate your 'Medical officers' when unfit for the service, which a retiring pension will enable you to do—otherwise they must continue in the service, if poor, for the sake of a mere living. In addition to this, it is but just to the Medical man himself, that after passing not less than twenty years in the service of the Poor-law—a service which at all times is most fatiguing and most assuredly tends to shorten life—he should have a retiring pension.

"I respectfully beg to call your attention to my letter of the 9th inst.

"I have the honour to be your obedient servant,

"The Right Hon. Gathorne Hardy, M.P." "RICHARD GRIFFIN.

"Poor-law Board, July 25.

"Sir,—I am directed by Mr. Gathorne Hardy to acknowledge the receipt of your letter of the 24th inst., and to say that no alteration of the kind can be made during the present year. "Your obedient servant,

"J. STEWART HARDY."

FOLEY *v.* POOLE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The Cork Medical Protection Association—the watchful guardian of the interests of the Profession in the south of Ireland—has recently taken up, with its usual activity, the case of Foley *v.* Poole, tried here on the 28th ult., and held a special meeting at the Royal Cork Institution on the 4th inst., at which the circumstances of the case were fully discussed, and the unanimous decision of the meeting—presided over by the venerable Dr. E. R. Townsend, and attended by the leading Practitioners in

Cork—was that Dr. Poole was entirely blameless in the case; and the following resolutions were moved, seconded, and unanimously adopted :—

First Resolution.

Moved by Dr. Hobart, seconded by Dr M'Evers—"That the members of this Society, impressed with a deep sense of the importance of supporting the members of the Medical Profession when made the objects of unjustifiable prosecutions, beg leave to assure Dr. Poole that they are convinced there were not the slightest grounds for the late action brought against him by the Dispensary patient Foley; and they beg him to accept this expression of their sympathy with him in the annoyance to which he has been subjected by this undeserved attack on his Professional character."

Second Resolution.

Moved by Dr O'Connor, seconded by Dr. Popham—"That the members of this Society unanimously request Dr. Poole to accept their assurance of continued confidence in his Medical and Surgical ability, and that they cordially endorse Mr. Justice Fitzgerald's statement that 'there are no grounds for this action, and Dr. Poole leaves this court without the slightest stain on his Professional character.'"

Third Resolution.

Moved by Dr. Tanner, seconded by Dr. Finn—"That, to evince their appreciation of Dr. Poole's private and Professional character, a subscription be entered into to defray the expenses of this action, which subscription Dr. Poole be requested to accept."

(Signed) EDWARD R. TOWNSEND, M D., Chairman of Meeting.
CHARLES ARMSTRONG, M D., Hon. Sec.

The circumstances of the case, as elicited at the trial, were the following :—The plaintiff, a carpenter, was returning home from a "Pattern" on the evening of the 24th of July last year when he fell off a cart and dislocated his shoulder. The following day Dr. Poole, the Medical Officer of the Ardmore Dispensary, visited him, and ascertained that the humerus was dislocated into the axilla. Dr. Poole, aided by three or four extemporised assistants—one of whom introduced his heel into the axilla—reduced the dislocation, bandaged the arm to the side, and enjoined quietude.

During the night Foley removed the bandage, and the dislocation recurred. Dr. Poole visited him twice subsequently, and on each occasion the patient refused to allow Dr. Poole to reduce the dislocation. This Foley himself deposed to on oath at the trial.

The Medical evidence given by Dr. Desmond, called by the plaintiff, reflected on the treatment adopted by Dr Poole in two particulars—first, that Dr. Poole should have used his own heel in the axilla instead of that of an assistant; and, secondly, that means should have been used to subdue the inflammation of the joint before attempting the reduction

No witness was called for the defence, although three eminent Medical men were in attendance to give evidence on behalf of Dr. Poole, the Judge stating that there was no case made out, and that Dr. Poole left the court without the slightest stain on his Professional character.

As this is the first action brought against a Medical man by a patient in Ireland for malpraxis and neglect, it has attracted considerable attention, and has enlisted universal sympathy for Dr Poole

It is one of those cases which should never have come into court, and never would, if a Medical man were not found to lend himself to so unnecessary and uncalled-for a prosecution. A subscription is now being made to enable Dr. Poole to defray the heavy expenses incurred in defending the action. A CORRESPONDENT.

Cork, August 6.

COMMUNICATIONS have been received from—

Dr. SANSOM; HENRY BOWE, Esq; J. D. PHILLIPS, Esq.; W. NISBET, Esq.; Dr. MACCORMAC; R. GRIFFIN, Esq.; F. C. SKEY, Esq.; Dr. BLANDFORD; Dr. DICKEN; J. WILSON, Esq; Dr MUDGE; F. H WARD, Esq.; MATT LAL MITRA; J. W.; Dr. WHITEHEAD; Dr. KING; JOHN GABB, Esq.; AUGUSTUS EVES, Esq.; Dr. EDMUNDS; Mr. J. CHATTO; Dr. LIONEL S. BEALE; Dr. ALDIS; Dr. B. W. RICHARDSON; Dr. MACLOUGHLIN; J. Z. LAURENCE, Esq.; Dr. WILLIAM HEWITT.

BOOKS RECEIVED—

Medical Record, No. 11—Crookes on the Cattle Plague—Braithwaite on Cholera—Report of the Sanitary Condition of the Whitechapel District—L'Union Médicale, No. 95—Gazette Hebdomadaire, No. 32—Gazette Médicale de Paris, No. 32—Dublin Quarterly Journal of Medical Science, No. 83—Blacklock on Cholera—Laudry's Traité Pratique des Maladies des Femmes, 2nd Edition—Bell's Surgical Operations—Gordon on Army Hygiene—Journal de Médécine Mentale, No. 8—Ellis on Safe Anæsthesia in Labour—Gazette des Hôpitaux, No. 95—Edinburgh Medical Journal, No. 134—Annual Report of the York Lunatic Asylum—Dr. A O. Jones on Cholera.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 11, 1866.

BIRTHS.

Births of Boys, 1021; Girls, 950; Total, 1971.
Average of 10 corresponding weeks, 1856-65, 1740·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	1131	1168	2299
Average of the ten years 1856-65	635·7	606·6	1242·3
Average corrected to increased population ..	..	..	1366
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	2	4	2	1	5	6	31	8
North ..	618,210	4	5	3	3	12	10	51	38
Central	378,058	6	9	10	—	3	4	31	23
East ..	571,158	8	13	8	—	8	14	101	673
South ..	773,175	11	9	8	2	9	14	50	39
Total ..	2,803,989	31	40	31	6	37	48	264	781

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·561 in.
Mean temperature	57·7
Highest point of thermometer	70·0
Lowest point of thermometer	48·2
Mean dew-point temperature	49·6
General direction of wind	S W. & N.W.
Whole amount of rain in the week	0·59

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 11, 1866, in the following large Towns :—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending Aug. 11.	Deaths.		Temperature of Air (Fahr.)			Rain Fall.	
				Corrected Average Weekly Number.*	Registered during the week ending Aug. 11.	Highest during the Week.	Lowest during the Week.	Weekly Mean of the Mean Daily Values.	In Inches.	In Tons per Acre.
London (Metropolis)	3067536	39·3	1971	1400	2299	70·0	48·2	57·7	0·59	60·
Bristol (City) . .	163680	34·9	100	73	‡164	66·7	47·8	56·3	1·30	131
Birmingham (Boro')	335798	42·9	263	163	147	67·3	47·4	56·1	1·00	101
Liverpool (Borough)	484337	94·8	‖352	281	‖492	63·3	50·1	55·8	1·32	133
Manchester (City) .	358855	80·0	208	203	‡221	65·8	44·2	54·7	1·23	124
Salford (Borough) .	112904	21·8	87	57	61	63·7	43·4	53·3	1·18	119
Sheffield (Borough) .	218257	9·6	171	115	105	64·8	46·3	53·1	0·72	73
Leeds (Borough) .	228187	10·6	265	116	140	68·0	41·8	55·5	0·66	67
Hull (Borough) .	105233	29·5	68	49	44	..	..	..	..	..
Nwcastl-on-Tyne, do.	122277	22·9	93	65	83	63·0	48·0	54·5	0·91	92
Edinburgh (City) .	175128	39·6	121	84	64	63·7	46·0	54·5	0·60	61
Glasgow (City) . .	432265	85·4	323	252	212	63·6	41·6	52·9	1·80	182
Dublin (City and some suburbs) .	318437	32·7	151	†156	127	71·2	43·9	55·7	0·90	91
Total of 13 large Towns . . .	6122894	34·4	4173	3014	4059	71·2	41·6	54·9	1·02	103
	(1863)				Week ending July 28.	Week ending July 28.		§		
Vienna (City) . .	560000	..	..	..	379	..	..	61·9	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·561 in. The barometrical reading increased from 29·29 in. on Tuesday to 29·96 in. on Saturday.

The general direction of the wind was S.W. and N.W.

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* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 59·3°.

‖ The usual return not having been received from Liverpool, the totals of births and deaths returned in the previous week have been substituted for the correct numbers to make up the total for the thirteen towns.

APPOINTMENTS FOR THE WEEK.

August 18. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p m.

20. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

21. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p m.; St. Peter's Hospital for Stone, 3 p.m.

22. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m. Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

23. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

24. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

ORIGINAL LECTURES.

LECTURES ON SOME MEDICAL SUBJECTS.

By F. C. SKEY, F.R.S.,

Consulting Surgeon to St. Bartholomew's Hospital.

Lecture IV.

On Hysteria, or General and Local Nervous Irritation.

In the last lecture I referred especially to hysteria in its local forms. You need scarcely be told that it is a disease involving the entire constitution. It is not my intention to enter at length into the detail of this more common form even were I capable, but I have something to say on this head that may be useful to you. You will not believe that either the mild or the severe and paroxysmal attacks of hysteria occur without a cause. That cause may be traced to constitutional weakness or previous exhaustion in some form or other, fatigue of body or mind, great mental emotion, causing a shock. Then follows at different intervals of time the attack, attended by headache, nausea, pain in the back—globus hystericus as it is termed—uncontrolled muscular contraction, convulsion of the diaphragm, indicating by fits of crying, sobbing, laughing, its close relation to mind, violent palpitation of the heart, fixed pain under the short ribs, increased secretion of urine—not uncommon in all nervous affections, especially of women. Such are the predominant signs of general hysteria. It is a medical disease, not a surgical one, and I dare say you are as familiar with the general symptoms as I am. The great Dr. Sydenham has testified to the general prevalence of this disease in all classes of society. He says, "The frequency of hysteria is no less remarkable than the multiformity of the shapes it puts on. Few maladies are not imitated by it; whatever part of the body it attacks, it assumes the appearance of the disease to which that part is liable." I don't see how this striking truth can be told in stronger language; and again I tell you the mock, is far more common than the real disease, and I warn you against that error in diagnosis which confounds the one with the other.

It is not an easy task to select the class of constitutions most liable to hysteric disease. Probably under certain conditions of impaired health the large proportion of the community would give evidence of its presence. Certainly it is uncommon in the lower class of males, and among those who occupy the beds in our public Hospitals. We know, on the other hand, that it is most prevalent in the young female members of the higher and middle classes, of such as live a life of ease and luxury, those who have limited responsibilities in life, of no compelled occupation, and who have both time and inclination to indulge in the world's pleasures—persons easily excited to mental emotion, of sensitive feeling, often delicate and refined. Such are among the mental attributes of hysteria. But hysteric diseases are not confined to the young. I have seen many examples in females of 40 and 50. Do not imagine hysteria is a disease of persons of weak minds. It will often select for its victim a female member of a family exhibiting more than usual force and decision of character, of strong resolution, fearless of danger, bold riders, having plenty of what is termed *nerve*. If you tell such young people they are nervous, they take offence, because they misinterpret the meaning of the word, and so may you. And they may well misinterpret it, for, like the word "irritation," its popular meaning is both various and indefinite. It is essential that we attach a definite idea to this term in its different applications, and I must digress for a moment to endeavour to explain them.

I have already used it in one sense.

1st. The word nerve is employed to express the mental condition of vigour, boldness, and resolution—as when a man's nerves are strung up to meet danger; so ladies are said to ride with more or less "nerve."

2nd. We employ it in its physical sense as a part of the general system of the nerves of the body.

3rd. We have the terms "nervous system," which may be not inappropriately defined as holding the same relation to the "system of nerves" in its physical sense that the physiology of a part holds to its anatomy. Yet this definition is imperfect, because the properties of the nerves of the cerebro-spinal system, with the small exception of those of specific sensibility, such as sight, smell, taste, etc., begin and end in the functions of motion and sensation. By the term "nervous system" we understand the general influence which the nerves in a physical sense exert on the constitution, the healthy or tonic condition of which is in a ratio with the combined force of the two systems—viz., the arterial, or circulation of blood, and the nervous. Health depends on the coincidence of these systems in perfect action. If the circulation fails in power, the consequence of this weakness falls on the nervous system, which is dependent on the circulation for its health and vigour. Failing an adequate supply of blood, this system is unstrung, and morbid sensations, endless in variety, take the place of real; and of all consequences hysteria is the most common. In the deficient supply of blood to the brain the faculties of the mind are involved. Confidence of strength gives place to fear, mental vigour to weakness and irresolution. Such indications are as untrue to the real character of the individual as the physical sensations are false and deceptive. Such is the nature of the large proportion of cases of persons who come into courts of law for compensation for what are erroneously deemed permanent injury, bringing with them headaches, spinal pains, tingling of the extremities, impaired vision, loss of memory, and many other symptoms of an unstrung nervous system—a series of grievances of the incurable nature of which an acute lawyer takes care to provide himself with ample testimony, and which will always be obtained so long as the diseases of the vascular system and their consequences monopolise a too prominent share of the attention of our Profession. I have traced several of these persons in their after career, the large majority of whom entirely recover. I believe it is to the prevalence of error in the early management of these persons, who are almost invariably subjected to depletive treatment, and to the imperfect knowledge of nervous diseases which prevails in the Profession, that large sums are awarded for injuries erroneously supposed to be permanent and incurable. Can it be reasonably expected that the truth will be brought home to the mind of a lawyer so long as our own opinions are yet uninstructed upon it? Sooner or later their true nature will become established facts in the minds of our Profession, and we shall no longer hear the painful discrepancies of opinion among Medical men that now prevail. The light of improved knowledge will dissolve the daily mysteries which surround these cases in the form of supposed spinal concussions, partial paralysis, effusions into the theca vertebralis, thickening of the membranes of the brain, spinal cord, and lesions of this organ or that. These, as Dr. Sydenham declares, are but imitations and resemblances, and not realities, and that they deceive the multitude is undoubted. When real disease prevails there is no difference of opinion among Medical men as to its existence.

It is a very interesting question to investigate how far the functions of the mind are involved in hysteric disease, and how closely it is connected with it, whether the relation between them is direct and immediate, or remote. In cases of local pain, and also in the local contraction of muscles, arising either from an excessive action of one muscle, or from the loss of harmony of action with its antagonist, as in a permanently flexed forearm or finger, it seems difficult to identify the evil with that part of the brain which we believe to be the seat of mind. And yet an inquiry into the past history of such persons will often reveal the fact that they have been at one time or other the subjects of general or paroxysmal Hysteria, or, in other words, that they have had hysteric fits; and as mental emotion is more or less associated with this form of Hysteria, it would appear not unreasonable to infer some remote relation between the mind and this variety of a disease apparently simply local in its nature. There is something in the mental development of these young persons very characteristic. They are quick and excitable, liable to sudden emotion without adequate cause. In very young persons the local disease may be developed before the mental character is fully matured, but advancing years will exhibit its peculiar features.

It is curious to observe the influence which the nervous system exerts on the daily condition of us all. When unstrung it preys upon ourselves. It is not in the varying force in our pulse, for that gauge is not sufficiently fine to detect the variations of health, that we can refer a consciousness of strength and vigour on one day that fails us on another. It is that our nervous system is more or less unstrung. There is a real illness and a factitious illness, and in this we observe the remarkable influence of mind in exercising a controlling power over the body. People without compulsory occupation who lead a life of both bodily and mental inactivity—people whose means are sufficiently ample to indulge in, and who can purchase the luxury of illness, the daily visit of the Physician and, not the least, the sympathy of friends—these real comforts come home to the hearts of those ornamental members of society who are living examples of an intense sensibility, either morbid or genuine, who can afford to be ill, and will not make the effort to be well. They are, in truth, well or ill, as you choose to take it, and they are only ill because they fail in mental effort, that mental resolution which is sufficiently powerful to rouse the dormant energies of the body and throw off the sensations of lassitude, of unreal fatigue and weariness of body and mind. A poor man cannot afford this indulgence, and so he throws the sensations aside by mental resolution.

There is a real fatigue and a nervous or unreal fatigue. A lady will tell you she was so tired that she could not walk another step. She thinks so, and without an adequate motive she cannot make the required effort. Give her the motive, such as the sudden illness of a relative or friend at a distance, and she will extend her walk to miles without effort or subsequent fatigue. How is this? It is that by a great motive acting through her mind she has called upon those dormant powers of her system which are possessed by all of us to be employed on critical occasions. Rarely, if ever, is the body subject to a degree of fatigue so great that an adequate motive will not obtain renewed exertion. When a lady tells you she can only venture on a walk of half a mile, you will understand that this effort is determined by the ordinary, not the extraordinary motive. It is your duty as her Medical attendant to place before her such inducements to a greater effort as shall call on the exercise of her dormant power, *the reserved fund* of physical strength, and she will walk four times the distance without fatigue. A poor man runs a race against time, and reaching the goal he drops from fatigue. Offer him at the moment £100 if he will run one hundred yards farther. He will accept the offer, run the required distance, and then drop. This is resolution acting on his muscular powers through his nervous system, screwed up by an extraordinary mental effort.

And this law of Nature is applicable to us all in our daily intercourse with the world. A man resolves to accomplish a certain amount of work on a given day, and he completes the task he has assigned himself by virtue of his resolution. Such resolution is eminently protective against fatigue.

A question arises to one's mind—Is Hysteria what is termed a specific disease, or is it the invariable result of a condition of health into which all persons pass in reduced states of bodily vigour, but only modified in degree? I presume it is associated with a peculiar organism common to man but not involving all, as some persons amenable to the influence of mesmerism pass readily into profound sleep, while others are entirely unaffected by it. It notoriously is far more common in women than in men, and in young persons from the age of 17 to 30, in the unmarried than in the married. We do not associate hysteric affections with persons of either sex who are characterised by vigour of mind, of strong will, of strength and firmness of character. Such persons may be reduced by protracted illness to a condition of weakness both bodily and mental, but they do not in their reduced strength, so far as I know, exhibit any of the peculiar features of hysteric affections. There is a remarkable form of Hysteria which affords evidence on this subject. It is notorious that the sight of a person under an hysteric attack has a tendency to involve other hysteric persons around her. It has happened to me several times in my Hospital career to witness the contagious, or rather the imitative, form of active or paroxysmal Hysteria on a large scale. On one of these occasions, in a ward of 12 females, no less than 9 young women were affected at the same time. Several were so violent as to call for the assistance of sisters, nurses, and other servants of the establishment to restrain them; and inasmuch as a person under the influence of hysteria brings into action all the latent strength of her muscular frame, which is greatly in excess of her apparent strength, the services of these attendants were scarcely sufficient for the purpose—several requiring three or four strong men to prevent injury to their persons. The attack commences in the person of one girl, who may have been the subject of some trivial operation, or been brought under the immediate influence of the disease by mental emotion. No sooner is the condition of this patient observed by her fellow-patients than her influence is felt throughout the ward, and the second subject may become involved, occupying a bed at the remote end of the room, and thus it passes irregularly from bed to bed, each patient appearing to take the disease in the order of their constitutional liability. In the course of an hour, more or less, it subsides, and tranquillity is restored, but the evil only slumbers, and on the following day the same scene may recur—less violent, perhaps, but acted by the same persons as at first. Some of these patients, who were not affected to violence, were affected to tears and wept in silence, while some few were not implicated at all, nor did they show any tendency to sympathise with the disease. These curious attacks, though they appear to the subjects of them irresistible, are yet but the result of what has been termed a surrender, and might be prevented by an adequate motive. The mode adopted to arrest this curious malady consists in bringing these persons under the influence of some powerful mental emotion, and in making some strong and sudden impression on the mind through the medium of, probably, the most potent of all impressions, fear. They are not lost to consciousness, and for the moment, except in the intensity of their paroxysm, they will listen to the voice of authority. Sympathy and kindness, or tenderness of voice and manner, are worse than useless. They rather aggravate than mitigate the evil. Ridicule, to a woman of sensitive mind, is a powerful weapon, and will achieve something, but there is no emotion equal to fear, and a threat of personal chastisement will not necessarily be required to be carried into execution. On two of the occasions I have referred to, a few quarts of cold water suddenly thrown on the person of a chief delinquent instantly brought the ward to a state of reason and tranquillity. The disease succumbed to the indignity of the treatment. There can be no doubt, then, that a malady spreading by sympathy and cured by fear, has its origin in the mind. I think you will find on close inquiry that nearly all cases of paroxysmal Hysteria originate in some form of mental excitement, and that of a depressing character, such as sorrow or disappointment. It is not the result of mere emotion. Joy, gladness of heart, or a sense of pleasure rarely produce it; yet it is difficult to explain either its immediate or proximate origin in attacks occurring during sleep. Sometimes these patients suddenly awake from sleep with severe palpitations of the heart leading on to a direct attack. What can be their immediate cause? There is no disease of the agents of circulation, or any suspected variation in the quantity of blood thrown upon the heart by which to explain it. Whence, then, the eccentric action of this organ? Possibly some mental emotion in the form of a forgotten dream or some other occult mental operation which escapes cognisance, such as occurs in cases of somnambulism.

In these current remarks on general Hysteria we must not lose sight of the subject taken in a surgical point of view. I have stated, both in this and in the last lecture, that under the condition of impaired health the nerves of a part of the body may become the subject of a deranged action by which, as Dr. Sydenham has declared, and we in our generation almost daily observe, so many symptoms of actual disease of that part may appear as to give the exact appearance or verisimilitude of local organic change of structure when such disease is entirely absent. There may be nothing apparent on a first inquiry to associate the case with Hysteria, whether local or general. It is not necessarily nor commonly preceded by hysteric paroxysms. There may be no appearance of illness, no heat or undue excitement of the system, nothing, in fact, to connect it with hysteric disease; yet it is nothing but local nervous exacerbation, and from the want of a better name we call it Hysteria. You must not confound it with simple Neuralgia; and with still less reason, with Epilepsy. It is not, however, always easy to draw a distinct line between Neuralgia and Hysteria, for both may have a constitutional origin, and be amenable to nearly the same treatment. In Neuralgia, however, we have a more generally local and more persistent affection of a nerve. The disease appears to be limited to the nerve itself, the course of which may be traced by the pain, which is often excessive; whereas in those cases of Hysteria marked by local pain, the pain is general, involving the structures around in common with real disease of the part affected. In Neuralgia the disease is placed on a recognised nerve, and a person is said to have Neuralgia of a given nerve, such as the frontal, mental, or digital. In Hysteria any locality may be affected without reference to the distribution of nerves; while Epilepsy is characterised by well-marked symptoms clearly of a cerebral origin. If you amputate a limb for hysteric pain, you throw the disease back on its nervous centre, and you kill your patient. In the early part of my hospital career I have seen this fact more than once exemplified. In such cases operative Surgery is entirely out of place.

Now, before I proceed to illustrate these statements by reference to cases of which I have an ample supply, I wish to make a few remarks on the relation between local Hysteria and the nervous centres—viz. the brain and spinal cord. Any facts that tend to throw even a gleam of light on the connexion between them must be interesting. I refer to the influence of anæsthetic agents, especially of opium and chloroform. In cases of Hysteria marked by local pain, relief is given by the application of opium to the affected part—a fact which does not confirm the generally entertained opinion that the local affection is dependent on irritation of the nervous centre. Select a case of hysteric contraction of the muscles of a joint—the elbow or fingers. If you administer chloroform, the contraction of the muscles which may have existed for months and which has resisted repeated attempts to extend them, will now yield to a gentle effort of extension, and the limb is immediately restored to apparent repose. Supposing this morbid contraction of one or more muscles to be caused, as we believe, by irritation of the nervous centre, how does opium or chloroform affect it? The effects of chloroform on the circulation are assuredly not in the direction of health, for it converts arterial into venous blood, or, at least, it gives to arterial blood the dark colour of venous, and we can hardly believe impaired circulation of a part of the body compatible with its improved function; and yet the disease subsides. This "irritation of the nervous centre," as I told you, does not convey a very clear idea of the nature of the relation between the respective parts—viz. the seat of the disease, and its source or centre. Perhaps the nearest approach we can make to a solution of the difficulty is by saying that these two agents—opium and chloroform—suspend for the time the influence of both sensory and motor nerves, under which suspension the local pain or the erring muscle partakes of the general influence of the anæsthetic. To bring this morbid state of the muscle within the influence of the mind as its cause is almost of necessity to infer the local evil to be wilful; but if it were so, the state of unconsciousness during sleep would remove it, which it does not, for the contraction is constant by night and day, while the specific influence of the chloroform suspends the disease, if it does not cure it, and the renewed, though partial, contraction of the muscle is now prevented by mechanical agency. The remarkable circumstance consists in this, that a disease of long standing which incapacitates for exercise and occupation is removed in a few minutes by the agency of chloroform, and the patient placed at once on the high road to recovery. Is this curious fact confirmatory or otherwise of the origin of the disease in the nervous centre?

Unfortunately hysteric persons have no exemption from real disease, and when the two are found in combination a difficulty in diagnosis will frequently occur to test the pathological knowledge of the Surgeon. The local disease is accompanied by symptoms of an eccentric character that do not legitimately belong to it. Local pains are aggravated in the active stages, and do not subside in a degree proportionate to the local improvement. A small malady such as a sprained wrist or ankle, is magnified into a large one. The constitutional symptoms take the direction of Hysteria instead of fever. The vascular system indicated by the state of the pulse, the skin, etc., is less involved than the nervous, and months will often expire before recovery is complete. To a Surgeon not familiar with hysteric disease, who practises his profession with reference to one only of the two systems of which the body is composed, these cases will always be obscure and difficult of management. When an injury occurs to the person of a young female, and to many others neither young nor female, hysteric symptoms are almost certain to develop themselves in some form or degree before recovery is complete.

A Chemical Defence.—During the late German war a Professor of Chemistry, desirous of preventing the inroads of the soldiers into his laboratory, managed so as to have an incessant supply of sulphuretted hydrogen gas issuing from its portal. It is said that the invaders forced the door no less than sixteen times, but the horrid fumes which issued effectually prevented all ingress and capture of the instruments and apparatus.

Cholera has been very fatal at Breslau; 2000 deaths took place from it in the course of a few weeks.

ORIGINAL COMMUNICATIONS.

CASE OF ASIATIC CHOLERA SUCCESSFULLY TREATED BY NITROUS ACID; WITH REMARKS.

By G. E. NICHOLAS, MD.,
Medical Officer of Health for Wandsworth, etc., etc.

In the presence of an epidemic like the present, when the Medical Profession is avowedly in lack of successful remedies, I venture to record in your columns my experience of the use of the nitrous acid in the treatment of cholera and diarrhœa—a remedy which, during a very extensive experience of this mysterious disease, has never failed to convey hope to the Physician while it could be swallowed by the patient.

During a six months' continuous presence of cholera in its severest form in the Mediterranean squadron in 1850 (when death would occasionally occur in four hours from the time of seizure without diarrhœa or vomiting), every mode of treatment, eliminative or astringent, every known remedy, simple or combined, in or out of the Pharmacopœia, was tried with much the same unsuccessful results, with but the exception of the agent to which attention is now desired.

During the epidemic in this country in 1854 it underwent at my hands, and at those of my colleague, Dr. Whiteman, of Putney, the rigid test of a general administration. The results of treatment in my subdistrict were as follows—viz., in 659 cases of diarrhœa, choleraic diarrhœa, and cholera,(a) there were fifty-eight cases of collapse of which five were moribund when visited, and consequently not under treatment, and twenty-nine recovered.

This is not a time for founding a theory of rational Medicine upon which to build an experience. Experience of treatment and of remedies must seek—though, as is too often the case in Medicine, it cannot command—an explanation of their *modus medendi.*

Whether the eliminative mode of treatment be right in theory but wrong in practice, or whether, conversely, the suppression of the diarrhœa be wrong in theory but salutary in practice, may be left to the mental profundity of censors of Colleges; but, as a matter of fact and experience, there must be many by this time whose experience of its use will bear out the assertion that the nitrous acid will speedily arrest the diarrhœa and its concomitant symptoms, and that such suppression is never followed (in uncomplicated cases) by the very unmanageable consecutive fever which usually occurs when it has been effected by opium alone or combined with the usual astringents; and, moreover, that in cases of collapse, when vomiting and purgation are at an end, it will cause reaction when no other remedy—not even castor oil—will avail to do so.

The formulæ I have used are the following, viz. :—℞ Acidi nitrosi ʒj. (the deeper the colour the better); aquæ ℥viij. M. ft. mist., cujus cochl. magnum ex aquæ cyatho vinoso post singulas sedes liquidas sumendum est. Si sit dolor, adde tinct. opii ʒj.; si sint spasmi, ætheris chlorici ʒj. Sed si sit vomitus, acidi gallici gr. ij. ad iij. imprimis sumenda sunt.

As an illustration of this treatment, I beg to add the following short notes of the only case of cholera which has come under my notice in this subdistrict up to the present time.

Case.—T. R., aged 61, labourer, employed lately in digging mud from the bed of the Wandle, etc., and previously in the manufacture of artificial manure. On Sunday, August 12, was taken, at 4 a.m., with vomiting and purging incessantly. Had been drinking overnight. ℞ Acidi gallici gr. ij., c. pulv. Doveri gr. v., st.; mist. acidi nitrosi, ut opus sit; turpentine fomentation to stomach, and hot water and turps to the feet. 1.30.—Cold surface; pulse scarcely perceptible, cannot be counted; speaks in a whisper; skin dusky blue; features shrunken; stools rice-water, but pinkish from admixture of blood, like sanious lymph; cramps very severe; tongue has a thick white fur. Repetantur remedia omnia. 3 p.m.—Has had four motions, and been sick three times. Pulse 120; more heat of surface; less cramp. 7 p.m.—Better; pulse 100, fuller; has vomited three times, and been purged four times, but in less quantity; warmth of skin restored; skin bluish red in colour; voice louder. To have some thick arrowroot and brandy, and raw extract of meat, and plenty of it, but little at a time. Continue remedies. 10 p.m.—Informed by message that he was still improving, and had been purged but little. Medicines to be used as required.

(a) No case was entered as cholera unless characterised by rice-wat evacuations and collapse. Without collapse it was entered cholera diarrhœa, and without the rice-water stools diarrhœa.

August 13, 11.30 a.m.—Has passed a restless night; four stools, the last has fæcal odour, and blackish from the gallic acid (no doubt); sick once this morning; passed a little water at 10 a.m.; pulse 90, fuller; skin dark red; tongue cleaning. 5 p.m.—Going on favourably. Continue mixture as needed; same nourishment.

14th.—Pulse 85; still weak; has had five stools, but small in quantity, evidently contain bile; feels comfortable; no cramp since yesterday, and no sickness. Continue.

15th.—Progressing favourably. Pulse 72; tongue cleaner. Continue.

16th.—Progressing. Continue; four ounces port immediately.

17th.—Convalescent, but very weak. Continue same diet, etc.

18th.—Suffering from nothing but debility. Fish, yolk of egg, milk, and gravy-tea for diet. Continue wine.

20th.—Stronger. To have mutton in place of gravy-tea.

4, Church-row, Wandsworth.

CASE OF REMOVAL OF THE ENTIRE CLAVICLE.

By HENRY BOWE,

District Surgeon, Springbok Fontein, Namaqualand.

On June 2, 1865, a coloured child, aged 7 years, named Klaas Cloete, was brought to me by his father, of whom I learned the following particulars:—About the end of 1864 he was severely injured in the right shoulder and adjacent parts by the upsetting of a wagon laden with wheat, several sacks of which fell upon him. About a fortnight after this occurrence, and when recovering from its effects, he fell down, and again injured the same parts. Very shortly after the fall he received a kick on the clavicle from the naked foot of a little Hottentot boy, after which the integuments from the shoulder to the sternum inflamed, and eventually matter formed, which was evacuated by a small incision made by a "native Doctor" over the sterno-clavicular joint. The opening made continued to discharge freely, and after the disease had existed about three months the sternal end of the clavicle protruded through it. On examining the lad, I found a general tumefaction of the integuments between the shoulder and sternum, and two small sinuses, both leading to dead bone—the one situated underneath and about the centre of the clavicle, the other near to the acromio-clavicular articulation—and, as stated before, the sternal end of the clavicle protruded about half an inch. On June 5, after administering chloroform, I cut down upon the bone, the incision commencing at the point of the acromion and terminating at the spot where the protrusion had taken place; the bone was then removed. No great amount of hæmorrhage occurred, although, considering the close proximity of the large vessels, it might reasonably have been expected. The wound progressed very favourably, and on the 13th he returned home. The following September he called upon me for examination. The wound had long since healed; there was a sinking of the right shoulder about three-quarters of an inch below its proper level, and it approximated nearer to the sternum than its fellow of the opposite side. He had, however, full use of the arm, and could, he said, throw a stone just as well as before he met with the accident; in fact, the lad appeared to suffer no inconvenience whatever from the loss of his clavicle.

⁂ The bone which accompanied Mr. Bowe's paper is exactly 3¼ inches in length, its sternal end blackened, and having a cavity which would hold a large pea.

Dr. James Duncan, of Edinburgh, died on Thursday at Tours in France, while on his annual holiday, of cholera.

Dr. Falconer, of Bath, has been elected Treasurer of the British Medical Association in the room of the late Sir Charles Hastings.

Poor-law Inspection. — We understand that Dr. Edward Smith has been appointed to the Home District, with residence, as hitherto, in London, and that Mr. Cane has been transferred to the Lancashire District.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE LONDON HOSPITAL.

CASES OF CHOLERA.

We have again to report a diminution in the number of cases of cholera admitted into this Hospital during the past week. Probably, however, this diminution is partly owing to the fact that a Cholera Hospital has been opened in Commercial-street. Yet the cases taken in are of a slighter kind, and there have been fewer deaths.

We have little to say on treatment. Dr. Fraser is now ordering for his patients a mixture containing chlorate of potash and dilute hydrochloric acid in camphor mixture. Dr. Clarke has treated some of his new patients with iron (the tincture of the sesquichloride) and quinine. Dr. Davies still gives calomel.

A good many cases of sham cholera have been a source of annoyance to the Medical officers. One of these patients who complained bitterly of cramps was taken in. She was taken in in order that her symptoms might be watched, lest by any chance a mistake should be made. However, so satisfied were the authorities as to the attempt to deceive, that the patient was, on Monday last, sent to the police station, and she will be brought before the magistrate to-day (Thursday).

Statement of Cases admitted into the Cholera Wards of the London Hospital for the week ending August 23, 1866.

	Cholera.		Choleraic Diarrhœa.		Cases of Diarrhœa treated as out patients, Aug. 16 to 23.
	Males.	Females.	Males.	Females.	
Aug. 17, 39th day .	8	3	2	4	129
,, 18, 40th ,, .	3	2	1	2	142
,, 19, 41st ,, .	3	1	—	1	97
,, 20, 42nd ,, .	3	1	3	2	117
,, 21, 43rd ,, .	4	2	1	—	120
,, 22, 44th ,, .	1	—	2	4	98
,, 23, 10 a.m. .	2	—	2	1	84
	24	9	11	14	787

Ages.	Cholera.		Choleraic Diarrhœa.	
	Males.	Females.	Males.	Females.
1 to 10 . . .	7	1	2	1
11 ,, 20 . . .	3	4	2	5
21 ,, 30 . . .	3	1	3	3
31 ,, 40 . . .	6	1	1	3
41 ,, 50 . . .	1	1	2	2(a)
51 ,, 60 . . .	3	—	1	—
Upwards . . .	1	1	—	—
	24	9	11	14

	Cholera.	Choleraic Diarrhœa.	Total.
Recoveries	33	23	56
Deaths	13	1	14
Remain	68	28	96

From the Outbreak.

	Cholera.	Choleraic Diarrhœa.	Total.
Admissions. . . .	464	148	612
Recoveries	141	107	248
Deaths	255	13	268
Remain	68	28	96

Total out-patients treated since the outbreak, 8768.

ST. GEORGE'S HOSPITAL.

FURTHER REPORT OF A CASE OF CHOLERA TREATED BY THE SUBCUTANEOUS INJECTION OF OPIUM.

(Under the care of Dr. WADHAM.)

No more cases of cholera have been admitted into this Hospital, and the patient whose case we related last week is, we are glad to say, doing well. The following particulars of his progress since our last report are obtained from Mr. Jones, the Resident Medical Officer, who had charge of the case:—

August 15, 3.20 p.m.—His bowels have again acted;

(a) 1 acute dyspepsia.

motions still rice-water; temperature 98; pulse 122; respiration 16. The injection was repeated. At 3.50 p.m. he was sleepy; temperature $98\frac{4}{5}$; respiration 12; pulse 132; pupils contracted. At 10 p.m. he appeared comfortable. Bowels were quiet, and there had been no sickness; had taken nourishment and had retained it; pulse 124, fuller; he had passed no water since ten this morning; voice natural; temperature 98; the injection was repeated. At 11 p.m. his pulse was 128; respiration 12; and temperature $99\frac{2}{5}$. Has been asleep since last injection.

16th.—Has vomited, since six this morning, grey-coloured matters; pulse 120; temperature $97\frac{1}{5}$; respiration 15; repeat injection. At 10 p.m. he felt much better; bowels had acted once; motions contained plenty of bile; no vomiting; pulse 96.

17th.—Passed about half a pint of urine, which was albuminous; and when treated with nitric acid gave a deep-red colour. Temperature 96.

On the 18th he became somewhat more restless, on account of nausea and vomiting of clear green bilious-looking fluid; the bowels acted twice; the motions were yellow and watery; the injection was repeated. At 2 p.m., as the sickness continued, four grains of calomel in powder was given. The sickness had abated by the evening.

On the 20th his tongue was quite clean; no vomiting, and bowels had not acted since the 19th; pulse 92; urine plentiful, pale, acid, and containing no albumen.

On the 21st the motions were darker and fæcal.

On the 22nd he was doing well; appetite returning; he was calling out for meat, and wishing to get up.

GUY'S HOSPITAL.

FURTHER REPORT OF A CASE OF CHOLERA TREATED BY THE SUBCUTANEOUS INJECTION OF QUASSINE.

(Under the care of Dr. OWEN REES.)

We are glad to have to report that no serious case of cholera or of choleraic diarrhœa has been admitted into this Hospital since our last report.

One of the patients, whose case we reported, has died. We refer to the woman whom we called W., and who was treated by the subcutaneous injection of Quassine suspended in water. This patient got over the algide stage of cholera, but rallied very imperfectly. She lay stupid and regardless, with sunken cheeks, which had a livid flush. She had retention of urine, and, as we mentioned last week, a roseolous eruption. She died August 17. The autopsy was made by Dr. Moxon, and from his records of post-mortem examinations, as well as from notes by Mr. Brown and Mr. Hartree, we obtain several of the above-mentioned facts, as well as a report of the condition of the woman's arm and of her viscera. The swelling of the arm had burst on the 16th.

Autopsy.—The left arm and forearm had several circumscribed swellings, and a section of these showed a peculiar greenish, very glutinous pus, and in the middle of this, under the punctured spot, was in each a brown flocculus, apparently the portion of tissue which had had the Quassine put in it. Brain substance firm and tough, remarkably so, and equally everywhere. Spinal cord natural. Small patches of hæmorrhage under the pleura. Lungs: Left, $8\frac{1}{2}$ ounces, pale, anæmic, yielding dark thickish blood from the greater veins. The right lung was bulky in comparison, somewhat decomposed, and full of dark serum, not softened, and no local affection. The state of the lungs contrasted strongly (she was always lying on her right side). The Heart: Patches of lentil or pea size hæmorrhage, chiefly on dependent parts. Blood liquid in all cavities. The intestines were discoloured, as after ordinary diseases; the ileum was intensely red within, chiefly at the lower end; there was no ulceration of the colon. The liver weighed 61 ounces, and looked healthy; the bile in the hepatic duct was pale and watery; mixed with water, it did not give it colour. Spleen 5 ounces; Malpighian corpuscles visible; of ordinary consistency. The kidneys 12 ounces. Right: The pelvis ramosely injected and ecchymosed, one calyx much reddened and tightly fitting to the swollen pyramid within; the base of this pyramid was suppurating in a line corresponding to the urinary tube bundles, and the cortical part over it was in a state of suppuration; there was a much less degree of the same state in the other pyramids; there was no such condition of the cortex and pyramids of the left kidney, although there was pyelitis here also; for the rest, the kidneys had a thick and pale cortex in which the natural columnar structure was scarcely discernible. The bladder deeply reddened within, especially at its lower half, and containing fœtid urine in small quantity.

No cases of cholera have been admitted into the Westminster, Charing-cross, Middlesex, Guy's, or St. George's Hospitals since our report last week.

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Medical Times and Gazette.

SATURDAY, AUGUST 25.

FEMALE MEDICAL SOCIETY.

We trust that the publication of the letter which appears in our columns this week from Dr. James Edmunds will afford him the satisfaction he desires. It is a delicate matter to argue with a gentleman who carries the thunders of the law in the velvet glove of his left hand whilst he summons you to accept, *nolens volens*, the statements which he puts forth with his right. We may, however, venture to offer a few remarks on the position which Dr. Edmunds has taken up in relation to the Medical Profession in general, premising that we are in nowise concerned with the doings of the Society of which he is the champion, and that our sole object is to vindicate the character and usefulness of our Profession.

Our readers will remember that on June 30 we called attention to the proceedings at the second annual meeting of the Female Medical Society at Hanover square Rooms, when a statement was made on the authority of Dr. Edmunds that *the mortality in childbirth among patients attended by even the present uneducated midwives is less than half that which occurs among patients attended by Medical gentlemen in general practice;* and we remarked upon the presence of Dr. Farr and Lord Shaftesbury at the meeting in order to guard the public against the notion that either of these gentlemen countenanced the assertion which we have quoted. We especially said we were in a position to disclaim on Dr. Farr's part any sort of support to a statement entirely unsupported by any reliable statistics. We refrained from giving any opinion adverse to the Society, but we pointed out the limit to which both Lord Shaftesbury and Dr. Farr confined themselves in their advocacy of its objects.

This has given offence to Dr. Edmunds, who has thought it well to formulate his grievances categorically in the manner set forth in his letter.

Considering the demands of really important matter on our space at this time, we must be excused from dealing with all the points of the letter *seriatim*, and can only touch upon those which are really germane to the question upon which we publicly joined issue with Dr. Edmunds.

Dr. Edmunds reasserts his proposition as to the relative mortality of the two classes of patients—the one attended by midwives, and the other by Medical men—and he shows us that he arrives at his conclusions by applying the results of the limited statistics of the Royal Maternity Charity to the whole childbearing population of London, and thence he generalises upon the wider area of the whole country. His reasoning comes to this: Deduct the births and the puerperal deaths of the Charity for the last five years from the corresponding figures for London, as given by the Registrar-General, and the result is a puerperal mortality of 1 in 579 registered births for the Charity against 1 in 204 for the rest of London. Now this startling deduction depends entirely on the premiss that all the childbearing women of London, exclusive of those taken charge of by the Maternity Charity, are attended in their confinements by Medical men, and Dr. Edmunds thinks that inference "so nearly fair" as to be taken for granted! But where are the returns to prove it? We know of none such: but we do know that the records of the Registrar-General—the only trustworthy authorities in such matters—contain no single clue to the elucidation of this matter of Medical attendance in childbirth. We will therefore answer this assumption by stating that there are no statistics in existence by which the proportion of women attended by Medical Practitioners can be known.

Then, again, what parallelism is there between the cases of the *married* women who form the sole patients of the Maternity Charity, and the numbers of young *unmarried* women with whom the birth of a child is a thing to be concealed, and who undoubtedly contribute a large percentage of the total deaths from childbirth? Thus this proposition, which Dr. Edmunds has ticketed (*b*), and which he in an airy fashion treats as of little importance, really lies at the root of his charge against the Medical Profession; a charge which we must persist in holding altogether not proved, until Dr. Edmunds can show from statistics of the whole of the London mothers that his inference about their Medical attendance is substantiated.

Again, with regard to another point upon which we insisted—namely, that the midwives invariably call in the aid of the Medical Practitioner in difficult cases or when their patients develope critical conditions, and in that way the midwives get relieved from responsibility when death ensues. The last Report of the Maternity Charity shows that, in 1865, out of 3020 deliveries, the aid of the Physician or Surgeon was requisite in 87 cases, three of which resulted in death—one from puerperal convulsions, and the other two from bronchitis and consumption. Here, at any rate, is a puerperal mortality of 1 death to 87 deliveries under Medical charge of the selected Physicians of the Charity, which is, as we know, much above the average puerperal mortality of all England; and we may reasonably ask what would probably have been the proportion of deaths in these 87 deliveries if they had been left exclusively to the charge of the midwives instead of being handed over to Medical gentlemen connected with the charity? The following passage, taken from the last annual report of the Maternity Charity, shows that Dr. Edmunds' objection to the employment of Medical men in confinements is not shared by the committee of that Society:—

> "With reference also to the cases to which the Medical gentlemen are called, when it is remembered that it is generally when difficulty or danger supervenes that their assistance is sought, and that of 87 of such cases only three have failed to yield to the treatment prescribed, it cannot but be assuring to the governors, as it is to your committee, that the safety and well-being of the patients of this Charity are entrusted to the care of *gentlemen (!)* well qualified for their responsible and important duties."

But the Maternity Charity, whose operations we cannot speak too highly of, is not a fair criterion: there is a staff of superior midwives, and there is the resource of a body of Physicians and Surgeons of the highest eminence to fall back upon in necessity. Need we do more than point to this picture for the suggestion of its complement, as we are all too familiar with it?

We do not see what Dr. Edmunds proposes to himself in his statement that there is a "serious error" in the supposition that the calculation of the average puerperal mortality of women in childbed at 5 per 1000 in England "includes the deaths of women in childbed from all causes." If Dr. Edmunds will refer to the Registrar-General's last annual Report, he will see that Dr. Farr uses these precise terms: "The usual mortality of mothers from childbearing is five deaths of mothers to every 1000 children born alive;" and this is the sense in which we have always understood the expression "mortality from childbirth." If Dr. Edmunds supposes that every case of death of puerperal women from disease, such as small-pox, scarlatina, or typhus, ought to be added to the deaths which occur from metria and the accidents of childbirth to get the resulting mortality fairly due to childbearing, he grievously misunderstands the object which Dr. Farr has in view in calling attention to the dangers of childbirth.

With reference to the general scope of the Female Medical Society, which Dr. Edmunds thinks so highly of, we hold, with all deference, that it is a fair subject for criticism. But we must correct the mistaken impression he entertains as to the intent of the article on "Midwives" which appeared in this journal of June 23, and which he construes to be an admission "of the necessity of the movement in which this Society is now engaged." The plain truth is, that no reference whatever to the "Society" was intended; its special application was indeed to an institution noticed in the article immediately preceding, on the "Nightingale Fund"—which, as a part of its operations, contemplates the training of nurses for the sick and midwives for the service of the poor generally, but especially in districts where Medical aid is deficient. The whole tenor of our remarks applied to the establishment of a service *supplemental* to the Medical Profession, not to supersede it; and herein, as we conceive, lies the difference—a very wide one—between Dr. Edmunds's aspirations and our own, so far as they are indicated by the article referred to.

One of the avowed objects of the Female Medical Society, as set forth in a printed prospectus now before us, is the "employment of educated women in midwifery *and* in the treatment of the diseases of women and children." Yet Dr. Edmunds says he does not advocate "lady *general* Practitioners!" Then why does he not strike the latter part of the sentence we have quoted out of his prospectus? He admits that "lady *general* Practitioners would, on account of their clothing, be most dangerously liable to propagate all sorts of contagious diseases among their patients, and it is obvious that, in the hurry and bustle of general practice, they would frequently carry animal poisons from their infectious patients to those who are so wondrously susceptible as lying-in women." Does Dr. Edmunds suppose that when an "educated woman" has received a complete Medical education she will confine herself to midwifery cases alone? If he does, he must be exceedingly sanguine. And even if the two branches of midwifery and Medicine were kept distinct, the report of Mr. Radcliffe on "several concurrent cases of puerperal fever at Maidenhead," which we have appended to Dr. Edmunds' letter, proves clearly enough that as much or more mischief may result from the employment of midwives as of Medical men, so far as communicability of puerperal disease is concerned.

We regret the tone of Dr. Edmunds' letter. It is certainly not calculated to remove the impression which his injudicious advocacy of his Society and his criticisms on the Profession of which he himself is a member have created. We are not of those "whose public feeling has been effaced by trade instinct," and we repel the insinuation that any such motive has created the opposition which frets him. That opposition has been brought about by the statements which he has made, as it seems to us, on insufficient grounds, and will cease when he thinks fit either to withdraw or substantiate them. *Cessante causâ, cessat et effectus.*

CHOLERA IN LONDON.

There appears to be reasonable ground for believing that cholera has done its worst in London—at least for this season. The deaths by the epidemic have fallen from 1053 and 781 in the preceding weeks to 455 in the week ending August 18. This decline is apparent in the general mortality of London, which has subsided from 45 to a rate of 31 per 1000, which is yet greatly above its general mortality rate. The weekly excess of deaths in the last five weeks has ranged from 428 to 1213, 1266, 933, and 467, and the curve indicated by those numbers represents the force of the cholera outbreak, now happily following the observed law of all epidemics.

The Registrar-General's Return for the week ending August 18 illustrates the results of the epidemic upon the mortality of the several London districts for the period of five weeks from its first declared presence amongst us. We append the following table, which is compiled from the Return, to enable our readers to see for themselves how extremely localised the epidemic has been.

Water company furnishing chief supply.	Districts.	Elevation in ft. above Trinity High-water Mark of the Thames.	Persons to an Acre in 1866.	Average Annual Rate of Mortality to 1000 Persons living in the Five Weeks ending Aug. 11, 1866.		
				All Causes.	Cholera.	Diarrhœa.
	London	39	39·0	37·44	10·70	4·60
	1—6. West Districts . .	30	47·5	24·07	·92	3·67
	7—11. North Districts. .	86	50·7	28·69	1·73	4·55
	12—19. Central Districts .	50	185·4	29·20	2·15	5·11
	20—25. East Districts . .	31	97·6	81·54	46·95	7·66
	26—36. South Districts. .	8	19·2	24·82	1·77	2·83
J. WM. c.	1. Kensington . . .	40	30·9	24·07	1·19	5·14
C.	2. Chelsea	12	76·3	27·69	·32	3·48
J. C.	3. St. George, Hanover-sq.	34	81·2	20·14	·44	2·10
C.	4. Westminster . . .	3	74·4	28·28	1·07	2·75
N. c.	5. St. Martin in-the-Fields.	38	70·1	24·91	·49	2·93
J. N.	6. St. James, Westminster.	58	208·3	18·94	1·53	·92
WM. j.	7. Marylebone . . .	87	105·9	29·24	·52	5·61
N. WM.	8. Hampstead . . .	350	10·5	16·83	·44	2·66
N. H. WM.	9. Pancras	73	78·0	27·00	1·18	5·07
N.	10. Islington	94	61·9	29·86	1·89	4·15
N. E.	11. Hackney	53	24·7	32·02	4·94	2·90
N.	12. St. Giles	68	213·2	29·97	·80	8·19
N.	13. Strand	50	237·7	27·82	2·04	1·53
N.	14. Holborn	53	217·1	31·14	..	7·11
N.	15. Clerkenwell . . .	65	168·3	28·88	1·14	7·51
N.	16. St. Luke	51	257·8	31·47	1·10	5·34
N. e.	17. East London . . .	40	246·2	29·37	6·93	3·33
N.	18. West London . . .	29	184·6	40·97	6·97	3·69
N.	19. London City . . .	31	91·6	17·06	1·84	1·05
N. e.	20. Shoreditch . . .	48	211·8	28·22	3·74	4·04
E.	21. Bethnal-green . . .	38	145·1	76·08	38·89	8·14
E. n.	22. Whitechapel (Lon. Hosp.)	32	188·1	114·62	69·68	8·74
E.	23. St. George-in-the-East .	21	196·6	100·47	60·28	8·08
E.	24*a*. Stepney	21	97·6	114·57	80·41	12·44
E.	24*b*. Mile-end Old Town .		118·5	82·38	49·53	6·72
E.	25. Poplar	8	34·2	107·01	70·40	9·10
S. l.	26. St. Saviour, Southwark .	3	145·7	32·09	3·15	5·16
S.	27. St. Olave, Southwark .	4	111·9	52·42	1·66	4·41
S. l.	28. Bermondsey . . .	0	93·5	27·91	1·62	5·68
S. L.	29. St. George, Southwark .	0	203·9	28·31	1·82	2·54
L. S.	30. Newington . . .	–1	148·5	23·08	·34	1·69
L. S.	31. Lambeth	3	43·6	26·01	1·07	3·88
S. l.	32. Wandsworth . . .	24	7·1	25·03	1·63	2·64
S. L.	33. Camberwell . . .	4	18·8	22·83	2·68	3·06
S.	34. Rotherhithe . . .	0	32·5	23·94	3·26	1·81
K. s.	35. Greenwich . . .	8	27·0	23·42	3·46	1·66
K. l.	36. Lewisham . . .	28	5·2	15·35	·23	1·04

Note.—The several water companies are designated by letters: thus, the New River Company by N., the Grand Junction by J., Chelsea by C., West Middlesex by WM., East London by E., Hampstead by H., Southwark by S., Lambeth by L., and Kent by K. In cases where a district is supplied by more than one company, the initial of the company supplying the greater part is placed first. Where a company supplies only a small part of the district it is indicated by a small initial letter. No correction has been made for Hospitals or Workhouses in deducing the above results.

In the five weeks ending August 11, 3116 persons have died from cholera alone in the whole of the metropolis; no less than 2686 or 86 per cent. of these deaths occurred in six districts at the eastern side of the City, where the inhabitants are certainly not so densely crowded together as in many other neighbourhoods, and where sanitary regulations are probably as much observed as in the worst quarters of the west, central, and southern districts. An examination of the details for these six districts shows a rate of mortality from one specific disease which has no parallel otherwhere in the table. Remembering the influence which has been justly attributed to the elevation of the soil in its effect on cholera, we look in vain for any solution of the remarkably circumscribed area of the recent attack in that respect, seeing that the western group of districts, which lies quite as low as the eastern, has scarcely suffered at all; nor can poverty be relied on as giving cause for the outbreak, inasmuch as there are scores of localities where the people are even poorer than the denizens of Mile-end, Bow, and Poplar. Only one hypothesis remains—that the water supply of the infected districts is in some way concerned in the matter. This hypothesis is very strongly supported by the fact that every part of those districts is supplied with water drawn from one source and distributed from one and the same reservoir. The Registrar-General puts the case thus:—London is divided into thirty-seven districts. Six districts are supplied from the East London Company's reservoirs at Old Ford, and every one has been ravaged by cholera, whilst the remaining thirty-one districts have been comparatively unharmed. If there be no relation between the water supply and the course of the epidemic, and if, as has been shown, neither elevation, nor density, nor poverty, will apply as exciting or sustaining causes in the present instance, then the coincidence of the high mortality in these districts must be evidently fortuitous. But this conclusion implies in 135 cases during six successive weeks the remarkable relation between the use of a particular water and an exceptionally high mortality, which is not only, as the Registrar-General says, a violation of the doctrine of chances, but which is also, as we think, obnoxious to common sense. The intimate connexion between impure water and the propagation of cholera has been incontestably settled by the experiences of 1849 and 1854, and the resulting induction cannot be safely disregarded now merely out of consideration for anybody's feelings. In the interests of the Medical Profession, of the public, and of humanity in the abstract, it is fervently to be hoped that the origin of the "explosion" of cholera in the eastern districts will be thoroughly investigated; all considerations, save that of truth, to the contrary notwithstanding.

THE WEEK.

THE CHOLERA.

The current topic of Medical conversation is the decline of the cholera. The deaths were only 51 on Tuesday, and 35 on Wednesday. In the *Times* of the 23rd, the word cholera does not appear. The predilection of the disease for the districts supplied by the East London water is remarkable enough; but the fact only comes out into its fullest prominence when the details of cases are inquired into which have proved fatal elsewhere. The crucial test of the fact that there was something in the parish of St. James which caused cholera in 1854 was the circumstance that numbers of persons who died elsewhere, ate, drank, and worked in the Golden-square district of St. James's. A man died of cholera in Half-Moon-street in 1854; a woman at Hampstead; both came from St. James's. Subsequent inquiries showed that there was more than mere coincidence here; and inquiries now going on will show that in many instances the first person who has died of cholera in some one of the Western sub-districts has either worked and taken food in the Eastern district, or has been under the influence of the River Thames. We have already mentioned the deaths from cholera in Mecklenburgh-square, in Southampton-row, and in Cumberland-street, Pimlico, as examples. There are more to be added. A boy who was treated in St. George's Hospital (see *Medical Times and Gazette*, August 18, p. 171) worked at Bow. The first case also in the Wandsworth district was that of a man living in Field-lane, who worked in Bow-common. One death was registered on Wednesday, the 22nd, of a young woman, aged 25, at Parson's-lane, Fulham. She had come from Bow. More of these instances will be worked out. Whilst, however, the localisation of the cholera seems to have been mainly coincident with the water source, there are not wanting signs of the general diffusion of the choleraic influence; one of these is the seizure of persons who have not (so far as is known) come within an infected district, but who have been suffering from exhaustion, fatigue, or starvation. The poor working man who walked up from Norwich, and was found fainting in Hyde-park and taken to St. George's Hospital, is one example; and in the epidemic of 1854 similar occurrences were very frequent. It is not to be imagined, however, that these are *tramps*;—poor half-starved men wandering about in search of work are very contemptible creatures—your true tramp is a lordly, well-fed, red-faced fellow; he thinks the cholera a good joke, and, like Gil Blas in the robbers' cave, roars aloud in the night with a feigned attack of colic, and wakes up the master of the casual ward to send for the Doctor, meanwhile begging for a little brandy, which he chuckles at getting. What strikes us most forcibly is the distinct yet limited power of spreading which the disease exhibits. For instance, an artisan living at 6, Brookland's-road, Wandsworth-road, and working at Nine Elms; was taken ill on August 2 with diarrhœa; after a week cholera followed, then his wife became ill, and, as they were getting better, three of their children were carried off in one day, the 15th; and on the same day a labourer living next door also died, after twelve hours' illness. In this case, the motions were disinfected with chloride of lime, and beyond swarms of flies there was nothing to show any special source of ill-health. In the immediate neighbourhood, viz., at No. 2, Hamilton-street, on the same day, died a stoker, whose history is no doubt like that of hundreds of other working men. He had been out of work for some weeks, and during this time had little to eat save tea and bread, although, by a curiously refined etiquette, his fellow-workmen treated him liberally to drink. He was drunk and affected with diarrhœa for a week; got some "powders," but drank all the same; then fell into sudden collapse, and died on the 15th. Verily the cholera is as much a moral as a physical phenomenon.

CHOLERA ON THE THAMES.

The cases of cholera received on board the *Belleisle* Hospital Ship now amount to fifty-one. We are informed by Mr. Harry Leach, the resident Medical officer, that since the commencement of the ship-to-ship visitation two cases only have occurred on the river between London-bridge and Woolwich, or on those parts of the Thames visited by the Medical staff of the Seamen's Hospital Society. There is no doubt that, as a preventive aid, this system of river surveillance is working extremely well; and the success of this inspection should encourage us to hope that some such system may be exercised by the Board of Trade with respect to the supply of limejuice to merchant vessels, so as to eradicate scurvy, that standing disgrace to the ships of Great Britain. If, as on the present occasion, a little care were shown for the sanitary condition of the men composing our merchant navy, the decadence of that body would not be, as it now is, a sadly naked fact, and one too that threatens greatly to interfere with the commercial interests of this country.

THE SANITARY ACT, 1866.

The first summons under the new Sanitary Act was taken out by the Vestry of Islington, and the case was heard at the Clerkenwell Police-court a few days ago. The house selected for the purpose was No. 41, Payne-street, a locality tenanted mostly by low Irish. A reputed case of cholera having occurred in this house, it was visited by direction of Dr. Ballard, and being found to be overcrowded the summons was taken out under the new Act, which constitutes dangerous overcrowding "a nuisance." The fact of the overcrowding being proved to the extent that in certain rooms not more than 180 cubic feet of space were provided for each inmate, the owner was convicted in costs, and a penalty of 20s. was imposed. The Sanitary Act and the 29th clause of the Nuisances Removal Act, 1855, were thus read as one Act. The advantage of using the Sanitary Act in this way is that in the event of overcrowding occurring a second time within a period of three months, and a second conviction being obtained, power is given to the magistrate preremptorily to close the house altogether for such time as he thinks fit. We are given to understand that, at the suggestion of the Medical Officer of Health, notices under the 22nd section have already been freely served upon the owners of filthy houses, where cases of cholera and fever have occurred, for the cleansing and disinfection of the premises, and that the speed with which these notices are complied with, when contrasted with the delays which followed notices under the old Nuisances Removal Act, testifies the light in which the landlords of such houses regard it, and the practical value of the new statute. The manure clause (section 53) is also being applied in the same parish. While we are upon this subject, we would suggest, as probably the best and most rational method of obtaining the full advantages to be derived from section 49, the formation of vigilance committees of the inhabitants, to relieve individuals of the possible odium which deters them from communicating to the Home Secretary any instances of neglect on the part of the nuisance authority in their district to carry out the salutary provisions of the several Nuisances Removal Acts. If half-a-dozen earnest men—whatever their rank in life might be—would, in different parts of their own parish, band together for this purpose, their action would keep vestries alive to their sanitary work, and they would be conferring an incalculable benefit on their several neighbourhoods.

PERILS OF THE SEASHORE.

The accident season has set in with its usual severity; railway and steamboat collisions and the drowning of incautious bathers are found in every paper. So also is the too often-told story of seaside visitors who set out on foot to walk on the sands at low water, and get overtaken by the tide. One such accident has been reported since our last issue, in which one of the ablest Physicians in London was nearly a victim. He may feel assured that the whole Profession felt deeply the tale of his peril and escape.

FALL OF A HOUSE NEAR HOLBORN.

Whilst hundreds are dying of cholera, it is not worth while to make much hubbub about the fall of an old house and the deaths of a few poor people in the ruins. An inquest has been held, and the owners of the house are said by the jury to have shown a want of "proper attention;" but then the deaths were "accidental;" the district surveyor, whose "attention" had been called to the house three years ago, and the landlord, who had been implored by a neighbour to look after it, were not much to blame. If well-to-do house-owners are not to blame for rotten water-butts, why should they be for rotten beams? Besides, rotten water-butts are visible and tangible; whereas, as a witness observed at the inquest, there might have been a "latent defect" in this house. It was added for our comfort that a thousand other old houses are quite as rotten. We well know that there are hundreds in the middle of London which it would be wise economy to replace by modern and wholesomer structures. Any one who will walk through streets more than thirty years old will see very few houses whose upper sashes will open—that is, unless they have been "done up" lately—and it is quite certain all such houses, unless lately drained by pipes, contain the old, flat-bottomed brick drains, and probably cesspools.

DR. NEWMAN'S CASE OF CÆSARIAN SECTION.

The case of Cæsarian section performed under local anæsthesia with ether spray by Dr. Newman, of Stamford, and reported by us several weeks ago, has progressed most favourably. On the 17th of this month Dr. Newman records that, in so far as the operation is concerned, "the woman is well." She is able to get up; she sleeps well; her appetite is good; she is in no pain; and the wound has healed. At one time in the course of her recovery she suffered severely from flatus, but was relieved speedily and thoroughly by Faradisation.

A THIRD CASE OF CÆSARIAN SECTION UNDER DR. RICHARDSON'S METHOD OF LOCAL ANÆSTHESIA.

The operation of Cæsarian section was performed again by Dr. Greenhalgh on Sunday last, Dr. Richardson having first produced local anæsthesia by the ether spray. The patient resided at Shoreham, near to Brighton, where she was under the care of Dr. T. Fuller and of Dr. Hall, of Brighton. This was her first pregnancy, and it was believed she had advanced into the second week of the last month. The obstruction to natural delivery was a large tumour, probably malignant, which had its origin in the rectum and pressed forward upon the vagina, rendering it difficult for the finger even to pass to the os uteri. Local anæsthesia, in the line of the incision, was produced by Dr. Richardson, with a single large jet, in fifty seconds, but the effect was sustained some seconds longer, until Dr. Greenhalgh felt through the abdominal parietes that the uterus was beginning to contract. Then the incisions into the uterus were painlessly made, and the child and placenta were extracted with great ease and rapidity. The period from the first application of the ether to entire delivery was three minutes and thirty-five seconds. There was a gush of blood (four to six ounces at most) when the uterine wall was divided; but there was no further loss, and the uterus in a few minutes was well contracted. The wound was closed with sutures of silk. As in the previous case, the patient expressed no pain until the hand was passed into the uterus. She gave expression to pain during the delivery, precisely as is common to women while bearing very moderate expulsive labour pain. During the whole of the operation she showed no sign of shock or depression, and within two hours there was lochial discharge. Nineteen hours after the operation, Dr. Hall was able to report her as progressing without an unfavourable symptom, the child (a girl) being also alive and well. The details of this case will be fully described in a future number by Dr. Richardson; meantime, whatever may be the result, it is clear that the local anæsthesia again proclaimed its many advantages. It relieved the pain of the knife, and so prevented shock; it subdued hæmorrhage; and it induced uterine contraction. In short, by its means the Cæsarian operation was brought, in so far as human suffering was concerned, to the simplest and mildest form of natural labour. There were present at the operation, besides Drs. Greenhalgh and Richardson, Dr. Hall, Mr. Jardine Murray, Mr. Blaker, and Mr. Philpott (of Brighton), Dr. Fuller (of Shoreham), Drs. Sieveking, Meadows, and Murray (of London), and Mr. Arnold.

FROM ABROAD.—THE LEGION OF HONOUR—RABIES CANINA.

In the annual shower of decorations of the Legion of Honour, distributed on August 15, which has been unusually large this year, the Medical Profession in France does not seem well satisfied with its share. No commander has been decorated from amidst their body, very few officers, and considerably fewer chevaliers than ordinarily is the case. Independently of the Medical officers of the army and navy, there have been created six officers and forty chevaliers. Among those who have received the honours there are not many whose names are familiarly known to English readers—many, in fact, seeming to have been decorated for mere length of service in the posts they have held. We may, however, mention the names of MM. Mercier, Kœberlé, of Strasbourg, Jaccoud, Delpech, Roger, of the Enfants-Malades, and Bouley, of the Necker.

In a recent publication upon *rabies canina*, M. St. Cyr, Professor of the Lyons Veterinary School, arrives at the following conclusions:—1. That the duration of the period of incubation has no fixity, since, in 159 dogs under observation, it varied from 16 to 115 days. The short periods of two or three days, often spoken of in rural districts, have no foundation in truth. 2. Another prejudice in regard to sex is also unfounded, since bitches are not less liable to rabies than dogs. 3. Dogs are more liable to it in proportion to the wandering character of their lives. 4. It is absolutely untrue that hot and dry weather favours the occurrence of rabies, it being in reality found that cases are oftener met with during the rainy months. 5. No other cause of rabies is known at present than contagion, and could all mad dogs be killed at a single blow, the disease would entirely disappear.

REPORT OF THE

THIRTY-FOURTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

(By our Special Correspondent.)

(Continued from page 181.)

THE ADDRESS IN SURGERY.

By William Bowman, Esq., F.R.S.

Mr. President and Gentlemen,—Surgery has always been that department of the healing art which most strikes the imagination of mankind, and secures their admiration, by prompt, dexterous interposition, in obvious and great perils, where life or limb is jeopardised, when the ignorant or timid are ready to despair, or the disease seems too terrible and deadly to be controlled. One now steps in, holding in his hand the talismanic charm of knowledge, with skill to find and courage to touch, for their correction, the hidden springs of life, and in a few moments how altered is the scene! The poor sufferer, a weeping family, or, it may be, a nation in deep anxiety, is relieved; and gratitude, the most precious human tribute for so great a benefit, so opportunely conferred, mingles with the respect and almost veneration that greet the successful operator.

Pardon me if I avow, arrived at middle age, that m boyish ambition—not far from this Castrum of the old Romans, and under the inspiration partly of one still among us (my father's friend), partly of others to whom I am even more deeply beholden—was to be a great Surgeon. And though I am able thankfully to acknowledge a gradual diversion of my lot in life away from this dream of earlier days, I yield to none in my regard for the eminent dignity of the Surgical Art, concerned, as it is, with some of the dearest earthly interests of mankind, and certain to rise more and more in their esteem as they become more capable of weighing things and men by the true and real standard of *their usefulness*. For I see no reason to doubt that future ages will still accept the pious saying of one of old, that Surgery is the hands of God—the human hands, apt images and reflex of man's whole being, from his morning hour of puling helplessness, when the

> . . . "tender palm is prest
> Against the circle of the breast;"

through all his working day of time; until they at last shall be upraised once more in joy and adoration, to hail a brighter and an eternal dawning; the human hands, permitted now, through insight into God's laws, to be the saving instruments of that earthly life and organisation, which His power, wisdom, and love, having first brought into being, still alone doth sustain and cause to perish when their part is played; of that organisation which dies every hour it lives, which indeed dies by living and lives by dying, and which wondrously transmits ever its own prerogatives and dark secrets to a succeeding life, destined apparently to remain a marvel and a mystery impenetrable to all generations.

A general survey of the present state of the healing art in those countries that most represent the recent progress of mankind, may well incline us, on an occasion such as this, to outstep the narrow limits of the specialty of Surgery, to which, indeed, our precedents do not confine us, and to inquire whether we be not in some danger in England now, amid the multitudinous divergencies and details of modern practice, of losing sight, in some measure, of the essential unity that pervades our whole work of healing in the world; and further, whether we do not need to hold more to this central idea of unity, in order, by greater concentration of our powers and agencies for good, more effectually to promote the proper objects of our great Profession, by better directed common efforts than in times past.

And can such a theme be more appropriately handled, than before an Association which is, up to the present moment, the only visible upholder and representative of the comprehensive unity of all ranks and degrees of healers in this country, and which has been for many years working towards the realisation of it?

Let us, then, spend a short time in tracing, if we can, the scope and meaning of this work of ours, which interests ourselves so very closely, and our fellow-men hardly less. And for this purpose our past history shall first be adverted to, so that we may gain, as from a distance, a more general and a juster view of our whole position.

With the earlier developments of the art in remote ages we are little concerned, except to observe that the same simplicity of conception which we now find among our less instructed countrymen, implied in their respectful customary epithet of "Doctor" addressed to us all alike, regardless happily both of University-acquired titles of too motley import and of modern Acts of Parliament—this same simplicity of conception would probably more apply to the healers of a dawning civilisation; who, though they then, as now, must have failed in any instance to embrace all knowledge and all the powers of treatment, yet could hardly have been other at first than general Practitioners.

Probably the state of the healing art (if so it can be called) in various savage tribes, and among the antique and decrepit communities of the East, only now being awakened out of the torpor of tens, perhaps of hundreds, of centuries, by the rude shock of contact with modern European forces, may exhibit to us, not inaptly, what it once was among ourselves. Certainly the early growth and moulds of our Profession must have been natural, not fostered by artificial means, except indeed where the policy of chiefs, or the craft of a pagan priesthood, may have warped them to their purposes. But generally, where individuals evinced or professed an aptitude, opportunities of experience would be rife enough, and according to the nature and variety of these would be the developments of knowledge and the divisions of practice.

In later ages, the elaborate civilisation of the Greeks and Romans, and subsequently of the Arabians, was manifested scarcely less in their knowledge of healing than of other useful arts, as their extant writings attest; it being reserved, however, undeniably for Christianity to elicit first among mankind the true spirit, as well as the right exercise of the art, in the institution of Hospitals and Asylums, and of nursing brotherhoods and sisterhoods, for the sick and maimed.

But, indeed, although the practice of Surgery in particular must have reflected, like other arts, the prevalent temper and ideas of those times, and may have been often rude, coarse, and undiscriminating, based on loose surmises, false analogies, or on prejudices or fancies altogether absurd, hence becoming what we might now be inclined to call unfeeling, even cruel; yet always, its aim being beneficent, its tendencies must have been so too—a humanising art, intervening on the side of mercy and pity, even in the wildest hours of savagery or war.

Turning to Britain and the dark ages, haply our Chirurgeons were a sorry set, who carried out lamely the despised manual part of treatment, under the direction of an order of men, by priestly office, or by education and social rank, above them, to whose authority they bowed—a set of men misnamed learned, ready in every difficulty to quote Galen without understanding him, and generally more ignorant than the poor handicraftsmen they controlled—men whose word could seldom be questioned, never gainsaid, though, from the falseness of their principles, they could never advance one step in true knowledge.

It was probably war, ever recurring war, that raised a few individuals from time to time into greater prominence and credit as Surgeons; for the powerful leaders of armies must have often experienced the benefits of Surgical treatment; and in extremities of danger the Surgeon must needs have taken a position in the esteem of multitudes which those would miss who could not, or would not, stanch a wound or save a life by operation. And it is inconceivable that, even in those half-barbarous times, the greater sort of minds among the body-Chirurgeons of emperors and kings should not have emancipated themselves from the obviously absurd relationship implied in their being merely the manual executors of the dictates of other men, whose fantastic pedantry and real ignorance of the practical part they must necessarily have contemned.

And in civil life a counterpart was seen. Isolated students in convents, cullers of simples, ignorant travelling quacks and mountebanks, bone-setters and leeches, flitting formless creatures in the twilight time. Then came the guild of Herbalists and Barber-Surgeons. Then, from our universities, especially on the revival of learning, Physicians, with a truer scholarship and more open minds, to whom all mankind must ever acknowledge themselves indebted—men competent to hold their place, even in that age of erudition, with the most exalted dignitaries in Church and State, and still maintaining, probably on that very account, their old superiority in station over their less learned chirurgical brethren.

But now, here and there, a real Surgeon rose; bold, perhaps prudent also; successful in grand ventures; startling the popular imagination by some marvellous cures of deep painful disorders or of portentous aspect, till then deemed incurable. Thus, Operative Surgery in great cities became the Surgery of the greatest Practitioners, and oftentimes overtopped and overshadowed the reputation of learned *medici;* causing, no doubt, jealousies, which we know to have been keen, but which we may now all the more afford to smile at, as we are certain none such exist amongst ourselves. Surgery thus became studied more and more by a class, as its prizes were great, and some men seemed by tastes and natural gifts more fitted to shine in it. It became an elaborated art, founded on observation of anatomical relations, both healthy and morbid; it began to have a distinct literature, and a body of rules and precepts, which were the subject of public debate and were traditionally transmitted. Its Professors increased in numbers and breadth of aim; they even shared with the most skilful Physicians in cultivating the knowledges (hardly sciences as yet) which pertain to the Healing Art; and to draw nearer to our own day, they have, within the last hundred years, in this as well as in all civilised countries, borne an equal, in some instances a transcendent, share in enriching and extending the whole field of Medicine.

But I am not here, gentlemen, to say flattering things of one department of our art to the disparagement of another. Nothing could be more remote from my intention. On the contrary, I desire to speak the truth only—to show our common aims and victories, and to vindicate the common bond that unites us all.

And for this, I must still ask you to revert with me for a moment to Tudor times.

We are tolerably well acquainted with the state of practice in our own metropolis in that day, when some of the most eminent revivers of learning, of whom England is rightly proud (though some of them were favourites of a court, paid by Church sinecures), established an Institution, since become venerable, which in those days fought a hard and, it must be added, a successful battle with the Surgeons before the Lord Mayor of London and other of the Queen's delegates (the more enlightened Master of the Rolls and the Bishop of the diocese bringing, we are told, many opposing arguments on the Surgeons' part) for the right and privilege of alone prescribing in Surgical cases inward medicines—and such medicines!—when the Apothecaries' shops, no less than the Chirurgeons' instruments, were still to a large extent under their control; and when, for example, one unhappy John Luke, *ocularis medicus*, receiving a faculty to treat diseases of the eye, was strictly limited to the use of external means, and forbidden all internal remedies, by whatever avenue they might be introduced, except under the advice of some learned and experienced Physician accredited by the College.

All these grave and learned men played their part well, however, according to their light. They upheld among the highest and most cultivated of the land, as we gladly acknowledge their successors do at this day, the dignity of the Profession and pursuit of healing. And if they did not plant this dignity in its true seat, knowledge of the frame that is most noble on this earth, and knowledge for the sake of usefulness to suffering man; if they sometimes stifled thought, as when they caused one of their number to recant, who had had the temerity to maintain that Galen was capable of error, we may remember what they did to introduce Anatomy into England, and to advance Surgery itself. Receiving from Lord Lumley an endowment under the Great Seal for a Surgery Lecture in the College, they "most thankfully accepted so honourable and generous a donation, and built rooms more ample and spacious for the better celebration of this most solemn lecture." And from among them sprang one, whose well-known services to our common calling and to mankind can never be adequately honoured, particularly for the prescient, penetrating, comprehensive character of his intellect, and the clearness of his perceptions; whose name will descend to the latest posterity among the greatest of English worthies.

William Harvey was Professor of Anatomy and of *Chirurgery* to the College of *Physicians*. His character was every way grand. The main feature of it was a supreme love of truth, and an intense longing to penetrate the secrets of organic nature; and for this he asserts always the right and the duty of going straight to the fountainhead of Nature herself, acknowledging no master in things natural but facts and the evidence of the senses. Modest, gentle, unselfish, courteous, not covetous of honours, he was fearless in asserting new truths, believing in their own native power to live and fructify; slow to controvert errors, knowing that they would disperse of themselves, and that narrow and prejudiced minds would cease to cavil, when the clearer light should have time to blaze forth. Withal he had that deep reverence for the Author of Nature which springs unbidden from the contemplation of man's own littleness amid works so mighty and so minute. How profound a truth he beautifully proclaims when he says:—"If you will enter with Heraclitus in Aristotle into a Workhouse (for so I will call it) for inspection of viler creatures, come hither, for the immortal gods are here likewise, and the Great and Almighty Father is sometimes most conspicuous in the least and most inconsiderable of His creatures!"

The torch of Harvey was lighted in Italy, where, while the fine arts were already waning rapidly, science was rearing erect her standard; and at Padua, where he listened to the teaching of the greatest masters of Anatomy, Medicine, and Surgery, Fabricius ab Acquapendente, Minadous, and Casserius, he must doubtless have discoursed with, and caught the spirit of, one still greater, Galileo. At home he may probably have known personally, certainly by his works, the immortal author of the "Advancement of Learning." Thus is science exhibited as not of a country, but of the world.

But tracing onwards the progress of the healing art in England, which had been founded at first on the institutions, traditions, and customs which, we shall find, represented the convenience of an imperfect and transitional stage of society, not less than individual tastes, growing rigid under the influence of forms and titles, and gathering around themselves clustering personal and corporate interests, not always in harmony with those higher objects by which alone they could have been at first justified; and tending to keep apart, though with decreasing force, the two great bands of a common profession.

The Physicians, it must, I think, be said on the whole, though with some remarkable exceptions, receded during the last century from the spirit and the traditions of Harvey, while they maintained orations to his memory. It is not surprising that Anatomy and Surgery should have ceased to be actively promoted by a college which was gradually losing its hold on the Surgical domain of practice, in proportion as Surgeons were becoming independent of the old restraint.

The Physicians were now, by their abstinence from all manipulative treatment, in a position of increasing isolation as regards a great domain of the field of experience; they were specialists by a great defect, by a self-negation; and the consequence was that many of the higher intellects among them betook themselves to a too exclusive clinical observation of disease, analogous to that of some of the ancients, and not sufficiently seconded by deep and personal study of the organic structure, and the laws of life; while others distinguished themselves by learned or philosophical labours, more or less important, and more or less connected with the immediate work of their calling.

The result has been that the Medical world has seen several systems or schemes of treatment promulgated on insufficient bases, but with much pretension of a simplicity for which Nature gives no warrant, and which have yielded one after another at the first summons of reason and common sense; not without grave discrediting of the whole Profession in the public eye, and not without giving a sort of countenance to that easiness of belief with which, within our own century, have been received by the public the flimsy follies of the shallowest and barrenest, the most credulous and the most boastful of Medical phantom sects, that of the self-styled homœopaths. In the more recent times, however, of John Richard Farre, of Matthew Baillie, and of Richard Bright, they have laboured afresh in the patient study of disease, not only during life, but have themselves, with their own hands and scalpels, sought real knowledge by the personal examination of the organs after death. They have also taken a large and important share in advancing the physical, chemical, and physiological sciences; in these and other ways thus setting a splendid example, and redeeming a position which might otherwise have been jeopardised.

For the Surgeons had approved themselves the truer followers of Harvey. Holding always to Anatomy, as by the very nature of their function they found themselves more and more constrained to do, and also finding apter materials for study in the more exposed and less recondite diseases falling to their care, as well as in the open results of wounds, including those of their own making, they have joined Anatomy, Pathology, and Surgery in a natural alliance, most favourable to progress and always abounding in new fruits, and have gradually risen in influence, establishing in our great Hospitals and in our fleets and armies an equality of rank with their more erudite, but (must we say it in all kindness?) unhandy brethren; and unostentatiously but surely asserting more and more the claim of the Surgeon's hand to be guided by the Surgeon's mind and conscience, from which henceforth it can never again be unholily divorced.

In the last century, in our own country, two men stand out from the rest—two Scotchmen—who gave a great impulse to the healing art. Brothers by blood, the Hunters were also of like tastes and industry, and nearly of equal genius, though John excelled by the acuteness of his penetration and the universality of his views. Both when young were Surgeons and Anatomists, toiling in Harvey's "workhouse," and William acquired his fame in practice as an Accoucheur. Both were illustrious by the museums they created, one of which has since become, by State purchase and the subsequent labours of Richard Owen, indeed of more than one kindred mind, supported by the liberal subsidies of the College of Surgeons, the most glorious appanage of a great Profession that the world has yet seen; and the other is in the city of Glasgow, to which the munificence of its founder bequeathed it, with an endowment for its maintenance.

John Hunter was so largely employed during many years in applying his knowledge to the relief of human ills, that it is indeed marvellous how he could have at the same time laboured so hard in the general field of the sciences of life. But (given his mental capacity, zeal for his subject, and the pauseless industry that sprang from that zeal, and overbore the instincts which must have often yearned for repose in a life of great anxiety and suffering) this double labour, which since the time of Harvey had hardly been seen united in any one man, is to be explained by the mode in which his mind ever carried physiological principles into the details of daily practice, and sought in return, by the study of those details, to illustrate and advance his general views of the processes of life. Had the two fields of thought been in his estimation distinct and separate, he could not have achieved in each so great a victory; in each, it will be found on examination, his success depended largely on the real union which he more than any of his contemporaries, or even of his predecessors, recognised to exist between them. English Surgery and English Medicine, in all their departments, have been since strongly coloured by this principle. This indeed is the abiding lesson which his life and labours have imparted to those who succeed him in the noble function of ministering to the wounded and sick, in his own country and throughout the world.

The Hunters may both be regarded as types of what the great masters and leaders of the healing art should be. They were anatomists; they were physiologists; they were pathologists; not by secondhand learning from the tongues or pens of other men, though this they did not despise, but by truth-loving observation and interrogation of Nature herself, in all her haunts of health and of disease; admitting no veils of limitation to be drawn by fashion, or caprice, or selfish interests between provinces and things essentially akin, but taking in the whole scope of the art as one great and ample field of noble study and beneficent activity—one by the unity of man's body, to which it yields a voluntary and loving service; one by the identity of the methods of research by which the secrets of that body (whatever secrets, and of whatever part) are to be disclosed; one by the common aim and intention of all treatment, internal or external, remedial or preventive; one, lastly, by the simplicity of the moral attitude which should stamp us all as members of one body, in our relations towards one another, to individual patients, and to the community among which we labour.

Gentlemen, I look upon the present meeting, comprising native members of every branch of our Profession (and would that we could welcome, in future years, many more brother members from other lands!), as one representing the idea most needing to be insisted on amongst "Doctors" at this time and in our own country, and which, I am persuaded, men like Harvey and the Hunters would have been foremost to assert and act upon—the idea of *the oneness of our common calling.* And can we aver that there is no need to advance this idea? For, could we imagine these great ones of the past to be still with us, what special encouragement or opportunities for his cherished pursuits, we may ask, would Harvey now find in his own favoured College of Physicians, whose welfare and improvement, we are told, "was the chief object that occupied his mind for several years before his death," but where "solemn lectures on Surgery" are no longer given; where there is no anatomical or chirurgical work performed; and where no "repository for simples and varieties" exists, such as he fondly hoped by his benefactions and his example to have founded; even no museum of morbid anatomy, such as Baillie and Bright would have longed for. On the other hand, should we be likely to find Harvey, a Fellow of the College of Physicians, admitted to demonstrate the motion of the heart and blood in the Hunterian Theatre? Could William Hunter, having become, as he did at the age of 38, a Licentiate of the College of Physicians, and not being longer "in actual *bona fide* practice as a Surgeon," share in the Councils of the Hunterian College, or in the love-labour of its Museum? or could he adorn its chair by his eloquence? Finally, could his greater brother, immortal by his "Treatise on the Blood," but being "only a Surgeon," find entrance, consistently with existing usage, to discourse on that great theme within the walls which derive their chief glory from the Discoverer of the Circulation of the Blood?

It would ill become me, humble as I am, and feeble in grasp of thought, to utter or imply anything in the way of censure of these venerable corporations, which, with all their human imperfections, have done, are doing, so very much to adorn and advance each its own side of our common Profession; and, if neither of them has yet found itself at liberty to esteem of subordinate importance those class and college interests, those "rights and privileges," which a former age fenced in by forms of oath now generally disapproved of, whatever useful purposes they may once have served, it must be freely acknowledged that much has been effected by both in many ways, in recent years, to approximate to a policy more liberal and large, and certainly one more likely to secure the class interests themselves by engaging for them, so far as they are good and useful, the support of the whole Profession.

Some minds abler than my own may, indeed, doubt whether the time be yet fully come for any large attempt at consolidation or union of these and other kindred bodies. We may be deemed to be still in a transition period, in which we must be content to work a little here and there, as we may, towards a better organisation and truer views. I know not. But I must express my own conviction that the old rivalries of "Physicians" and "Chirurgeons" are now laid asleep in the breasts of all men of sense; or that, if they survive at all in our ampler day, it is only in some remnants of the traditional policy of the council chambers of corporations, the vast majority of whose members are now too enlightened to harbour them much longer, against the broad and well-understood interests of a whole profession. I am persuaded that the leading minds of both the more powerful corporations are in accord with the great bulk of thoughtful Medical men throughout the three kingdoms, that these great and noble foundations, so far as they retain, in their constitution or in their forms, traces of the antiquated prejudices and narrow notions of an age long since past, should mould themselves afresh to suit the wants of a more instructed time, when the Medical world, being older and much larger in numbers, is also more highly educated and wiser than before. The whole Professional body has a perfect right, most of all in our progressive England, to see the institutions which are its own made conformable to the wants of a period of unexampled social activity and advancement, when all the old impediments to intercourse are vanishing day by day as by the touches of an enchanter's wand; and when there are spread everywhere over the land able and intelligent members of our Profession, whose co-operation should be invited and carefully organised, not only for the satisfaction of their own just wishes, but still more for the sake of the immense impulse that would thus be given to the prosecution of those common objects which it so much imports us, as a scientific and professional community, to pursue.

And here, I trust, it may not be out of place to call before us for a few moments the memory of four men, from whom, had they been spared to us, a comprehensive view of all interests, judicious counsels, and a liberal course of action, might have been expected. It cannot, indeed, be truthfully said that their loss is irreparable, for in England no man, however valuable, can long be missed: their room will doubtless be supplied. But to allude to the living might be invidious.

Benjamin Collins Brodie was eminently a man belonging to us all. A great Surgeon, he was also a great Physician, though probably he could not have been placed on the *Register* under that title. But he was a great Medical Surgeon, able to take in all the aspects of every complex case, to prescribe or to withhold physic, to operate, or to advise against operation. This capability arose primarily from what has been already suggested as its natural and legitimate source; he had zealously, as a young man, pursued the paths trodden by Hunter. He knew the body and its functions by the evidence of his own senses; he had meditated deeply on the inner phenomena of life; he had experimented on animals; he had enlarged the knowledge of his day. When the cares of an almost overwhelming practice pressed heavily upon him, he still did not desert Science, and we owe to him, in addition to his many pratical works, some most thoughtful contributions to physiological psychology. His scientific fame, reaching everywhere, is an honour to the Medical Profession, not alone to the Surgeons, but to us all.

Joseph Henry Green was of too much capacity to be a Surgeon only. Early devoted to metaphysical speculations, for which his grand and subtle intellect peculiarly fitted him, he was also a wise, prudent man of action. His views of our art were always extended and liberal. He embraced within his range all the world of life; he saw that *pure Surgery*, so called, was a narrow and impossible specialty; he looked on disease as he found it in nature, not capable of classification by any such test as that of the applicability to it or otherwise of one special kind of treatment, the chirurgical or manual. This last was to him a noble portion, but a portion only, of the whole art. He was always anxious, like Brodie, to enlarge the basis of our Profession, to elevate the standard of acquirement in its members, and to promote the sciences which belong to it.

I recall with gratitude the converse—in later years, the intimate and friendly intercourse—I enjoyed with both these considerable men. The third to whom allusion shall be made was in a nearer sense my loved and honoured friend and work-fellow. Bred a Surgeon as well as a Physician, and always fond of Surgical pursuits, a teacher of anatomy, a professor of physiology and of general and morbid anatomy, an ardent worker in the physiological laboratory, mastering in a real and practical manner all the details of his subject, Robert Bentley Todd was both a voluminous writer himself, and a zealous promoter of literary and scientific work in other men. Then he became a clinical teacher and practical Physician, indefatigable in the Hospital wards, excelling some of his English contemporaries by the constant reference he was able to make in his teachings to anatomical and physiological facts and principles. Overburdened with engagements of various kinds, he yet always strove earnestly to promote in his own College, as well as elsewhere, the study of his favourite sciences; and he delighted to speak of those distinguished men the associates or early successors of Harvey, who had shed lustre on the College by their anatomical researches; particularly Francis Glisson, *omnium anatomicorum exactissimus;* Thomas Willis, the author of the still classical work, "*Cerebri Anatome;*" and Clopton Havers, known chiefly by his "Observations on the Bones."

One who followed thus closely in the footsteps of Harvey and the later British anatomists, whose mind, too, was remarkably sagacious and practical, and whose character was of force to leave a considerable impress on his generation, could not have failed to take an active and useful part in promoting union among us. I venture to think that, as his brethren come to look from a little greater distance on his career, he will rise yet more in their estimation ; and his friends will add their testimony to the excellence of his heart and life, as his name and fine countenance are revived in their memory by the marble statue erected in his honour in the Hospital which he largely contributed to found.

You will anticipate me as to the fourth name I would mention —that of Charles Hastings, so lately lost, so justly dear to the members of this Association. His great merit has been, that he first conceived an union of all the classes of our Profession for common objects, and bore a principal part in advancing that union, under many discouragements, to the point we have already reached. I trust that his spirit of wisdom and conciliation, his large-heartedness, his breadth of view, will prevail in the councils of our whole Profession, and guide us all to a more complete concord of thought and action in whatever concerns the advancement of the objects he deemed so precious.

Let us now inquire, by glancing for a moment at one or two characteristics of the age in which we live, whether the time itself does not ask us to take a wide view of our calling, and to break through the trammels of a period of comparative immaturity. We see mankind everywhere becoming more and more one family, chiefly by the increase of man's dominion over nature, through augmenting knowledge of her laws.

It is but a little while ago that Galvani and Volta, experimenting on harmless frogs, in the highest spirit of science, opened up new provinces of research, in which Davy, and Oersted, and Ampère, and Faraday, were soon to astonish the world by the rapidity and brilliance of their discoveries. And it seems to me but yesterday, for I was there, that our Wheatstone, under the approving eyes of Daniell, passing the wire of his battery beneath the Thames, in presence of the now lamented Prince whom we had just welcomed to our shores as the consort of our Queen, proved the possibility of the subaqueous transmission of those subtle vibrations whose rate of travel we now know to exceed in a very high degree that of the mandates of the will along the nerves. Yet already, by a combination of enterprise and skill unparalleled, the magic twine unites two continents; and man's thoughts, ciphered with unerring truth by silent-speaking symbols, in the last degree refined, and borne onwards by tender tremors of the metal, fainter yet far fleeter than Æolian whisperings, are traversing every moment—even as I speak—the awful solitudes of Atlantic depths, under miles of ambient water; where no sound, hardly light itself, can ever penetrate ; all heedless of the fogs and icebergs and mimic storms of the surface, 15,000 feet above. And soon the very globe itself will be woven over with a time-annihilating network—a blessed harbinger, as well as sure eventual promoter, of goodwill and peace, of peace and goodwill to all mankind; and certainly a fulfilment, of which we can none of us as yet appreciate the full meaning, of the loving purposes towards our race of the eternal and infinite God.

From the bed of these watery deeps, too, abysses no longer unfathomable, the finger of man has picked up evidences of teeming life there also, such, probably, as he now knows to have built up, by slow and gradual accumulation, in geological ages of unassignable remoteness, strata of the earth's now solid crust, tens of thousands of feet in thickness ; and these in their turn contain the fragmentary but faithful records of series of organisms that have preceded the existing forms ; and which seem to intimate, with other collateral proofs (though I prejudge nothing), that life has been continuous on our planet from the first origin of organic being, through successive generative links of evolution,even down to, and into, the very times in which we live.

Again, while we consider all this, and descry through Harvey's "optick glass" of higher power, in the tiny elements of the gland of the insect or the gigantic quadruped, an identity of essential structure with the corresponding parts of our own frame ; and while we call to mind that when our yet uncharactered members were seen already by the All-seeing, every one of us consisted wholly and merely of such tiny elements of structure ; who shall say that the touch, the very touch of a mysterious organic kinship is not there, though it be as yet untraceable with certainty, as yet unprovable ? The pedigree of man himself seems to be on trial before the court of science, and a true verdict may be given at no distant period. Let whoever loves truth, and the God of truth, await it with perfect calmness, though it should possibly fail to coincide with some prejudices of the timid. I may incidentally express an earnest hope that our Profession, which beyond others is brought to the threshold of such questions by the nature of its studies and by its habits of thought, and which I aver to be signally remarkable for its love of truth and regard for religion, notwithstanding some vulgar echoes of old charges against us, will play an useful and moderating part, by reassuring less informed persons and quelling groundless alarms. Let us cast aside the foolish thought, so flattering to our pride, that man's dignity depends in any the least degree on the mode of origin of his material organisation, whether in the individual or the race, any more than for the structure of his mature material organs ; and not rather on that capacity for the reception of the Divine Spirit, and for elevated commune with God and his works, which comes with growth, but with which, at the earlier moments of his origin, he has not yet been endowed. It may come to be worth considering, that man's nature may derive comfort from an inversion of the dictum of the witty orator of the Sheldonian Theatre ; and that it may be a nobler, even a more Christian and less Pagan view of our destiny, to find ourselves belonging from the first. in the divine counsels, to an ascending rather than to a descending series of the scale of being. We may come to acknowledge by science, as we now accept by revelation, that our bodily organisation has sprung in the past from the dust of the ground, though only through ascending forms ; and as to our hereafter, although we know not yet what we shall be, we have the assurance that we shall one day share the angelic nature, in seeing God as He is.

Would that the divines of England and their venerated leaders, under the difficulties of their position, could be always mindful, not in words only, of the noble principle, so congenial to this spirit of her church, that such questions, so far as they belong to the domain of man's intellect and sense, must and will be followed up according to the laws of his being and the onward current of human thought, in the interests of truth only, regardless of all consequences ! Would that they would all have faith in science, that they would meet her, embrace her, and not mistrust her! being firmly convinced that her true results, when well proven and finally accepted by all competent minds, after full inquiry, become, so to say, *vox Dei!* That they would remember that such a voice may be so potent as to rise to the height of that which once summoned an apostle to cast off his most rooted prejudices, and to exclaim, "What was I that I could withstand God?" Without in any degree prejudging pending questions, it must surely be prudent, in the interests of both truth and religion, to hold an even mind ; not yielding to unworthy fears of the divine faculty of reason, nor abusing those who are honestly employing it within the sphere of its proper activity ; but having a faith, above fear, in the certain victory that awaits both reason and religion—both God's precious gifts to man in his darkness, and both certain to harmonise at length in Him.

Turning now to touch lightly on some of the advances of Medical science in recent days, let us remark how inseparably they blend with, and mutually illustrate, the general progress outside our own immediate province. They may be conveniently comprised in two words, scientific insight into our work of healing, the actual conditions of the body, in health or unsoundness, having become more easily distinguishable ; their mutual play and connexions better understood ; and our means of profitable interference at once more numerous, more definite, and more manageable.

Before a society so completely informed as you are, gentlemen, I feel it unnecessary to attempt to make good this part of my programme by laboured argument or lengthy illustrations ; examples are only too abounding. Harvey had heard the healthy sounds of the heart, but its morbid sounds inform us now of the nature of its structural defects. The sounds of breathing must countless times ere this have met the ear, but it was reserved for our own days to study them, so as often to enable every tyro to say what is the state of those great organs, hidden from our view, but so indispensable to life. And so with percussion. Nay, with our eyes we can now behold for the first time in its living acts, that marvellous mechanism in its most exquisite and joy-inspiring movements, as well as when it is oppressed by disease, which stands as a sentinel at the orifice of the air-passages, and on which the voice and speech primarily depend. And need I advert to other applications of optical mechanism, or recount how one has called forth another, until the various internal surfaces and structures, particularly those of the organ of sight itself, are now opened to hourly survey, to scrutiny most exact and delicate, so that often even the pulsation of the smallest arteries or veins and the physical conditions of the capillary bloodvessels, with almost the earliest and slightest signs of morbid change, may be detected and made available as guides to treatment? Much might be said under this head. Diseased states thus submitted to the faithful eyesight are seized on by the mind with a vividness that is of inestimable value to the Practitioner, in framing his conclusions as to treatment; and he can judge, too, by the direct evidence of sense, how far to continue to follow up these. In a word, all the advantage the Surgeon has hitherto had, over him who deals with concealed diseases, in that he has had ocular demonstration of his facts, the Physician now enjoys in regard to many internal organs. The Surgeon also participates largely in this expansion of our field of view, while a collateral result is that the Physician in many instances finds himself under the dilemma, either of undertaking operations strictly surgical, or of abandoning some departments of treatment and some important organs, that custom has hitherto assigned to him. Many have had the good sense to consider simply their patients' advantage, and not the punctilios of a class; and thus there has been a considerable and, as I regard it, a very satisfactory demolition of old and artificial barriers between different grades of Practitioners, which the future progress of physical diagnosis must still further tend to promote.

Take another example. By means of that modern optical triumph, the compound microscope, which takes us, as it were, among the very elements of form and the rudiments of organic structure—a world we are apt to lightly regard, though it has infinite uses for us, as it has infinite beauties—by this an instructed Practitioner, even one not highly gifted, but only conscientiously alert and observant, can say with confidence of an organ deep in the wasting frame before him, beyond his touch, out of his sight, which emits no sound, and is the seat of no pain, "This gland has been certainly passing insidiously through this or that important destructive change, it is now so and so, I can accomplish this, or probably only this, for its relief, and this, or this, will be the end!"

And not to weary you, gentlemen, with more examples from the field of diagnosis, the results of chemical examination, frequently seconded by the microscope, need only to be alluded to in order to take their eminently important place in this imperfect sketch, by the side of the other aids to physical investigation of the signs and footsteps of disease conferred upon us by modern science.

As to the intimate nature of disease and of health, modern physiology is a platform on which all Practitioners have an almost equal footing; where they meet and cross each other at every turn, and find everywhere the opportunity of a community of thought and action. All admit that disease is such a departure from a state of health as oversteps those undefinable limits which the organisation will bear, without strain, or curtailment of its perfection. But these are not now such vague words as they might once have been; for vivid light has been thrown upon many of the abstruser problems that formerly perplexed us; the details of the interwoven structures and of the complex functions of our composite frame have been zealously and perseveringly traced by some of the acutest observers and of the keenest intellects that have ever lived; with a harvest of results so plentiful, so reliable, so mutually illustrative, and on the whole so marvellous, as to make very much of the knowledge of even the last generation seem antiquated and obsolete. And we may accept it as a truth that every step forwards in our knowledge of the healthy body, so it be real, must lead us right onwards, too, towards a better understanding of disease; and if of disease, then also of our power of counteracting it, whether in the way of prevention, alleviation, or cure.

As to modern treatment I shall only remark that the direct and obvious tendency of all modern progress has been to make it more rational and more simple—that is, more appropriate, first, to the precise conditions, more correctly recognised in each case; and next, to the degree in which interference on our part is found likely to be advantageous or otherwise to the sufferer.

No conceit of our great advances in the Medical sciences, however, must beguile us into assuming that Medicine itself is a science, or can ever become one, in the sense of our being ever likely to be able to practise it on principles unerring and exact. It is not in any true sense a science, but the application of many sciences, and indeed of all appropriate and available knowledge, of whatever kind, to the relief of suffering. It is really an art, as the father of Medicine long since styled it; and woe be to those patients who fall into the hands of men, aiming at treating all who come to them and all diseases on some single, so-called simple principle, which can really be no other than the negation of all good sense and of all the well-understood conditions of our art. It is an art, however, which, while it must always be pursued with the very closest regard to the individual facts of the case, must in the interest of each patient be pursued in a scientific spirit, for thus only can the facts be duly interpreted and our treatment suitably applied.

And it seems the special glory of the advances in healing knowledge in our own day, that they are of a kind to supersede those vague, general observations by which a few rarely gifted men could formerly, as now, make sagacious, pertinent, sometimes true guesses as to the nature and more latent relations of diseases (though these gifted men oftentimes fell into lamentable mistakes), while the generality steered without accurate chart or compass—or worse, under the deceptive guidance of some false, delusive, though vaunted, theory. Although still, in the uncertain and ever-varying phases of practice, we can none of us afford to disregard the aid of our own unwritten experience, or those general impressions left on our minds by a long series of empirical observations, in which as yet no clue to a satisfactory explanation has been described, these late advances are at the command of all who, being honest enough to desire to detect the nature of a disease committed to their care by a suffering fellow-creature, will, with ordinary intelligence, instruct themselves in the requisite, and usually simple, physical tests. So far as they extend, they are to be most highly prized. They bear the stamp of all true knowledge in being useful, available, and not apt to deceive; and having been once acquired, they become henceforward the inalienable inheritance of all mankind, and doubtless the starting point for future conquests.

The subject of anæsthetics is one which cannot be altogether passed over in this place, though it is hard to mention it and not to pursue it to the exclusion of all else.

Dim notices of the use of medicinal agents to prevent pain in Surgical operations are not altogether wanting in very early times; and the desire and hope of finding some means for effecting this was certainly felt by more than one person during the last century. Even a method by compression of the nerves was actually tried in one of the London Hospitals. But our present universal use of this eminent blessing to suffering human nature is the result, first, of the progress of pure science, not Medical; then, of the applications of pure science by men devoted to particular specialties of practice; and both hemispheres share the glory of it.

Let us look at Cavendish, Priestley, and Lavoisier, at work in their pneumatic laboratories; at Beddoes, with young Davy, in Bristol, trying to make inhalation of gases useful in Medicine, inhaling laughing-gas, and noting its effects; at a public lecturer at Boston, in America, nearly fifty years afterwards, exhibiting its well-known effects to an audience, among whom was a Surgeon-Dentist; at the sudden idea of this one to apply it as a remedy in his own case, for he was tormented with a toothache. It succeeded; but afterwards, when he had urged its adoption on a great operating Surgeon, and it had been actually tried several times, the uncertainty of its effects caused it to be completely abandoned. But the idea had been too intensely impressed on some lookers-on to be ever again lost sight of. Faraday had already long since shown the great similarity of the effects of laughing-gas and of the vapour of ether, and this was familiarly taught to students in chemistry. But nearly two years still elapsed ere another Surgeon-Dentist, who had been present on the former occasion, tried the ether, and found it to succeed so perfectly, and to be so manageable, that he at once proclaimed it to the world; and it was soon adopted by the Surgeons of all countries.

But now a pharmaceutical chemist of Liverpool, at the instance of a more gifted mind, suggested another substance, a product of modern chemistry, discovered simultaneously in Europe and America sixteen years before, which had been medicinally used, and even its name philosophically settled according to the analogy of its exact constitution, by one of the first chemists of France. The gifted man was an Obstetric Practitioner of Edinburgh, whose fame, already world-wide, will not rest hereafter solely even on so great a fact. After applying it in his own department of practice, the adoption of chloroform by Surgeons, to the gradual exclusion of ether, rapidly followed; and all mankind will profit by it until, in the sure progress of the art, some other anæsthetic shall be found, without even the slight inconveniences of this one.

In reviewing the subject of anæsthetics, we cannot fail to be struck by two pregnant facts. The first is that while Surgery has chiefly felt their influence, and its practice has been modified by them in a remarkable degree, Surgeons have been but passive recipients of the boon, which has been brought to them from other quarters, and even from a side branch of their own specialty, which some great ones among us have sometimes thought scorn of. The other is that the noble sister art of physic (considered also as a specialty) has had no part or lot in this greatest of the applications of modern science to the alleviation of man's bodily pangs. I must, however, except Dr. Beddoes, and cannot omit to mention with grateful appreciation the important share borne by the late able and amiable Dr. Snow, both in the theoretical and practical parts of this great subject, as well as the recent labours of Dr. Richardson.

In this instance, as in almost, if not quite, all that most distinguish the modern art of healing, we see it fostered and advanced, not to say transformed, by the influences of general science in departments apart from and beyond ourselves, combined with those of the special sciences, which may with some propriety be called Medical and practical, because they are prosecuted mainly by men engaged in practice, and with the object of applying them in the treatment of disease. Let not, however, individual promoters glory, or indeed a great number leagued as a Profession, for that would be even less reasonable. It would almost seem that as "the earth bringeth forth fruit of herself, first the blade, then the ear, then the full corn in the ear," so the world in our time is reaping results all valuable for the good of mankind, which have been long, and in various modes and places, a preparing, and in contemplating which our feeling should be rather one of thankfulness than of exultation; and this feeling may induce us sometimes to ask ourselves, "Can we do anything now and in the future to help on, by united action, the harvests of a still brighter hereafter?"

This leads me to refer to the actual distribution, at the present day, in this and other civilised countries, of our Professional power or force.

The immensity of the field of Medical science and art is such, that no one mind has ever been able to embrace it all, and the daily enlargement of it in all directions must render it more and more difficult to do so. Hence the great specialties of Medicine and Surgery, however impossible it may be to draw a precise line between them, have long existed and must continue to prevail. The grounds for them lie,—1. In the necessity for a division of labour in large communities (large by concentration of numbers or by ready means of intercourse); 2. In the somewhat equal proportions of grave and serious Medical and Surgical diseases, so called, under the circumstances of human life; 3. In the varying tastes of individuals, causing men to confine themselves, more or less, to one or other of these divisions of practice. But the great majority of Medical men must be ready to undertake all treatment, since the exigencies of Society require it of them.

Now the very same causes which have developed the healing art for ages under two principal divisions, have within a century, and especially of late, led to the multiplication of subordinate branches, often just as impossible to define by strict limits. On these a very few remarks are all that the time admits of.

Specialties, then, are natural products of a period of progress, and of certain favourable external conditions of society, and as such should be allowed free course to develope themselves according to their tendencies. The policy of the Profession towards them should be always to retain them within its bosom, to hold them to their connexion with the whole, of which they form a part, and only to seek to restrain their growth and action, when it disposes them to an isolation, pernicious as regards their own usefulness, alien to the comprehensive spirit of our art, and a violation of our unity as one body.

Medical men, acting under some common impulse, are apt, like any others, to take a one-sided, or what is sometimes called a professional, view of whatever new proposal seems to affect them as a class, or in a large number. Let us, however, consider that our ends coincide with the good of mankind, and that in estimating the good or the evil likely to be done by new specialties, we should appeal to no other standard than the public benefit: Is this or that suggestion for the advantage of the community in which we minister? Our own credit as a body, and generally our individual prosperity, will be found in the general good; and if otherwise, we should gladly yield it up to this.

Hence there are strong grounds for allowing specialties, whether promoted by smaller or larger numbers, to make progress according to their natural divergences and powers of maintaining themselves. Some may originate on an insufficient and unreal basis, started, perhaps, by some supposed individual interest, and sustained by some strong personal bias, talent, or local circumstance; these will fail of themselves if they be left alone; and whatever harm they may do in diverting benevolence from more healthy channels, or wasting time and opportunities, these are probably smaller evils than the creation of a feeling in the public mind, with any degree of reason, that we are narrow, or opposed to the progress of our Art.

What may be styled the Natural Specialties are those devoted to mental maladies, the obstetric, ophthalmic, and some others. These generally have reference to the natural distribution of organs in the frame, or are such as men readily accept, and see the propriety of, in their being manifestly for the convenience of patients as well as Practitioners, and conducive to the advancement of knowledge. These are likely to increase in number, and to strengthen their footing. They should be held bound to the Professional body by every available tie. Two things have given me pleasure in this point of view; the one that the College of Surgeons saw the wisdom some years ago of allying the Surgeon-dentists of England to themselves by suitable links of connexion; the other, that the great library of the College of Physicians was lately the scene, under the auspices of its beloved and honoured President, of one of the most astonishing historical displays of the mechanical appliances of the obstetrical branch of the art ever collected in one room. A happy augury, I thought it, of a larger and grander union, in time to come, of all branches and all departments, under some single spacious noble portico!

Were the whole Profession thus at one with itself, there are many weighty objects which it might labour for with tenfold vigour and effect. I am content, for my part, to regard as of very secondary importance all attempts to obtain political influence or the recognition of merit by titles, whether personal or corporate. For I am well convinced that, whatever may be worthy of our ambition in this respect (and it does not seem much), will follow of itself, and without our efforts, if we are true to ourselves in a higher, and indeed our proper, sphere; by striving to become more useful as Practitioners, wherever we may be, either in our private rounds, where most must toil, or in some more public station.

With regard to our own better organisation, it must of course be worked out by ourselves. We alone understand our needs; and the State cares little or nothing for what does not directly concern the public health, although we must acknowledge that it has shown itself, on many occasions, ready to forward our wishes, when these have been suitably advanced. The institution of the Medical Council is a transitional step of immense import for our future unification, no less than the work performed by that body in the preparation of a common register of all qualified Practitioners, and in the publication of a Pharmacopœia for the whole kingdom. Its beneficial influence will likewise be gradually felt in better arrangements for admission into the Profession on an uniform basis.

But there are many functions, in connexion with the Government, which so great a Profession as ours might rightly ask to perform through its own well-appointed organs; in which, as a body, it now takes no share whatever; which are at present accomplished irregularly, almost as chance or caprice may determine, by a reference, either to one or other of the corporations, or to some individual selected by the minister, whose very name, perhaps, is not known, and who therefore, practically, is not responsible to his own Profession for the advice he may tender. By degrees, indeed, of late years, as the care of the public health has more and more engaged the attention of Parliament, this want has been in part supplied by the appointment of Medical officers for special duties in governmental departments; and most ably have these performed their duties, as the documents from time to time issued by the Board of Health, under the Privy Council, among others, amply testify. And the labours of the Army Diseases Prevention and Cattle Plague Commissions illustrate in another way how the services of Medical men may be most usefully elicited on special occasions or emergencies. More might be added to the same purport. A complete and recognised organisation of the entire Profession, however, would apparently be a measure of great importance in reference to our relations to the State.

But leaving these more public questions, and looking at the whole nature of our position, we may fairly ask ourselves whether in our corporate capacity, as a body of men concerned with such great human interests, we may not hope to do more than we have hitherto done to help forward those interests, for the advantage of our own day and of those who are to follow us. We have a grand inheritance from the past: we should hand it down much amplified to our successors.

Individuals have done, are doing, will continue to do much. But I speak of the direction of a common endeavour, devised by forethought, tending to well-considered objects, and sustained by the united will of an enlightened, numerous, and, on the whole, powerful Professional body, to promote and advance those branches of knowledge which lie at the foundation of a rational art of healing.

I am not here to flatter any man, least of all to commit the little less than crime of the huge flattery of my own class, to the lowering of what should be our higher aims; and I say, with all love and respect for my fellows, and with a deep sense of my own shortcomings, that we are not doing, as a body, what we might do in Britain to extend and deepen the scientific foundations of our Art.

In our corporate capacity, we ought to foster especially those departments of research which are least likely to be undertaken by individuals without such encouragement; which, indeed, can hardly be prosecuted at all without means and appliances beyond the ordinary reach of individuals. We need in England the public open establishment of means and apparatus for original research and observation, *especially for our younger men*, in the sciences ministerial to Medicine, particularly physiological and pathological laboratories and for organic chemistry. These should be in part connected with Museums, Medical Schools, and Hospitals. The lay governors of great Hospitals should be moved to consider it as one of their most urgent functions, to see that no unnecessary waste of the precious means of improving knowledge, placed under their keeping, occurs.

The progress which recent years have witnessed, points with sufficient clearness to the direction in which the next steps may be most profitably taken. It is in the field of exact scientific investigation into questions and problems which the latest advances have opened to view. Here each new fact and principle, patiently grounded on previous knowledge and established beyond dispute, though it may for a while appear an idle and unimportant addition to the common store, may fructify hereafter into some solid and useful generalisation, applicable, in the most unexpected and startling manner, to human happiness and the success of our cures.

In any step taken by the whole Professional body for the encouragement and promotion of the Medical sciences, we should not, of course, look for immediate results of that kind termed in common language *useful;* that is, having an immediate and obvious application to some present use. We remember that great uses may long lie dormant, and at length overpower us by their splendour. *Witness chloroform.* Individuals are naturally prone to pursue studies which appear to them most likely to be crowned by an early result. Few have time or opportunity to labour for any result very far off, and for mere love of knowledge; but those who do should be most of all helped on and sustained. As a body, we might have a settled policy, and look further and deeper. Such is the nature of our studies, that at present real advances are to be sought in depth rather than in extent of work. It is only by going deep that we can hope to reach central relations, and such principles as may be at the same time simple and reliable; not simple by the fallacy of an incomplete view. We should encourage the less immediately useful matters of scientific research, such kinds as experience reasonably shows to give promise of great and wide, though more remote benefits. The Royal Society was founded simply "for the promotion of natural knowledge," and what results for mankind has it not aided in achieving!

In a word, we have the certainty, from all history and from the nature of the thing, that out of knowledge will flow useful application; and well-instructed men now-a-days will not cavil or sneer at even the least advance, so it be real, into the realms of the unknown in natural phenomena, because it bears no immediate fruit or gives no present earnest of profit. The torch which illumines will ever be found also to warm and to cheer man's life upon the earth; and this is especially true in the Medical sciences, prosecuted as they are by men whose whole habit and tendency is to apply knowledge.

The time is too short for me to attempt even to enumerate the lines or provinces of research that might be thus encouraged; but there is one subject on which a few words may not be inopportune at the present time.

There is a sentimentalism which I shall venture to characterise as in some of its developments not robust or manly, and therefore not morally sound or grounded on right reason, which is inclined to bring popular indignation, excited by speeches at public meetings and by essays produced under an artificial stimulation, to bear on men of science desiring to investigate great principles in the doctrine of life by experiments on living animals. Having formerly, when circumstances led me into this region of inquiry, and in the performance of my duty as a professor of physiology, taken part in such experiments, and knowing well how vast an accession of knowledge useful to man has accrued, and will certainly hereafter accrue, from such experiments, I should be ashamed of myself, and deem myself to be neglecting a moral duty, if I omitted to take this opportunity of protesting with all my force against the imputation of "cruelty to animals" sometimes raised against Medical men on this ground.

As inheritors of the labours, and, let us hope, of the scientific spirit, of Harvey, whose works abound with evidences that the discovery of the circulation itself was largely due to such experiments, we should be untrue to our ancestry and to our convictions if we hesitated to uphold, publicly if need be, the lawfulness, the expediency, nay, the desirableness, of such experiments; and, as it seems also to me, if we failed in our corporate character to take more active steps than at present to promote these in their proper place and degree, among other kindred pursuits.

A society, respectable and praiseworthy when directing its shafts against the meaningless and selfish acts of vulgar and brutal natures, or when striving in various ways to diminish the pain inflicted on animals put to those human uses which general consent; no less than the widest view of all nature, sanctions, is no longer to be commended when it ventures to raise a prejudice against the refined and honourable inquiries of educated men, seeking to advance legitimately a branch of knowledge most nearly touching human interests of a lastingly high order. For every really forward step taken in the science of man's life, is a part of that progress which is indisputably adding to the sum of human happiness, not only in the present time, but in the future. It is only those well-meaning persons who are little acquainted with the necessary elements, and the excessive difficulty, of such researches, and apparently still less with the motives of the higher class of scientific inquiries, who can presume to endeavour to thrust themselves into a province where no present abuse calls for interference. I think it would be wiser for the excellent persons in question to confine themselves to those spheres of exertion in which all good men and scientific men must heartily bid them Godspeed, rather than wear the appearance of attempting to add to their *éclat*, as a popular society, by a foolish crusade against what can certainly be justified, and must even be applauded by all well-wishers of their own kind, if we admit, as society seems inclined to do at present, that to apply animals to purposes useful to man, is one of the manifest ends of their mutual relationship on the earth.

In the country of Harvey, and in the bosom of the Profession which derives so much glory from his name, in the country of John Hunter, of Astley Cooper, and of Brodie, there should be no doubt as to the free allowance of dissections of living creatures for the advancement of knowledge, whenever the course of investigation demands it, of which those only can properly judge whose minds are occupied with the pursuit. To the conscience and human feelings of these may safely be committed the discretion as to how far this exercise of man's prerogative over all the lower organisations may be carried, without the abuse of inflicting unnecessary pain.

Now that anæsthetics are in common use, physiologists, we may be sure, will be the first to employ them whenever the nature of their inquiry allows; and the public may be satisfied that—in Britain, at least—those who know most of the interior structure of the animal frame, and of the movements, of whatever kind, that are the manifestations of its wondrous life, would be the first to denounce the causeless infliction of one pang on the lowest of God's creatures. Let the indecorum not be committed of dragging such questions before public audiences, for which they are quite unsuitable. Let the opponents of legitimate experiments on the lower animals (and I believe they are few, even in the Society to which I have alluded) desist from a course which, however well intended, cannot be required for their chief objects; and which may expose themselves to the charge once brought against persons of an altogether different stamp, of stopping the gates of knowledge, neither going in themselves, nor suffering those that are entering to go in.

I intended, gentlemen, had my limits permitted, to have adverted to several additional ways in which, as it appears to me, an united Profession could find opportunities of promoting scientific culture; of which a principal one might be the employing more speedy and extensive means of making us acquainted with the productions of foreign Medical literature than have hitherto been attempted. Men of science have a common field and common objects of pursuit, but not now, as once, a common language; for most of us, translations only can supply the defect; and translations, unless promptly brought to us and tolerably full, are of comparatively little value. Nor can our weekly and quarterly journals, conducted as they are with constantly increasing ability, and all of them, I think, comprising a foreign section, do much to satisfy this particular want.

Our New Sydenham Society is worthy of all praise, but its sphere is too limited and its publications are restricted to its own subscribers; and these only 2500, too small a number out of so great a Profession. The original memoirs and works in Medicine and the allied sciences bear a considerable proportion to the whole of the scientific productions of the world; and some idea may be formed of the number of these, from the fact that the separate scientific memoirs and works of all countries, of which the distinct titles could be ascertained as having appeared between the years 1800 and 1863 inclusive, brought together under the authority of the President and Council of the Royal Society, reach the astonishing total of 120,000, while every year's produce is becoming greater than the last.

The Medical literature of Germany, France, Holland, and other continental countries, abounds in materials of great value to us, both as scientific men and as Practitioners (as ours, no doubt, does to them). But unless we are kept fully aware, in each department, of the additions as they accrue, we are in danger of lagging in the race of improvement, and can hardly hope to do justice to our patients or to ourselves.

But, gentlemen, I must conclude. I would willingly have resigned into abler hands the task unexpectedly imposed upon me by your Council. Circumstances and my tastes have caused me for some time past to desire to play my humble part noiselessly in the world; and I have been less able than I could have sometimes wished to share even in the pleasure and the profit of Professional gatherings. I have, therefore (more perhaps than some men), looked somewhat as a spectator, from the outside, on many of the more public doings of our Profession, whose well-being, prosperity, and honour, I yet esteem above all price, and am constrained by every motive to desire to promote. I must say that I have witnessed with delight every successive sign of a spirit of conciliation and approachment between the old, venerable, and most justly honoured, but still independent and detached, rather never-yet-united, corporate institutions, to which so many of us owe an allegiance undertaken formally by a solemn act. It has seemed to me that we have been weaker for good than we might have been; and especially for the furtherance of those beneficent objects which no class will pursue if not our own, and none so well as our own; which, therefore, it would seem to be incumbent on us to prosecute by all the means in our power, and which have apparently been less thought of because of our divisions. Not real divisions of feeling, nor any wide or deep divergence of interests, but only a want of united action; through the continued existence, in too much of their traditional shape, of isolated institutions, which, in their present form, we have somewhat outgrown, and which seem to need some considerable re-arrangement if not consolidation, if they are to represent the altered state of the whole Profession, such as it has come to be in our own age of astonishing progress.

I have now endeavoured to convey to you, I fear at too great length, my general impressions on this head, I hope without offence to any one and with sincerity, certainly very inadequately. I have long looked upon this Association as the element in our Profession out of which stronger bonds of union between all ranks, classes, and degrees, might be expected to grow, than out of any other—at least, at present; for it is framed on the most comprehensive basis, and is organised so that all interests in all parts of our common country may find their place and voice in it.

May it be more and more every year an arena where the wisely expressed objects of its founders may be temperately, but steadily and earnestly pursued—above all, in a spirit of union! and may the leading minds of our Profession, whose cooperation we so much require, and so highly appreciate, come more and more amongst us to help forward that great and noble art of healing, to which, in one or other of its departments, the lives of all of us are devoted!

(To be continued.)

GENERAL CORRESPONDENCE.

FEMALE MEDICAL SOCIETY AND MORTALITY IN CHILDBIRTH.

LETTER FROM DR. EDMUNDS.

[To the Editor of the Medical Times and Gazette.]

SIR,—In reference to the statistics and arguments which I have put forward upon the mortality of women in childbirth, your articles of October 14, 1865, June 23 and 30, and July 7, 14, and 28, 1866, may be summed up in the following propositions:—

1. That the matter which I have published is injurious to the Profession.

2. That it involves a fallacy of which you have satisfactorily disposed by pointing out—

(*a*) That the Maternity patients are all married women, and would naturally have less mortality than a mixed collection of married and unmarried puerperæ. (This is perfectly true, but the resulting correction will be found to be very small.)

(*b*) That the general population of London is not entirely attended by male Practitioners, and that some of the deaths are due to the ignorance of midwives.

(*c*) That the conveyance of infection from patient to patient is much more likely to occur with female than with male Practitioners.

(*d*) That those cases attended by midwives which prove dangerous are referred to Medical men, and thus Medical men get credited with the mortality arising therefrom.

3. That the education of midwives merely is quite a retrograde step.

1. The first proposition resolves itself into the second, as, if a publication of the truth be "injurious to the Profession," such "injury" ought to be consummated as soon as possible, and the best cure for a fallacy is to give it plenty of rope and show it up to the scrutiny of Professional critics. By this means the fallacy will be exploded while its ruins are affixed to the reputation of its author.

Every one who has attained large and responsible practice knows that he can neither perform his duties well nor maintain his own health if he attend also to midwifery cases, and this fact is recognised by every Hospital committee in pledging their Medical officers not to undertake midwifery in any way whatever. Ample personal experience and observation have led me to believe that it is necessary to relieve Medical Practitioners of the routine practice of midwifery, in order to enable them to become scientific men, and for other reasons I think that midwifery should, as a rule, be left in the hands of properly educated women. I wish, however, to state that I raised my voice on this question, not for the purpose of gratuitously disparaging the safety of general Practitioners as Accoucheurs, but in order to refute allegations to the effect that midwives produced excessive mortality among their patients; and if, in the course of discussion, injury have accrued to Accoucheurs, they must blame the assailants and not the defenders of the work of the Female Medical Society. As a fair specimen of the preposterous assertions which met us at every turn, I quote the following from a letter in the *Times* of October 14, 1865, signed by a Dr. Robert Sawyer, of Mile End:—

"Taught by experience in country practice of the terrible consequences inseparable from the practice of female accouchement and the injury done to Medical men who are called in to relieve them from the consequences of their malpractice, *I have always, as a rule, refused to go to cases where a midwife has been in attendance.* From Dr. Edmunds' extensive midwifery experience, no one knows better than he that about nine out of ten of the fatal cases occurring in every Medical man's midwifery practice consist of those to which he has been called after they have been subjected to mismanagement at the hands of a midwife or unqualified Practitioner. This will clearly account for the startling state of the Registrar-General's returns." Dr. Sawyer then goes on to point out "another *cause of low mortality in lying-in Hospitals.*" (The italics are mine.)

As to the statement in support of which this writer appeals to my experience, I am bound to characterise it as evidence of unacquaintance with the subject, on a par with that indicated by the notion that *lying-in Hospitals have a low mortality.* And I doubt whether there be in the Medical Profession any person who will hesitate to join me in repudiating the "rule" which I have italicised.

2. As to the alleged fallacy. The average puerperal mortality of women in childbed is 5 per 1000 for "England."(a) But many writers, and notably so Dr. Robert Barnes in a laboured essay against these statistics which appeared in the *Lancet* of November 11, 1865, have, *in limine*, fallen into the serious error of supposing that this calculation includes the deaths of women in childbed from all causes. After careful inquiry, I stated at the first that the heading "METRIA" includes only those cases of blood-poisoning which pass as "puerperal fever," and that "CHILDBIRTH" includes only those which are due to the accidents and irregularities of childbirth, while the deaths of women in childbed from non-puerperal causes, such as small-pox or scarlatina, pneumonia or bronchitis, paralysis or heart disease, consumption or cancer, are set apart and registered to their own proper causes and not under either of the headings for puerperal deaths.(b) This has since been made clear to every one by the insertion in the Registrar-General's Twenty-seventh Report, just published, of a new table (No. 15) for these non-puerperal deaths in childbed. And the fact is put most distinctly in Dr. Farr's speech at the last annual meeting of the Female Medical Society.(c)

In the Royal Maternity Charity the aggregate numbers for the 15 years (1850-64) have been—Deliveries, 47,600; deaths "from all causes," 132, or 1 in every 361; deaths from puerperal causes," 85, or 1 in every 579. The maximum mortality in any one year from "puerperal causes" has been 11 in 3781 deliveries, or 1 in 344; and there is, on the other hand, one year in which the deaths "from all causes" were only 2 in 3297 deliveries, or 1 in 1650. The subsequent year (1865), for which the report has recently been published, gives:—Deliveries, 3020; deaths in childbed from *all causes*, 3. One puerperal death from "convulsions inducing premature labour at the eighth month," probably due to pre-existing organic disease. The other two deaths were from old-standing "bronchitis" and "consumption" respectively. 97 *per cent. of these deliveries were completed under the unaided superintendence of midwives.*

The statistics of this Charity were collated by me with those of the rest of London, and not with those of all England. If we deduct the births and the puerperal deaths of the Charity for the five years 1860-64 from the corresponding figures for London of the Registrar-General, we find that the puerperal mortality for the rest of London comes out at about 1 to 204 registered births against 1 in 575 for the Charity. As there are in London (census 1861) 5000 Medical men and only 190 midwives, the latter mostly employed by public institutions, and all on an average probably equal to those employed by the Maternity Charity, I said that the women of the rest of London are chiefly attended by Medical men. That statement I still think so nearly fair, that I will not now pursue it further in respect to proposition (*b*). The Charity's patients are all entered on the books and allotted to a local midwife. In case of difficulty the midwife sends for her district Physician, and in case of emergency for a neighbouring Practitioner. *The result of every case is recorded*, whether delivered by midwife or Doctor, and, so far as my comparison is concerned, this fact is a complete answer to proposition (*d*).

(*c*) On the question of infection, an interesting *résumé* of facts will be found in the *Social Science Review* for July, 1866, in an article by Mr. W. Blower, M.R.C.S., "On Childbed Fever and its Prevention." It is there shown that childbed fever arises from the following causes:—

1. Mental excitement.
2. Overcrowding.
3. Hospital influences.
4. Dissection taint.
5. Putrid animal matter.
6. Communication by means of the Accoucheur with erysipelas, typhus, malignant sorethroat, scarlatina, abscess, mortification; and Mr. Blower recites a case in which he himself unfortunately conveyed scarlatinal infection.
7. Puerperal fever itself.

Now, I quite admit and believe that lady *general* Practitioners would, on account of their clothing, be most dangerously liable to propagate all sorts of contagious diseases among their patients, and it is obvious that, in the hurry and bustle of general practice, they would frequently carry animal poisons from their infectious patients to those who are so wondrously susceptible as lying-in women. But I do not advocate lady *general* Practitioners. What I have done is to point out that the casual manufacture of puerperal fever cannot be prevented without separating the practice of Midwifery from that of Medicine and Surgery, and that (*inter alia*) woman's slender hand gives her a great physical advantage in the performance of many obstetric operations, while the "mental excitement" which often occurs in sensitive puerperæ on the entrance of a gentleman, renders it desirable that patients should have the option of employing properly educated lady-midwives, if they prefer it.

3. The statement that "the education of midwives merely is quite a retrograde step," is more than corrected by the writer of your admirable article, "Midwives," of June 23; and while the second part of proposition (*b*) affirms that puerperal deaths are at present caused by the ignorance of midwives, I will set the other statement aside as a slip of the pen.

What I said upon the "statistics of the mortality in childbirth" is published at length in the *Victoria Magazine* for November, 1865, and a full report of our recent public meeting and of the speeches of Dr. Farr, Lord Shaftesbury, Lord Houghton, and other speakers, appears in the number for August, 1866. I beg to refer your readers to those papers, and I shall be glad also to furnish other printed matter and to reply to any questions whatever.

My personal opinion is that the present duty of the Female Medical Society is to endeavour to do for midwives what the College of Surgeons has done so well for Barber Surgery, and that women ought to be provided with a proper organisation for educating themselves in midwifery and the accessory branches of Medical science to a level with Medical men. Thenceforth I would leave to women themselves the settlement of their natural relations with other branches of Medical practice. But, although present convictions would not carry my own efforts beyond this point, I hold that all examinations and degrees should be open to women as freely as to men.

In conclusion, I would state that I am personally most anxious to merit the confidence of the Profession, and that I wish to work in every way for the advancement and welfare of Medicine and its disciples. But I do not see that this would be shown by obsequious yielding to irrational opposition or by silence in the presence of misrepresentation. If it be undesirable to make a Medical education in any way accessible to women, if our present imperfect attempts to give women a proper Midwifery education be really "injurious to the Profession," or against the public weal, let that be shown in your columns by those who hold that opinion. If our plans or proceedings be injudicious, give us kindly criticism, and point out what we should do. If some one of adequate position, ability, and technical knowledge will undertake the duties which, perhaps somewhat presumptuously, I have attempted, let him or her come forward, and I will gladly stand by. But otherwise I claim for the Female Medical Society the sympathy and co-operation of those in the Profession whose public sentiment has not been effaced by trade instinct.

I am, etc.,

JAMES EDMUNDS, M.D.,
Hon. Sec. Female Medical Society.

4, Fitzroy-square, August 6, 1866.

⁂ Dr. Edmunds's arguments receive their answer in the following Report:—

"*Report by Mr. John Netten Radcliffe on several Concurrent Cases of Puerperal Fever at Maidenhead.*

"From the second week in October to the second week in November twelve married women in Maidenhead have been attacked with puerperal peritonitis, and of these eleven have died. The first six cases were attended in confinement by a certified midwife, named Kingston. The confinements took place in rapid succession, and four of the women lay ill of the malady at the same time. The seventh case was attended in confinement by Dr. Plumbe's assistant, Mr. Duke, a Member of the Royal College of Surgeons, and Licentiate of the Apothecaries' Society, who at the time had Medical charge of three of the patients suffering from puerperal peritonitis. The remaining cases were attended in confinement by Mrs. Kingston's daughter, also a certified midwife, and living with her mother.

(a) "England" includes England and Wales.

(b) *Vide* Supplement to the Twenty-fifth Report of the Registrar-General, Section III., pages xxii., xxiii.

(c) *Vide* Report of the Second Annual Meeting of the Female Medical Society, *Victoria Magazine*, August, 1866, page 349.

"With one exception, unfavourable symptoms showed themselves about forty-eight hours after the confinement, and in the majority of the cases the disease ran a rapid course. In one instance, the patient died sixty hours after confinement, in another, four days.

"Shivering, followed by more or less febrile reaction, and pain on pressure over the abdomen, ushered in the malady. The abdominal tenderness increased, tympanitic distension occurred, and in several cases there was diarrhœa, with or without sickness. Prostration rapidly supervened, the patient fell into a typhous state, and in one case only of those which terminated fatally was life prolonged to the ninth day.

"The two groups of cases which had been attended in labour by Mrs. Kingston and her daughter occurred in such rapid succession that the mischief was done before it came to the knowledge of the Medical Practitioners of the town. Of the first group of cases, three coming under Dr. Plumbe's observation at the same time, he at once debarred the midwife from continuing her occupation, the clothes she had worn whilst in attendance upon the cases were burnt, and she herself was sent to the sea-coast, where she remained three weeks.

"The second midwife has also ceased her avocation, and she will not be permitted to resume it until a sufficient period has elapsed, to secure safety to her patients. The duties of the two women are now being performed by a certified midwife obtained from London. Mr. Duke and Dr. Playne (who had attended two of the cases of puerperal peritonitis) have also ceased to practise as accoucheurs for the present.

"No fresh case of peritonitis has occurred since the 8th inst., and it is hoped from the present precautions taken that the outbreak is now at an end. All the measures requisite to insure security to women, who shall subsequently be confined, appear to have been taken.

"The origin of the first case is obscure. Scarlet fever has been unusually prevalent in Maidenhead, but in one instance only is the patient known to have been directly exposed to that disease. The woman attended in labour by Mr. Duke had visited a child sick of scarlet fever, forty-eight hours before her confinement. She suffered slightly from sore-throat in her subsequent illness, but no eruption was observed, and she died from peritonitis.

"The local Medical Practitioners hesitate to express the opinion, that the midwives were the means of communicating the disease from one woman in labour to another, but their precautionary measures were very properly based upon the supposition that such might be the case. The supervention of the malady, in the single instance of labour attended by Mr. Duke, whilst he was visiting cases of puerperal peritonitis, the restriction of the disease to the women attended in confinement by Mrs. Kingston and her daughter, and its cessation after they had desisted from their avocation, are facts which are most readily explained by the conjecture that the disorder was directly conveyed from one patient to another. And this explanation is consistent with what is known of the most common mode of propagation of puerperal peritonitis.

"The deaths occurred in three different registration districts, the registrars of which live at some distance from Maidenhead. I visited the registrars of Bray and Cookham, and examined their registers. Nine of the deaths had occurred in the former district, one in the latter. The cause of death registered in one instance was 'childbed fever,' in another 'puerperal fever,' in a third 'peritonitis, inflammation of the lungs,' and in the remaining cases 'peritonitis.'

"No other women in the district suffered from puerperal peritonitis or died in childbed during October and November, or for many months previously. With the exception of the case under the care of Mr. Duke, the disease was limited to women attended by Mrs. Kingston and her daughter, none of whom escaped after the appearance of the malady."—*Appendix No. 7 to the Eighth Report of the Medical Officer of the Privy Council*, 1865.

TREATMENT OF CHOLERA.

LETTER FROM MR. THOMAS JONES.

[To the Editor of the Medical Times and Gazette.]

SIR,—As a case of cholera which was treated in this Hospital by the subcutaneous injection of opium was reported in your journal of last week, perhaps you will allow me very briefly to state the principle upon which this plan of treatment was adopted.

In a paper read before the St. George's Medical Society last winter session, I offered some theories on cholera suggested by well-marked cases of this fearful disease which had come under my observation during the previous year. Taking spasm as one of the most prominent symptoms, I argued that the cholera-poison, whatever that may be, is of a depressing nature, acting primarily upon the spinal nervous centres. I brought forward several facts to show that spasm is an expression of deficient nerve-power. From this I surmised that whatever would act upon the spinal nervous centre to produce spasm of the voluntary muscles would also act, as a further stage of the same phenomena, upon the sympathetic nervous centre to cause spasm of the blood-vessels, and suspension or perversion of the functions of the different internal organs. Upon this theory we have an explanation of the fruitlessness of all the specific remedies in cholera which have for their end the restoring the functions of particular organs, such as calomel to promote the secretion of bile, astringents for the diarrhœa, etc. I maintained in the paper referred to, and do still maintain, that the indication of treatment should be to sustain and exalt every form of nervous energy. To fulfil this, I advocated free administration of nutriment—wine or brandy—and of medicines, opium, chloroform, ammonia, and camphor. I insisted that this treatment, to do good, should be carried out promptly and decisively. I suggested that in cases in which the wine and nutriment could not be retained, we should depend more on the medicines, as they could be introduced into the system by other channels. In the case of the boy reported in the journal of last week, and which is continued this week, I consider the success of this treatment was very marked. It is true that two large doses of opium were given by the mouth, without any beneficial result; on the contrary, the boy rapidly became worse. This was because the opium was not absorbed, for in less than a quarter of an hour after each injection of opium under the skin, the symptoms became less urgent. Although, as a rule, one case is hardly sufficient to draw a conclusion from as to the effect of a particular treatment, still, in this instance, the effect of the injection of opium for good was so manifest on each occasion upon the temperature, the pulse, the purging, and vomiting, that I cannot help attributing the recovery to the treatment.

I am not so sanguine, however, of the same amount of benefit from this treatment in cases in which the pulse at the wrist cannot be felt. I believe that if this treatment were adopted, and its full effects kept up, according to circumstances, at a time when the circulation is sufficiently active to take up the drug, the symptoms of collapse could be warded off.

I am, &c.

St. George's Hospital,
August 22.

THOMAS JONES,
Resident Medical Officer.

ALOES AS A PROPHYLACTIC AGAINST CHOLERA.

LETTER FROM DR. BERRY KING.

[To the Editor of the Medical Times and Gazette.

SIR,—Nearly forty years have elapsed since, when a Medical student, I witnessed the treatment of cholera in the Paris Hospitals in the winter of 1831-32. England was then in trepidation awaiting its first devastating advent. Since that period little or nothing has been consented to with regard to the pathology of this alarming disease or its proper treatment.

In Jamaica, as one of Her Majesty's Health Officers, and holding all the public appointments in my part of the island, I had every opportunity of seeing the tropical phase of many diseases; but, as regards cholera, I had the advantage of being twice employed by the local Government Board of Health to attend it, a district being assigned to me.

On one occasion I was employed on the noble estates of Mr. Gladstone—the father, I believe, of our distinguished statesman—with a circuit of five miles. It is a duty to mention, since so very much depends upon the fact, that here every possible facility was proffered to aid the duties and wants of a Medical director. Mr. Cooper (Mr. Gladstone's attorney) even went beyond generosity in this respect by his constant personal encouragement and supervision. Now, on these estates and around were many Madras coolies, all working with the negroes; but it was a strange phenomenon that not one of the coolies caught the cholera, which was assailing the negro population for better for worse. On inquiry, the coolies said that they took every morning a cupful of what they termed aloe tea. This apparently prophylactic treatment was consequently tested by sixty of the mixed coloured population submitting to the like regimen. Among this number were included five out of six of the appointed staff to bury the dead. Every one of these sixty individuals escaped; the sixth sexton, who refused the treatment, caught the infection, and died. In effect, aloes appears to be a prophylactic. Is it worth a trial or not? If so, I think a grain of the extract enough, because beyond the first day a disturbing action is not desirable. But there is something strange in the union of science and instinct in this fact, for Raspail (who, however bad as a politician, is beyond doubt a great Medical philosopher) insists upon this very drug (aloes) being its antidote.

I am, &c.,
BERRY KING, M.D., M.A., Oxon.
Belmont House, Stone, Stafford.

HEMIPLEGIA OF THE LEFT SIDE, WITH DEFECT OF SPEECH.

LETTER FROM DR. HUGHLINGS JACKSON.

[To the Editor of the Medical Times and Gazette.]

SIR,—Will you kindly give me space to ask those who may happen to see cases of hemiplegia with loss of speech, to inquire if the patients are left-handed?

On Friday last I saw at the Hospital for Epilepsy and Paralysis a patient who, with hemiplegia of the *left* side, had considerable defect of speech. Moreover, he had been previously hemiplegic of the right side, and then he had no defect of speech. This poor fellow lamented that the paralysis should have seized him on the left side, because, he said, he was "a left-handed man." The fact that the left side of his brain had been damaged in a previous attack of course lessens the obvious significance the case would otherwise have; indeed, one case proves nothing, but one case may serve to point out a direction for inquiry.

I have recorded several cases of hemiplegia of the left side, with defect of speech, but I have no observations on the point I have just mooted. I am, &c.

J. HUGHLINGS JACKSON.

CHANGE OF TYPE.

LETTER FROM DR. FREDERICK J. BROWN.

[To the Editor of the Medical Times and Gazette.]

SIR,—The *ipse dixit* of no man should be received in matters of science; therefore I counsel that a painstaking Physician should visit the country districts about Rochester, and obtain the testimony of the aged peasants on the subject of annual bloodletting in times past, and of the reason of the desuetude of this practice.

In the meantime I request the Medical Practitioners of Kent to come forward and state their knowledge on this subject, carefully adhering to instances of healthy individuals.

I am, &c.
Rochester, August 22. FREDERICK J. BROWN, M.D.

THE DETACHMENT OF THE INTESTINAL EPITHELIUM IN CHOLERA.

LETTER FROM DR. PARKES.

[To the Editor of the Medical Times and Gazette.]

SIR,—I observe that Dr. Beale believes the epithelium of the small intestines to be detached during life in cholera, and the general tone of his remarks indicates that he attaches great pathological importance to this separation. As I brought forward evidence in 1849 intended to show that this separation is almost entirely a post-mortem change, in opposition to the statements of Boehm, permit me to restate the arguments for this opinion.

When a case of cholera, fatal in the pure algide stage, is examined after death, an opalescent or milky-looking, or occasionally pinkish, fluid, in which small curd-like masses are often suspended, is invariably found in the gut. A drop of the fluid, or a particle of the masses, shows the most beautiful specimens of columnar epithelium which can be conceived. They adhere together in such quantities, and are yet so readily separated by the slightest pressure; their outlines are so defined, their shapes so perfect, and often (when the body has been little moved, and the intestine is opened very carefully) they are so spread over the surface, as to make it almost impossible that they can have been subjected to much movement. Moreover, they are found in cases in which there has been the greatest diarrhœa, as well as in the most rapid cases with little purging. Were they thrown off during the course of cholera, it is hardly conceivable they should be found so invariably, in such constant quantity, and in such perfection of form. Conceive indeed the constant and violent contractions of the intestines in cholera, and the force with which the contents are expelled, and we must admit that such delicate bodies as epithelium cells would certainly be detached from each other, and would probably be more or less broken up were they thrown off during life in any quantity.

Then, if thrown off, they would surely be found in the discharges in greater quantities than is the case. No doubt epithelium, sometimes columnar, but more often flat, is seen in the rice-water stools, but it is small in amount, and the mass of the white deposit is not made up by anything which can be recognised as epithelium. I have again carefully examined this point in the present outbreak, and with results confirmatory of those published in the *London Journal* in 1849. To account for this, Boehm hazarded the conjecture that the epithelium of the small intestines might really be detached, but be dissolved in the fluid of the large intestines. But even granting that the fluid of the large intestine possesses such a power (which certainly it does not, for it has no action on epithelium out of the body), it is hardly conceivable that epithelium should be dissolved so rapidly, and that such enormous quantities should still always be found in the small intestines after death.

If, then, perfect epithelium is found largely after death in the fluid of the small intestines, and very sparingly in the discharges during life, there is a probability that its detachment is a post-mortem change.

This is corroborated also by examining the intestines of those who die after complete reaction has set in. Some epithelium is no doubt detached, but the small intestine is, as far as I know, still clothed with epithelium, though undoubtedly the changes in structure of the villi and membrane generally, which hinder digestion and absorption of nutriment, are one cause of the large mortality in this stage.

The physical conditions existing in the small intestines after death are precisely those which would favour in a high degree the detachment of epithelium. Constant passage of fluid during life, and frequent muscular contractions, are succeeded by complete maceration in an alkaline fluid for some hours before the body is opened. The mere act of taking out the intestines must aid the detachment.

I hope Dr. Beale will again examine this point, and I would refer him to what Dr. Gairdner has written on this matter, as well as to the observations of several observers in my paper before referred to.

In the fluid in the large intestines, epithelium is also found after death, though the cells are not so beautifully seen as in the small intestines.

While on the subject of cholera, permit me to ask those gentlemen who have opportunities to observe the following points:—

Much interest was excited last year and this year in Southampton by the fact of an uterine bloody discharge (like catamenia) following the application of Dr. Chapman's icebag to the spine in two or three cases. This seemed to harmonise with Dr. Chapman's explanation of the effect of cold to the spine on distant vessels. But I noticed in 1849 that the uterus was occasionally affected in cholera without the application of cold to the surface. In 11 adult women (several of whom died in the cold stage) there were no uterine symptoms in 6, but in the other five the condition was as follows:—In one woman the catamenia appeared three days after the usual time during the early diarrhœal stage, after the patient, according to her own account, had had more than 100 stools and continued for about 12 hours during the early cold stage, then ceased. The patient died in reaction, without their reappearance. In another woman, the catamenia, having appeared two days before the attack, continued, though scantily, through the cold stage. In a third woman (aged 50) the catamenia appeared after an absence of 9 months, at the commencement of reaction. In a fourth patient the catamenia, having naturally ceased three days before the attack, reappeared during reaction. In another case the catamenia appeared at the usual time during reaction.

There is certainly no evidence here of bloody discharge from the uterus coming on during the height of the cold stage; but still the uterus is evidently affected by cholera, and it is very desirable to collect more facts before ascribing the catamenial flow which occurred in some cases at Southampton to the ice-bag.

It is undoubted that milk or a thin fluid which distends the breasts may be secreted during the algide stage in suckling women. In a woman, dead after thirteen hours' illness, in 1849, I saw the breasts as turgid as if she had not suckled for 36 hours, but the milk seemed quite watery. It would be very important to know if any and what solid constituents are secreted.

I would also ask those gentlemen who have the opportunity, to notice the exact connexion between the following phenomena:—Early rigor mortis, muscular movements, and rise in temperature in the mouth after death; my few cases show a connexion between the three orders of facts, but more evidence is necessary.

Even after the numerous analyses of the blood, a more complete examination of the amount of solid constituents in different kinds of blood, and of the physical condition of the albumen, which, I am sure, is very different from that of healthy blood, is much needed. It would be also a great pity if the examination of the colouring matter of blood, after the manner of Professor Stokes, were omitted.

I am, &c.

Royal Victoria Hospital, Aug. 18. E. A. Parkes.

MEDICAL PROVIDENT SOCIETY.

Letter from Dr. John Clay.

[To the Editor of the Medical Times and Gazette.]

Sir,—I am probably the only one who considers the Medical Provident Society in connexion with the British Medical Association to be a decided success. Whether the Society was or is wanted by the Profession is no business of the few outside grumblers. It is sufficient to say that thirty-five members of the Profession have thought such an institution needed, that number having enrolled themselves since April 6, 1865, the day of the Society's registration. It would, however, be more correct to say during twelve months only, as some weeks were required to get the Society into working order after it became registered. During the first twelve months nearly £100 have been contributed to the sick fund alone and now ready to be applied for relief in sickness, etc., and there is an auxiliary fund, I believe, amounting to nearly £700. The members have gradually increased during the past year, and if it had not been for the opposition which has been made to the Society, I have reason to believe that the number of members would have been nearer a hundred than the number already enrolled.

A great deal has been said about the dictum of Mr. J. T. Pratt, that the Society would not be a success unless it had 200 members. Did the Registrar or any member of the Association imagine that that number would be enrolled in one year? Were the 2300 members of the Association out of say 30,000 Medical men admitted in one, ten, or twenty years? and I suppose we must consider the Association a success? It would have been sufficient to secure the stability of the Society if it had numbered 200, years hence, when the funds might reasonably be expected to be required. All that would be necessary during the next five years to ensure success is to keep down the working expenses of the Society, and then when the Institution could show signs of vigour I have no hesitation in saying that there would be no lack of contributing members. I confess I am much annoyed to find that the Directors should be so dispirited and deficient in courage. Why not smile at the threats of a small band of discontented members of the Association who, right or wrong, had predetermined to demolish the Society? I consider the Society to be quite safe, excellently organised, and, in fact, quite a model Society. I believe no institution ever started under more favourable auspices, or can boast of a greater success than the Medical Provident during the past twelve months or dating from its establishment. Why, then, do the Directors show the "white feather"? It is a hardship to the gentlemen who have so nobly joined the Society to find that the hope of a secure provision in the hour of need should be so ruthlessly dashed from them in the manner in which it has been done.

My object in addressing you, Sir, is to enter my protest against the winding up of the Society, and I hope the other contributing members will also strenuously object to this being carried out. If they could only be induced, although the blow has been struck, to continue members of the Society and try to double its numbers during the next year, the success of the Society would be secured beyond all doubt, as I could easily convince them. If the length of this communication did not warn me to pause, I could point out where the shoe really does pinch, and where is its remedy. I will only say, in conclusion, that I am quite confident, with a moderate amount of energy and prudent management, the stability of the Society would in a few years be placed beyond the cavil of the most determined opponent. I am, &c.

John Clay, Vice-President of the Medical
Provident Society.

95, Newhall-street, Birmingham.

DR. BEANEY'S ACQUITTAL.

Letter from Dr. Beaney.

[To the Editor of the Medical Times and Gazette.]

Sir,—My trial of ten days' duration on a charge of murder has just concluded with a verdict of acquittal; and as the mail is now closing, I have hastily written this to ask you to withhold any remarks upon the case until I forward by next mail the whole facts of the case. I am, &c.

Melbourne, Australia. James Geo. Beaney.

MEDICAL NEWS.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Barwell, R., F.R.C.S.E., has been appointed Lecturer on Anatomy at the Charing-cross Hospital.

Clark, Andrew, M.D., F.R.C.P. Lond., has been appointed Physician to the London Hospital.

Coulson, W. J., F.R.C.S.E., has been appointed Assistant-Surgeon to St. Mary's Hospital.

Hall, J. C., M.D., has been re-elected a Physician to the Sheffield Public Hospital.

Hayden, James Augustus, M.R.C.S., L.S.A., has been appointed Resident Medical Officer of Charing-cross Hospital, vice James Grosvenor Mackinlay, M.R.C.S., L.R.C.P., resigned.

Oppert, Dr., has been appointed Physician to the City Dispensary.

Parker, S., Surgeon to the Sheffield General Infirmary, has been appointed Consulting Surgeon to the Sheffield Public Hospital and Dispensary.

Semple, R. H., M.D., has been appointed Physician to the Eastern Dispensary, Leman-street, Whitechapel.

Simpson, Philip John, M R.C.S E., L.S.A., has been elected Apothecar to the Middlesex County Asylum, Colney Hatch.

Thurgar, B. B., M.D., has been appointed Resident Obstetric Officer to St. Mary's Hospital.

BIRTHS.

Clapton.—On 21st inst., at 6, Lansdowne-villas, Lee, Kent, the wife of E. Clapton, M.D., of a daughter.

Mansfield.—On 19th inst., at Portsea, the wife of Dr. Pierce Mansfield, Surgeon R.N., late H.M.S. *Amazon*, of a daughter.

May.—On the 5th inst., at Pentonville-road, the wife of E. H. May, M R.C.S.E., of a daughter.

Roberts.—On the 19th inst., at Knipton House, near Grantham, the wife of James Roberts, Surgeon, of a daughter.

Surrage.—On 9th inst., at Wincanton, Somerset, the wife of James Surrage, M.D., of a son.

Sutcliffe.—On the 14th inst., at Ashville-place, Battersea-park, the wife of W. Greenwood Sutcliffe, M.R.C.S.E., of a son.

Welch.—On August 17, at Avon-hill, Milford, Bath, the wife of J. G. Welch, M.D., of a daughter.

MARRIAGES.

Francis — Halliwell.— On August 1, at Islington, A. O. Francis M R.C.S.E, of Derby, to Emily, youngest daughter of the late Joseph Halliwell, Esq., of Beverley.

Howett—Adlington.—On 15th inst., at the Friends' Meeting House, Mansfield, Francis Howett, M.D., of Nottingham, to Ann, second daughter of W. Adlington, Esq., of King's Mill, Mansfield.

Liveing—Hawker.—On the 15th inst., at Blendworth Church, Horndean, Hants, Robert Liveing, M.D., to Adelaide Mary Dorothea, youngest daughter of the late Admiral Hawker, of Ashford Lodge, Petersfield.

Millett—Davey.—On 14th inst., at St. John's, Truro, R. O. Millett, B.A., M.D., to Elizabeth Ann, daughter of the late Mr. Joseph Davey.

DEATHS.

Best, John Hamilton, the beloved child of Surgeon-Major Best, 68th Regiment, at Portsmouth, on the 14th inst., aged 5 months.

Bryant, J., M.R.C.S.E., of Northampton-square, on the 8th inst., aged 63.

Halahan, G. A. F., M.D. Glas., at Carnew, county Wicklow, on the 3rd inst.

Harvey, W., M.R.C.S.E., at Knapp House, South Petherton, on the 3rd inst., aged 56.

Rae, H., L.F.P. and S. Glas., at Parson-street, Glasgow, on the 7th inst.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATION.

Brackley Union.—Mr. G. A. Knott has resigned the Third District; area 11,900; population 3330; salary £60 per annum.

APPOINTMENTS.

Isle of Wight Union.—William Hoffmeister, M.D. Heid., L.R.C.P., M.R.C.S.E., L.S.A., L.M., to the Cowes District.

Northleach Union.—Thomas S. Stott, M.R.C.S.E., L.S.A., to the Second District.

Ticehurst Union.—Francis A. Young, M.R.C.S.E., L.S.A., to the Bodiam District.

The Queen has conferred the honour of Knighthood on Mr. Baker and the Companionship of the Bath on Captain Grant, the African travellers.

Medical Officers in the Navy.—We deeply regret to find that the change in the pay and position of the Naval Medical Officers has not produced the beneficial effect which might have been expected by the Admiralty. We understand that no fresh candidates of an improved character have come forward for examination since the issue of the circular which lately appeared in our columns. It is quite evident that the popularity of the Naval service was reduced to so low an ebb in the chief Medical schools of the country that it will not only require time, but probably the temptation of a further increase of pay, to bring it again into favour.—*Army and Navy Gazette.*

A Cholera Hospital has been opened in Commercial-street, and Dr. H. G. Sutton has been appointed Physician to this Institution.

Cholera Bulletins.—Although the prohibition against publishing the Paris cholera returns is still maintained, it is said that the deaths have diminished from 120 to 60 per diem, and that there have not been more than 3000 victims of the epidemic since its reappearance. The Medical journals, whether contagionist or not, blame severely the establishment by the authorities of special cholera wards, thereby concentrating the poison and adding much to the alarm and danger of the patients, the mortality in some of these wards having proved enormous. The establishment of tent Hospitals, scattered round Paris or even in the public gardens, is advocated by M. Lefort, calling to mind the service they did in Germany and the Crimea. M. Fritz, one of the most promising of the Paris *internes*, who had been decorated by the gold medal, is one of the last victims of this scourge. At Arles, where the cholera had existed since July 27, the mortality from being moderate took on larger proportions, but by the last accounts has again diminished. At Marseilles there continue to occur between 5 and 10 deaths only daily. At Nantes, since the invasion of the cholera, there have been received at the Hôtel Dieu 142 cases, with 73 deaths; but at the Hospice St. Jacques only 2 were saved of 35 patients. At Amiens and all the Département du Nord, the epidemic is well-nigh extinct. From the official publications it appears that in Holland the following has been the course of the epidemic during July:—From the 1st to the 8th, 3686 cases and 2137 deaths; from the 8th to the 14th, 2086 cases and 1367 deaths; from the 15th to the 21st, 3675 cases and 2066 deaths; from the 22nd to the 28th, 2681 cases and 1647 deaths; from July 29 to August 4, 1992 cases and 1269 deaths. From the commencement of the epidemic there have been 22,969 individuals attacked and 13,831 deaths. Italy, thus far, has been completely exempt from cholera—even her army, in such propinquity to that of Austria, in which it has prevailed, not having suffered therefrom.

The British Association has commenced its session at Nottingham, under the presidency of Mr. Grove, Q.C., who on Wednesday evening delivered a most brilliant inaugural address; the subject being the unity and continuity of force and phenomena on the earth's surface, and, in fact, throughout the universe. In arguing against the convulsionary school he said—"It was easier to invent a *Deus ex machinâ*, than to trace out the influence of slow continuous change. In geology a deluge or volcano was supplied; in palæontology a new race was created whenever theory required it; how such new races began the theorist did not stop to inquire. A curious speculator might say to a palæontologist of even recent date in the words of Lucretius:—

> 'Nam neque de cœlo cecidisse animalia possunt,
> Nec terrestria de salsis exisse lacunis.
>
> * * * * *
>
> E nihilo si crescere possent,
> (Tum) fierent juvenes subito ex infantibus parvis,
> E terrâque exorta repente arbusta salirent;
> Quorum nihil fieri manifestum est, omnia quando
> Paulatim crescunt, ut par est, semine certo,
> Crescentesque genus servant.'

—which might be thus freely paraphrased, 'You have abandoned the belief in one primæval creation at one point of time, you cannot assert that an elephant existed when the first saurians roamed over earth and water. Without, then, in any way limiting Almighty power, if an elephant were created without progenitors, the first elephant must, in some way or other, have physically arrived on this earth. Whence did he come? Did he fall from the sky—*i.e.*, from the interplanetary space? Did he rise moulded out of a mass of amorphous earth or rock? Did he appear out of the cleft of a tree? If he had no antecedent progenitors, some such beginning must be assigned to him.' He knew of no scientific writer who had, since the discoveries of geology had become familiar, ventured to present in intelligible terms any definite notion of how such an event could have occurred; those who did not adopt some view of continuity were content to say God willed it; but would it not be more reverent and more philosophical to inquire by observation and experiment, and to reason from induction and analogy, as to the probabilities of such frequent miraculous interventions? He knew he was touching on delicate ground, and that a long time might elapse before that calm inquiry after truth, which it was the object of associations like that to promote, could be fully attained."

The Medical Officers of the Guards.—It would be a great mistake to regard the case of the Medical officers in the Guards as a mere question of minor military politics. It is a question of public good faith. The *Army and Navy Gazette* acknowledges this week that "both the Horse Guards and the War Office appeared to admit that there was something exceptional in the case, and intimated that it would be so determined." It was, in fact, stated in the columns of that journal, with authority, that a warrant was in preparation which would rearrange promotion of the Medical officers in the Guards for the future, but would not have a retrospective action. This was accepted as a fair concession, and it met the just claims of the officers whose interests were threatened. It is now, however, announced in the same journal, by way of apology and defence for the threatened breach of faith which would be involved in the gazetting of Mr. Elkington during the recess, that "the intimation given that the present Assistant-Surgeons' case was to be regarded as exceptional is not illusory." The brigade promotion is to be applied to them retrospectively, but every Assistant-Surgeon who would have been entitled to regimental promotion according to the terms on which he entered will be offered promotion as a Staff-Surgeon on condition of leaving the Guards and entering a line regiment. We should be glad to know on whose authority this is stated. Such an arrangement would be a hollow pretence, and involves a double injustice. It is in no sense an acceptable boon to the Medical Officers of the Guards, even supposing that they were desirous of being removed from their regiments. In a very short time their pay and relative rank will be improved in some degree by the forthcoming general warrant of General Peel, in which he intends, as he has announced, to adopt the provisions of the report of the Committee on the Position and Remuneration of Army and Navy Medical Officers. At one time such "promotion" as that now indicated by the *Army and Navy Gazette* would have been a boon; and within the last few years it was applied for, but was refused. The refusal was based upon the ground that such promotion would involve injustice to the general

Medical staff of the army. This objection still applies; and the promotion would now be no boon to the Medical officers of the Guards, nor is there any reason to think that any one of them would accept it. But what can be the meaning of this? Why are the interests of ten men to be sacrificed that one may be at once promoted? What sacred promise has been given to Mr. Elkington which requires that all sorts of devices may be put forward to remedy the clearly acknowleged injustice to be perpetrated for his sake? There is no public interest involved in the retrospective change. It does not in the least affect any general administrative question. At least nine out of the ten Assistant-Surgeons are known to be opposed to it, and most of them will suffer from it. There is no public reason why Mr. Elkington should be promoted out of his turn to the disadvantage of so many others; and if there be any private reason, let him have the option of army promotion, which, it is intimated, will be tendered to the other Assistant-Surgeons of the Guards, with the foreknown result that it would of course be rejected. We do not profess to know the inspiration of announcements such as this, but we hope that it does not represent the intentions of the Commander-in-Chief. The pledge given by the military organs, and by the late Secretary at War, was that the warrant allowing promotion should not be retrospective. This is a very simple solution of a difficulty which, really, is only created by the Horse Guards. To carry out that arrangement is to do justice and to keep faith. What is spoken of by the *Army and Navy Gazette* will answer neither purpose.—*Pall-Mall Gazette.*

NARROW ESCAPE.—On Tuesday, about noon, Dr. W., of Guy's Hospital, who is staying at Scarborough, started (alone) to walk along the sands, expecting to reach Filey. After walking about five miles, he found the projecting rocks hindered his further progress. He attempted to retrace his steps, but the tide having risen considerably he was soon hemmed in. He promptly sought refuge in the cliffs; when the tide receded it had become dark, so that he durst not come down, but was obliged to remain the whole night, and unfortunately when daylight appeared the tide had again returned, and he was compelled to wait for hours. Search was made, but without effect. On Wednesday morning his friends proceeded to Filey, and having no tidings of him engaged the services of some fishermen, who, with the assistance of ropes, went over the cliffs and explored the rocks. After searching in vain for some time, they found that Dr. W., exhausted, had crawled over the rocks to the door of a small cottage built upon the beach, asking admission. The poor woman, seeing his wretched condition, at once admitted him, and administered a little brandy to him. His clothes, which were saturated to the neck, were immediately taken off, and he was put to bed, and messengers were afterwards despatched to Scarborough for a carriage, by which he was taken home to his hotel.

NOVEL CRICKET MATCH.—Time was when war raged fast and furious between the Lunatic Asylums of Laverstock and Fisherton; but free trade has become a universal law. The softening influences and the higher views of the now managing directors, Dr. Bushnan and Dr. Lush, have, like oil upon the troubled waters, calmed the storm, and the only rivalry now existing between the two establishments is which shall most contribute to the comfort and happiness and well-doing of those who have been placed by disease within their walls. In proof of all this, a cricket match was played last Saturday, upon the Salisbury cricket ground, between the patients and staffs of the two asylums. It was a most interesting meeting, and one thoroughly enjoyed by those participating in the game and those who witnessed it. A liberal luncheon was provided by the challengers—Laverstock. Fisherton won by seven wickets. The return match will be played next Saturday; and then we say, "May we be there to see."—*Salisbury Journal.*

EXTRAORDINARY CASE.—On Monday, the 23rd ult., Christina Macarthur, residing with her parents at 13, Holmscroft-street, Greenock, while amusing herself on a stair at tenement 28, Ann-street, got, unobserved, outside of the rail, and in attempting to get over upon the roof of a cellar fell headlong to the paved court below, a depth of some 18 feet, striking her head heavily. She was picked up by Mrs. Vosper, a neighbour, to all appearance lifeless. Dr. M'Raild, who resides nearly opposite, was immediately in attendance, and from him we gather the following particulars:—"I found the child utterly motionless and breathless, and to all appearance dead Her head was twisted beneath the left shoulder, and almost reversed on the body. I began to examine whether, and if so whereabouts, the skull might be fractured, when Mrs. Vosper, who had the child in her lap, told me the neck, not the head, was broken, and that therefore Medical aid was useless. I saw at once that the relation of the neck with the head was unnatural, and, instead of waiting for a nice diagnosis, proceeded to use means of reduction. With this object I supported the back with the left knee, took a grasp of the head, and began to pull gradually and pretty strong. I had not pulled much when the patient's eyes opened, and an attempt was made at breathing. As a physiological test of the nature of the injury I ceased pulling, when immediately every phenomenon of life ceased as before. I then pulled strongly, and the parts came to the natural position with a snap, exactly as occurs after the reduction of displacements, but not so audibly. Immediately the eyes opened, and shortly afterwards gasping took place, and in a minute or so breathing was established. The child was then carried upstairs, while I continued to keep the head and neck steady. We placed her on a hard, narrow bed, and in the best position possible, by means of pillows. Mrs. Vosper undertook to remain beside her to guard against any movement of the head. The head, however, was disturbed during the night, and convulsions supervened, which ceased, however, as soon as the head was kept steady by the hand. Then came vomiting of dark matter, followed by much heat and much disturbance. I caused the neck to be well leeched, and a counter-irritant to be applied to the epigastrium, on which the convulsions disappeared. To secure rest laudanum was administered, after which the patient slept. During sleep heat was kept down by means of iced water applied to the head. Next morning the patient appeared more lively; but the least movement of the head produced distortion of the features, and a minor convulsive movement. She was quite sensible, but could neither articulate nor swallow. Towards mid-day she could articulate most words, but was deficient in pronouncing linguals. A few hours afterwards she could both swallow and speak. As there was much disturbance of both cerebral and respiratory organs I gave her ten grains of calomel, which soon settled her down. The child's neck is still distorted to the right side, and for this a stay support is being used; the child is progressing favourably."—*North British Mail.*

THE following are the last week's Cattle Plague Returns,

Census Divisions.	1. Attacked. Week ended July 28.	Week ended Aug. 4.	Week ended Aug. 11.	Back cases reported in the week ended Aug. 11, 1866.	2. Result of reported Cases from the Commencement of the disease. Attacked.	Killed.	Died.	Recovered.	Unaccounted for.
Metropolitan Dist.	1	1	..	..	7911	3429	3714	318	450
South Eastern Co. .	..	..	..	..	4880	1705	2539	465	171
South Midland Co.	42	37	35	7	20871	8873	10070	1541	387
Eastern Counties .	12	6	9	..	11498	5455	4854	789	409
South Western Co.	27	5	6	..	1845	739	828	207	71
West Midland Co. .	63	55	28	..	14999	6479	6096	1519	905
North Midland Co.	18	8	9	..	19016	10983	6368	1226	539
North Western Co.	30	90	50	6	73398	26374	35042	8491	3491
Yorkshire . .	12	13	13	..	34620	7962	18359	5938	2361
Northern Counties.	..	..	..	..	8636	4931	2613	974	118
Monmouthshire & Wales . . .	3	6	6	..	8387	1179	5794	1117	297
Scotland . .	..	..	5	..	46866	6263	28091	10707	1805
Totals .	208	221	161	13	252927	84372	124268	33292	10995

This Return shows that 161 attacks were reported to have occurred during the week ended August 11, being a decrease of 60 on the previous week.

Correcting the total by adding an estimated average of attacks commencing during the week, but which may be subsequently included under the heading "Back Cases," the number for the week will be 177.

Fresh outbreaks took place in 33 farms or places where cattle are kept; the number of such outbreaks in the previous week being 40.

Note.—2 Inspectors, who reported cases last week, have not reported in time for this return, viz., for the county of Chester 1, and Stafford 1. These Inspectors reported 7 cases last week.

BOOKS RECEIVED.

Inquiry into the Nature of the Choleraic Influence; its Origin and its Course; to which is added a collection of the most effectual Remedies for the Cholera adopted in various Countries, and a Plan of Treatment. By Mrs. Carleton, author of "An Enquiry into the Nature of the Nervous Influence." Pp. 88. London: H. Bailliere. 1866.

⁂ Mrs. Carleton considers that "the source of the choleraic principle is evidently in the earth, and that it is carried at uncertain periods from the south-eastern part of the East Indian peninsula towards the magnetic pole by the joint action of air, earth, water, and electricity, in currents which send out branches right and left;" that it is a gas, probably hydrogen; that it unites with sulphur, forming sulphuretted hydrogen, and attacks "the human system through the pneumogastric nerve and the great sympathetic, so on to the stomach," etc. Mrs. Carleton has evidently devoted great attention to the vagus, which she seems to hold in a sort of familiar deference; we wish certain Practitioners knew as much about it. Her style is singularly free from starch. The vagus, she says, "starts affrighted at every unusual object, grumbles, growls, and quarrels on every occasion, and disturbs all the neighbourhood," while the "sympathetic quietly plods on. *Its* branches meander about instead of going *straight to the point* like the spinal nerves;" in short she gives an excellent sketch of this part of anatomy. At p. 84, she suggests that the potato disease was caused by a cholera current, "perhaps a current of hydrogen combining with the sulphur of the plant." Mrs. Carleton concludes with another suggestion, that this disease is calculated to call forth the dormant virtues of charity, neighbourly love, fortitude, and presence of mind. As the Scotch cook said to Lady ——, "There was a fine cook spoilt when *you* were born an earl's daughter," we may say of Mrs. Carleton that our Profession lost a good Physician when she was born a woman. To her sex we must attribute her partiality for the vagus; when did it not welcome the wanderer? Her contempt for the sympathetic's indecision and "maundering" is equally characteristic, as is her approbation of the spinal nerves going "straight to the point." It is an entertaining little book by a learned and pious lady.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

A summary of the scientific labours of the British Medical Association, with abstracts of the papers, shall appear in our next.

Our notices of Dr. Beigel's inhaler, and of the patent oxygenator, and also of the oxygen water, are postponed until next week.

J. R.—A man with wife and two children is scarcely suffering from the cause he speaks of. In the absence of your ordinary attendant, consult the most eminent Physician who lives near your house.

A. B.—We do not print communications in the "Notes and Queries" as a sign of "inferiority," but because the smaller type enables us to get in a very much larger quantity of matter.

Dr. H. Jeanneret writes to us expressing his steady conviction of the benefit of camphor in cholera in doses of three or four grains, combined with forty-five of aromatic confection. His pamphlet was noticed by us in the *Medical Times and Gazette.*

Gems from Newspapers.—The Devil's Haunts.—A Lesson for Professor Owen.—A country lecturer gave, says the *Wrexham Advertiser*, a lecture on the Four Resorts of the Devil—the Lion, Serpent, Man, and Pig—a somewhat novel subject. In the course of his oration the lecturer declared that—

"The propriety of these various characteristics would be seen by studying their natural history. The appearance of the lion is terrifying. His voice is authoritative, and his teeth show that his life is sustained by devouring the lives of others. All this is very applicable to the devil. The serpent also rules by its subtleness; it keeps all insinuations out of sight; its appearance is attractive; it shows no teeth to create fear; it has no feet to do injury, nor paws to be alarmed with; but it *is venomous and will kill with its tail*, and that often when its head is destroyed; *it lives on poison;* what kills others is food to the serpent. This is the case also with the devil. Through man also the devil is introduced into the most cultivated societies. The domestic circle is too often corrupted by his presence. He is also introduced honourably. The names of the greatest men on earth are lent to his services as well as their dress and persons. The privileges of man also he obtains and applies to his service. Amongst the ruling powers of the earth the devil has been working as a lion. He manifested himself authoritatively in Nimrod, also in the Pharaohs of Egypt, in the kings of Babylon and Nineveh, and in a less extent in the king of the Medes and Persians, in the Greeks of Macedonia, and in the Romish Cæsars. Leaving the ruling power and witnessing the characteristic of the lion in the social circle, he always carries an aggressive appearance, he can but live on the destruction of others. The characteristic of the serpent in the social circle is, that it employs the language of love, but *similar to the rattlesnake they kill and tear while singing, and with their eyes weeping they destroy with other parts.* As a man the devil is introduced into every social circle; he is through men brought into the holiest places, and will borrow the smiles of the face to practise hypocrisy. He makes use of the eyes to weep, and the mouth to drink."

The following advertisement appears in a daily paper:—

"DIPLOMA (MEDICAL) to be DISPOSED OF, a bargain.—Address or call on Mr. Hammond, 20, Herbert-street, Hoxton, London."

⁂ Quære, of what use will the diploma be to the purchaser?

Do Poor-law Medical Officers ever Resign their Ill-Paid Appointments?

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—All thanks to Mr. Griffin for his pertinacious advocacy of our rights, but I must dissent from one statement contained in his note of the 28th ult. He says the Vaccination Bill which has just been defeated would have conferred great benefit on the poorer portion of our Profession—to wit, the Poor-law Medical Officers. Now, the very reason why his efforts have not my sympathy is that, as a rule, the Union appointments are not held by those he supposes to have them. Being one of the poorer members of the Profession, when I look around and see my seniors, men established in lucrative practice, still clutching at the props which sustained them twenty years ago as young Practitioners, I am filled with disgust. If the present holders of those appointments are underpaid, let them resign and confine themselves to private practice. Why should they cling so desperately to work which does not remunerate them? Or rather, does not their tenacity of office prove that they are sufficiently well paid? We younger men would be glad to have our turn and the same kind help to climb the ladder of success. Why should not the office be taken for a term of years; first by one of us, and then by all the others? The youngest men are often the most competent, and their anxiety to approve themselves would command that attention which is often wanting in older servants. In fact, the exertions of many of these gentlemen are already overpaid. And yet Mr. Griffin, not content with granting them privileges sufficient to make them the envy of their brethren, would treat them after all as ill-paid individuals, and pension them off at the expense of their less fortunate compeers. In fine, if any increase of pay be secured through the notion that it may benefit the poorer members of the Profession, as one of them I protest that it will be obtained by misrepresentation. I am, &c.

August 20. One in the Ranks.

Cholera—A Suggestion.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Acetate of lead was theoretically recommended in the treatment of cholera by Dr. Robert Graves, of Dublin. It was not tried by me, because its action as a sedative astringent arrests secretion. It was tried by the Physicians of the Cholera Hospital then open in Cork, and was, after trial, rejected.

In cholera it is a prime object to sustain, or to restore, the natural action of the heart. General or ordinary stimulants fail to effect this, and if not used discreetly aggravate the reactive fever. The soluble salts of iron render the blood more stimulating to the heart and to the brain, but time is needed to produce this effect. The special astringent power of one of them may gain some time and admit of its entering the circulation. I therefore propose theoretically the following compound, or some other similar, with suitable preliminary and auxiliary treatment:—℞ Liq. pernit. ferri; *Essentiæ* camphoræ, āā ℥ss.; spir. ætheris nitrosi, tinct. opii, āā ʒss. M. Cochl. j. parv. singulis 2dis vel 3tiis horis, vel p. r. n., ex aquæ gelidæ pauxillo. The liquor should, of course, be chemically perfect. I am, &c.,

Rampart, Kinsale, August 20. Henry B. Evanson, M.B.

On Cholera.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I have waited somewhat impatiently to see whether any one would take an opportunity of making a few practical remarks on the prevailing epidemic.

In the first place I consider that the insertion in the *Times* of three columns of Dr. Johnson's book on cholera was a mistake, which has opened up a controversy, and, like all other controversies, seems calculated to add little dignity to the Profession. In this morning's *Times* I count five letters from different Medical men, all more or less on the eliminative treatment. Let us hope that the editor for the future will "eliminate" them. If I remember rightly, the castor-oil treatment had in the last epidemic at King's College a very fair trial, and was found wanting. With regard to the water supply of London, I find that East London seems by the analysis to have better quality of water than that distributed by five other large companies; in fact, the Kent and New River Companies only having a less amount of organic matter, East London being 0·40, West Middlesex 0·76. Evidently the amount of organic matter alone in the water is not the true cause of cholera. It would be presumption in me to suggest a cause; but as so much confusion seems to prevail, I will venture to suggest—

That some peculiar living germ is the true cause.

That all exhausting causes, such as dissipation, overwork, bad food, bad drainage, constitute the soil in which such a germ finds all the elements for its active propagation.

That all exhaustive causes act by weakening the chemical affinities on which I presume the vitality or life of an individual depends, and I firmly believe that the best means for preventing the spread of the present epidemic would be to supply wholesome, sound, and well-cooked food in large quantities to all the poorer classes. I feel satisfied that people who eat and drink a good fair share of sound, wholesome food are very rarely indeed troubled with an attack of any epidemic. As far as I have seen of the present epidemic, undoubtedly 90 per cent. at least of those attacked are miserable, wretched specimens of humanity, ill-fed, badly clad, and I should think in summer time pretty nearly always suffering from what would in a better class of life be termed disordered bowels; and when cholera attacks such, the eliminative treatment, the opiate, the stimulating, or the transfusion are alike equally unsatisfactory—in fact, they are death-stricken from the commencement.

Apologising for troubling you, I am, &c.,

20, Kingsland-crescent. William Hewitt.

A Word for Podophyllin.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I am rather surprised that amongst the numerous letters and communications from members of the Profession on the medicinal substances recommended in the various modes of treatment of cholera, no mention has been made of podophyllin as a purgative. I am not an advocate for the indiscriminate use of purgatives of any kind as the best mode of treating cholera, but there are cases where a purgative is indicated, and in such cases calomel has generally proved the most efficient medicine, probably owing to its being an effective disgorger of a gorged liver—in short, a true cholagogue.

From a very careful observation of the properties of podophyllin during the last six or seven years, I am satisfied that if ever a drug deserved the title of a cholagogue, it is this; and I regard it as one of the very few valuable medicines that have been introduced of late years. It is, in fact, a most powerful medicine in a very small compass.

In cases so frequently met with of sluggish liver, or at all events of a retention of its peculiar secretion, as indicated by the usual symptoms, where mercury has long been the most efficient remedy, I have again and again substituted podophyllin, and have very rarely been disappointed in its action. Many, I am sure, will bear me out in this, yet it appears to me that the therapeutic virtues of this substance are not so generally recognised in the Profession as they deserve to be.

I have never known it to salivate, as has been said, nor to cause vomiting if the dose is properly adjusted. Neither have I found it necessary to combine it with an alkali or with a sedative, as hyoscyamus. These, I believe, are only requisite to counteract the evils of an overdose.

The usual dose for an adult I find to be one-third of a grain of the resinous extract, and it is best combined with a grain or two or three or more of the warm and excellent pil. rhei co. of our Pharmacopœia. I need scarcely say that the proportion must be determined by the judgment of the prescriber, according to the nature of the case and the constitution, etc., of the patient; but, generally speaking, I have found that half a grain nauseates or causes vomiting, and that a quarter of a grain is inactive.

It must not be supposed for a moment that I am an advocate for discarding mercury from our list of remedial substances; in many cases I know not how it could be dispensed with, but in its specific action as a cholagogue I think it is equalled by podophyllin; and in those cases of cholera, or of severe diarrhœa, where, in the judgment of the Physician, a purgative is required, and the most efficient purgative has hitherto been found to be calomel, I think that every benefit derived from the administration of that substance will accrue from the substitution of podophyllin.

What then are the advantages of this medicine over calomel, supposing their therapeutic action to be the same? They are that the frequent inconveniences of the mineral drug, both on the system and on the lining membrane of the alimentary canal, seem to be avoided, while the beneficial effects are the same. In any case it is a great advantage to possess two substances whose essential properties for the purpose required are identical, while the one is liable to produce effects which in certain cases may be objectionable.

I must not here encroach on your space by entering into details on the action of this drug; suffice it to say that when given in such quantity as the stomach will bear, I do not find it so rapid in its action as calomel, and this might be thought to be an objection in a complaint so rapid in its progress as cholera. But the dose may be repeated at short intervals, and when once a dose has left the stomach all risk of vomiting is over. Should subsequent doses overtake each other in the bowels, the consequence will be, not vomiting, but possibly griping and pinching of the intestines—which is rather a prelude to the operation of the drug, and which, if proceeding to a greater extent than is desirable, will quickly be relieved by opium.

No member of the Profession will suppose that I am recommending this drug as a cure for cholera. The public would probably think so if such a letter as this appeared in the pages of the daily press—too often the receptacle of theories more or less ingenious, and of the vain outpourings of the imagination. I honour the efforts of those who are endeavouring to search into the intimate nature of this complaint, and to found a treatment on physiological bases; but it is very unlikely that a specific remedy for Asiatic cholera will ever be discovered, any more than for small-pox or scarlatina, rinderpest or yellow fever, etc., etc. Such maladies must be met, according to their several symptoms, by judicious treatment based on an intimate study of nature in health and disease, physiology and pathology, together with a thorough knowledge of the properties and effects of drugs and medicinal substances. Our art consists in regulating Nature, in controlling her aberrations. But in order to do this we must have life on our side. A ship without way on her will not answer her helm; nor will the human body, deprived of its vital power (a term I have not yet discarded), as is often the case in the prostrating form of cholera, answer to the remedies which we know to have certain effects on the living frame. In such cases our first effort must be to restore this vital power; yet we must not be disheartened if, in spite of all we can do, Death will often gain the victory. If all complaints were curable, who would die?

I have witnessed and lived through three invasions of this pest, and have again consented to act as Medical adviser and superintendent of all Medical arrangements over rather an extensive district in case the complaint should unfortunately break out. It is not therefore without some practical acquaintance with the subject that I venture these remarks. My principal object in making this communication was to attract the attention of the Profession to the peculiar properties of podophyllin, already ably described by Dr. Garrod; and if I have been led on to extend my remarks beyond the original intention, the awakened sense of danger and the praiseworthy efforts which are now being so generally made to meet the threatened invasion must be my excuse.

I am, &c., J. B. Wilmot, M.D.

Tunbridge Wells, August 20.

COMMUNICATIONS have been received from—

Harry Leach, Esq.; J. H. James, Esq.; J. G. Beaney, Esq.; Dr. Jeanneret; Dr. Parkes; Dr. Wilmot; One in the Ranks; Dr. Sansom; Dr. Evanson; Dr. Brown; Dr. Berry King; Dr. Clay; Dr. R. King; Secretary of British Association for Advancement of Science; Mr. Whalley; Dr. Edmunds; Mr. F. C. Skey; Mr. J. Chatto; Dr. B. W. Richardson.

BOOKS RECEIVED—

Mrs. M. A. Baines on a Few Thoughts concerning Infanticide.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 18, 1866.

BIRTHS.

Births of Boys, 944; Girls, 927; Total, 1871.
Average of 10 corresponding weeks, 1856-65, 1747·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	946	853	1799
Average of the ten years 1856-65	616·9	593·9	1210·8
Average corrected to increased population..	..	..	1332
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	3	3	6	—	6	5	28	7
North ..	618,210	5	7	7	1	8	11	40	15
Central	378,058	5	3	9	—	6	2	22	16
East ..	571,158	12	7	7	2	7	13	63	369
South ..	773,175	7	13	8	2	11	10	41	48
Total ..	2,803,989	32	33	37	5	38	41	194	455

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·680 in.
Mean temperature	58·0
Highest point of thermometer	72·2
Lowest point of thermometer	46·9
Mean dew-point temperature	50·7
General direction of wind	Variable.
Whole amount of rain in the week	0·62

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 18, 1866, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending Aug. 18.	Deaths.		Temperature of Air (Fahr.)			Rain Fall.	
				Corrected Average Weekly Number.*	Registered during the week ending Aug. 18.	Highest during the Week.	Lowest during the Week.	Weekly Mean of the Mean Daily Values.	In Inches.	In Tons per Acre.
London (Metropolis)	3067536	39·3	1871	1400	1799	72·2	46·9	58·0	0·62	63
Bristol (City) . .	163680	34·9	104	73	‡162	68·7	45·1	57·9	0·10	10
Birmingham (Boro')	335798	42·9	274	163	120	67·5	46·2	56·8	0·35	35
Liverpool (Borough)	484337	94·8	369	281	518	64·7	52·5	58·4	0·43	43
Manchester (City) .	358855	80·0	209	203	‡185	68·5	41·0	56·1	0·96	97
Salford (Borough) .	112904	21·8	64	57	58	66·6	41·0	54·4	0·86	87
Sheffield (Borough) .	218257	9·6	154	115	105	64·0	44·4	53·6	0·72	73
Leeds (Borough) .	228187	10·6	159	116	111	69·3	43·0	55·7	0·60	61
Hull (Borough) .	105233	29·5	82	49	58	..	..	..	..	..
Nwcastl-on-Tyne, do.	122277	22·9	90	65	74	64·0	45·0	54·5	0·27	27
Edinburgh (City) .	175128	39·6	110	84	80	67·7	41·0	55·0	0·70	71
Glasgow (City) . .	432265	85·4	319	252	204	61·8	40·9	52·7	1·59	161
Dublin (City and some suburbs) .	318437	32·7	163	†156	136	..	..	..	..	..
Total of 13 large Towns . . .	6122894	34·4	3968	3014	3510	72·2	40·9	55·7	0·65	66
					Week ending Aug. 4.	Week ending Aug. 4.				
Vienna (City) .	(1863) 560000	..	..	..	..	..	..	§ ..	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·680 in. The barometrical reading decreased from 29·90 in. at the beginning of the week to 29·51 in. on Thursday.

The general direction of the wind was variable.

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* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 58·8°.

APPOINTMENTS FOR THE WEEK.

August 25. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p.m.

27. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

28. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

29. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

30. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

31. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

WHY NOT USE THE BEST?

"MAIZENA"

Is the ONLY "PRIZE MEDAL" CORN FLOUR. It was also reported by Jury of 1862, London,

"EXCEEDINGLY EXCELLENT FOOD."

It is superior to the best Arrowroot; makes in short time, and at trifling cost, delicious Blanc-mange, Puddings, Cakes, Omelets, Creams, and scores of other dishes, and is always an invaluable Food for INVALIDS and CHILDREN. Sold in Packets, with directions, by Chemists, Grocers, &c.
N.B.—The price is *no more* than for inferior articles.

TRY IT ONCE.

Pulvis Jacobi ver, Newbery,

FRAS. NEWBERY & SONS, 45, ST. PAUL'S CHURCHYARD.

Prices for Diſpenſing, 1 oz., 9s.; $\frac{1}{4}$ oz., 3s. 4d.

Natural Mineral Waters of Vichy, Carlsbad, Seltzer, Kissengen, Homburg, PULLNA, FRIEDRICHSHALL, &c., direct from the Springs; also the Artificial Mineral Waters prepared by Dr. Struve and Co. at the Royal German Spa, Brighton.—Agents, W. BEST and SONS, 22, Henrietta-street, Cavendish-square, London, W.

NATURAL MINERAL WATERS OF VICHY,

Efficacious in Stomach, Liver, and Renal Diseases; Gout, Rheumatism, Diabetes, &c.

Also, the celebrated OREZZA MINERAL WATER, containing Iron, and which is extensively prescribed as an invaluable Tonic.
VICHY PASTILLES, the best Digestive Lozenges; and VICHY SALTS for Baths. Also, other French and German Natural Mineral Waters.
VICHY WATERS COMPANY (only Depôt in Great Britain), 27, MARGARET-STREET, REGENT-STREET, LONDON, W.

The Mineral Water of Geilnau (Nassau), an Acidulous and slightly Alkaline and Chalybeate Water, of very agreeable and refreshing taste, owing to its large proportion of carbonic acid; a valuable Dietetic Beverage in many morbid tendencies through its antacid, diuretic, and tonic qualities.

Specimen and analysis of the Water may be obtained from Messrs. BECKER and JUNG (Ems), the appointed Agents, 9, Rood-lane, Fenchurch-street, E.C., London, who supply also the other German Mineral Waters.

BARTH'S OXYGEN WATER holds free Oxygen in solution. It gently stimulates the functional action of the stomach and secretory organs, and is a very useful beverage. Wentworth Scott's Analysis gives as contents of a bottle—"Nearly half an imperial pint of pure distilled water, and about 13·5 cubic inches, or 4·6 grains of gaseous oxygen; equivalent to that contained in 21·4 grains of chlorate of potash." 4s. per dozen.
OXYGENATED WATER COMPANY (LIMITED), 36, LONG-ACRE.

MINERAL WATERS OF VALS.

ACIDULOUS, GASEOUS, BICARBONATED, SODAIC, &c.

Analysed by O. HENRI, Member of the French Imperial Academy of Medicine.

Ferro-Arsenical Spring of Dominique.	
Free sulphuric acid	1·33
Silicate acid } sesqui-oxide of iron. Arseniate ,, Phosphate ,, Sulphate ,, Sulphate of lime Chloride of soda Organic matter	0·44

Thermalité 13°.	*Saint-Jean.*	*Rigolette.*	*Précieuse.*	*Désirée.*	*Magdeleine.*
Free carbonic acid	1·425	2·095	2·218	2·145	2·050
Bicarbonate of soda	1·480	5·800	5·940	6·040	7·280
,, of potash	0·040	0·263	0·230	0·263	2·255
,, of lime	0·310	0·259	0·630	0·571	0·520
,, of magnesia	0·120		0·750	0·900	0·672
,, of iron and manganese	0·006	0·024	0·010	0·010	0 029
Chloride of soda	0·060	1·200	1·080	1·100	0·160
Sulphate of soda and of lime	0·054	0·220	1·185	0·200	0·235
Silicate of silica, alumina	0·080	0·060	0·060	0·058	0·097
Iodure alcalin, arsenic of lithia	traces	traces	traces	traces	traces
	2·151	7·826	8·885	9·142	9 248

Quantity Analysed, One Litre of Water from each Spring.

These Waters are extremely gaseous, and very agreeable to drink at table, pure or mixed with wine. An excess of Carbonic Acid, and the happy proportion of Bicarbonate or Calciques Magnesia, make these the richest Mineralised of all known Waters, and of a light, soft, and essentially digestive character. They are very valuable for preventing the formation of the alkaline diathesis. The ordinary dose is one bottle per day.

SPECIAL USES.—*Saint-Jean:* Maladies of the Digestive Organs. *Précieuse:* Affections of the Biliary System. *Désirée:* Disarrangement of the Sexual System. *Rigolette:* Chloro-Anæmia. *Magdeleine:* Maladies of the Urinary Organs. *Dominique* (this Water is Arsenical, and has no analogy with the preceding): Intermittent Fevers, Cachexies, Dyspepsia, Skin Complaints, Scrofula, Organic Maladies, &c.

The Waters of these six Springs are exported, and keep well for years, without undergoing any alteration. They are to be obtained at the price of 36s. per case of 50 bottles, of

E. GALLAIS & CO., 27, Margaret-street, Regent-street, W.; W. BEST & SONS, 22, Henrietta-street, Cavendish-square, W.
COVERDALE & CO. 11, London-street, City, E.C.; and of all the principal Chemists in the Kingdom.

ORIGINAL LECTURES.

NOTES OF LECTURES ON INSANITY.

DELIVERED AT

St. George's Hospital,

By GEORGE FIELDING BLANDFORD, M.B. Oxon.

Lecture IV.

Insanity without Delusion—Impulsive Insanity—Transitory Insanity—Insanity with Delusion.

Gentlemen,—There are patients who are plainly and unquestionably insane and demand merely medical care and treatment; there are others, where the insanity is doubtful, who will come before you chiefly in your medico-legal capacity, and who cause great contests and disputes because they are much misunderstood. You will anticipate me when I say that I refer to those forms called "moral insanity," "partial insanity," "impulsive insanity," etc. These are heard of, not in asylums, but in courts of law: in criminal courts, when insanity is set up as a defence, or in civil, when an endeavour is made by a Commission of Lunacy to deprive a person of his or her civil rights on the ground of insanity. Now of such a person one of two things is alleged: either that he or she has been from birth incompetent, imbecile, lunatic, or that the lunacy has supervened upon a previously sound mind. The first of these will come into the class I spoke of in my last lecture, where the individual has never reached the standard of ordinary life, but has been from birth deficient—more or less imbecile. This is entirely a question of degree. It was in this class that the famous Mr. Windham was ranked by the petitioners, but the case broke down because the facts which went to prove his imbecility were not substantiated. No rules can be applied to such cases. All depends on the degree of imbecility, of which you must judge according to your own observation, receiving with great caution that which is told you by others.

Of the cases in which insanity is supposed to have attacked a previously sound mind, I will first consider those of the so-called "moral insanity." This name was given by Dr. Prichard to a species characterised "by a morbid perversion of the feelings, affections, and active powers, without any illusion or erroneous conviction impressed upon the understanding; it sometimes co-exists with an apparently unimpaired state of the intellectual faculties." Now the essence of this is, that there must have been a *change*—a perversion of feelings—yet without illusion (by which Dr. Prichard meant delusion), and with an *apparently* unimpaired state of intellect. To distinguish this from delusional or intellectual insanity, he called it "moral." As modern psychologists see that the question of morals has nothing to do with the question of insanity, they have called this form "emotional" insanity.

Let us take a case of this kind, which is fresh in my recollection. A city merchant, past middle age, grave and respectable, suddenly takes to drinking and low company, becomes extravagant, quarrelsome, gives up business, takes to horses and riding, of which he knows nothing—is, in fact, an altered man. He has fits of drinking, ceasing for a while, and then recommencing; but drink is not the beginning of his disease; it is the effect, not the cause. Nothing can be done beyond a general surveillance, as certificates cannot be signed. Matters go on like this for a year or two, till at Brighton his conduct becomes outrageous, he rides his horse to the end of the chain pier and on the pavement, assaults the police, and is locked up; when released, he runs off, forfeiting his bail. At last he is handed over to an asylum. When admitted, this gentleman was angry and rather excited, somewhat rambling in argument, yet he had no delusion, unless justifying the whole of his conduct can be called one. But though there were no delusions, was there no intellectual defect? There were no acute symptoms; he was not raving; he behaved in all respects as a gentleman. Some of his friends, who thought him unjustly restrained, sent a solicitor to see him, who, after a long interview, told me that he could detect no delusions, but that he could not keep him to the point; he could not fix his attention and reasoning faculties upon one subject. His ideas were disconnected, and would not flow in regular coherent order and sequence, though they were not wrongly connected so as to amount to delusion. And the solicitor, though he did not visit him till he was much improved, pronounced him rightly confined. This patient was loquacious, and it was easy to detect his want of sequence and coherence. Had he been taciturn, and only answered the questions put to him, this intellectual defect might have escaped notice. Yet I firmly believe that in these cases of insanity without delusion, where the patient is completely altered, and commits extravagant acts, intellectual alteration and defect is to be discovered, if there be opportunity afforded, and if it be carefully considered and properly looked for. The way such patients reason about their acts is constantly absurd and irrational—in fact, insane. One gentleman tried to convince me that sitting naked in the water-butt of a London house at 4 o'clock in the afternoon was an ordinary and reasonable act. You often hear it asserted that this or that action is not of itself proof of insanity. This may be so; but when such action, though trivial in itself, indicates a complete change in the actor—when the rector of a parish meets his wife at a railway station in a white hat and other unusual garb—we are obliged at any rate to suspect insanity. Such eccentricities are not done unconsciously, from involuntary and irresistible impulse. On the contrary, there is full consciousness and recollection of them; they are remembered and justified to-day, to-morrow, and the next day. And they are done voluntarily, with volition, albeit a diseased volition; and lawyers, recognising this, but not recognising the disease, try to hold the actors responsible. In the conduct, and in the defence of it, there is plain disorder of intellect as well as of feeling, and therefore it is better to call this form simply "insanity without delusion."

Had I space to analyse the recorded cases of so-called "moral insanity," I believe it could be shown that in all there are lesions of intellect. In the majority of Dr. Prichard's examples the moral insanity degenerated, as he says, into monomania—that is, the intellectual alteration, which did not at first go to the extent of delusions, reached this stage later (*vide* cases 1, 2, 3, 5, 6, 8).

If the insanity is alleged to be indicated by one single act, which may be criminal, and if we have never seen the person before the committal of the act, it will be often difficult to come to a conclusion, because intellectual symptoms may be feigned. Here we must be guided by the previous history, derived from credible informants, and by our frequent observation of the alleged lunatic. We must inquire whether he was before this act altered in character, habits, or demeanour—whether there have been any causes of mental disease, or any acute symptoms, such as loss of sleep, refusal of food, or signs of ill-health. Generally at the commencement of insanity there is a stage of more or less excitement or depression, with sleeplessness and other physical symptoms. We may probably find a cause which will much assist the diagnosis. There may be a history of insanity in very near relatives, or of epilepsy, or a blow on the head, or previous "brain fever." The letters and writings of such a person will often reveal incongruities or even delusions which are not apparent in conversation.

To what extent extravagant acts and slight mental disorder will be accepted as evidence of irresponsible insanity, will depend much on the fashion of the opinions and temper of the day. Though even now a lunatic is occasionally hanged by mistake, yet doubtless there is generally a greater disposition to treat insanity as a disease. Lunatics are hanged now because their lunacy is doubted, not because it is thought just that they being lunatics should nevertheless be hanged. This opinion, though it still haunts the minds of a few lawyers, is practically abandoned by all humane men.

There is, however, another species of insanity at which the public sneers still more than at the last-mentioned, and which, if wrongfully applied, might unquestionably be made to cover crime even more easily. This is the so-called "impulsive" or "instinctive" insanity. As described, it consists of a sudden insane impulse in a previously sane individual to commit a crime, which impulse ceases as soon as the deed is done, leaving the individual sane as before; consequently the crime stands out as the only evidence of the insanity. This is an exaggerated account of a form of mental disorder which really exists. A patient consciously, but involuntarily, in spite of every wish and the utmost efforts of his will, is hurried by an irresistible impulse to do some act of violence. The impulse in his brain-centres forces him straight to action, reason and will being powerless to check it. The act is as automatic and "instinctive" as the acts of lower animals. Such cases occur, and are seen in asylums; they are not invented merely for legal purposes. The patients are often aware of their propensity, and beg to be guarded against it. They have no delusions, they do not justify their crimes; be the impulse to suicide or to homicide, they deplore it, and seek treatment and assistance. The diagnosis of such cases must necessarily be guarded. There is little evidence of insanity beyond the act itself. The patient's feelings are not perverted except at the moment, for he bewails his state, and often attacks those he loves best. He assigns no motive, but rationally confesses his inability to resist. Such impulses have been explained by the theory of the "reflex action" of the cerebrum, which operates in a manner analogous to the reflex convulsive action of the spinal centres. If this does not explain, it at any rate illustrates the disease. It is involuntary action coming from some morbid stimulation of a nerve centre, with consciousness, but in spite of every effort of reason and will. Inquiring into the history of such, we find generally a strong hereditary taint; possibly symptoms of head disorder may have been exhibited quite early in life, or there may have been epilepsy, or a blow on the head. It is essential in such cases to try and discover a cause wherewith we may connect the manifestation of disorder.

This impulse to an act of violence rarely passes away after one single outbreak. Often it is chronic, lasting for years. In the *Annales Psychologiques* there is the case of a man of 43 years who, from the age of 15, had suffered from an impulse to kill his mother, which, after twenty years, he overcame so far as to transfer it to his sister-in-law. To get away he joined the army, but never knew one happy hour, and was constantly tempted to desert in order to go home and gratify his longing. At last, hearing his sister-in-law was dead, he returned on furlough, but found she was still alive. His propensity was then so strong that he sought advice and was bled, but without relief. Finally, he caused himself to be tied with cords till he could be taken to an asylum. Many patients are kept in asylums without other evidence of insanity than these impulsive homicidal or suicidal attacks. And the impulse is not always confessed, as in the above case; it may be concealed. Therefore it is difficult to say that such an one is cured, for the impulse may be long absent, and yet may return; lamentable events have occurred through the premature discharge of such from the care of an asylum. The instinctive and automatic nature of this form is shown by its occurrence in the young as well as in adults, in children of almost any age. The case above mentioned commenced at the age of 15, and cases are recorded of children even of 5 and 7 years, both suicidal and homicidal. It would be in vain, however, to look for insanity with delusions at this age; the propensity is instinctive, we may almost say convulsive. The propensity may be always present—a chronic desire to kill or to commit suicide—or it may depart, returning periodically with or without notice of its approach. Other acts of violence, such as rape or arson, may be committed under similar impulse.

Allied to this pathologically, and often confounded with it, is another form of insanity of more frequent occurrence and easier diagnosis. This is literally a "fit" of insanity—a transient attack of mania, *mania transitoria.*

Its duration may vary from a few hours up to two or three days, but it is generally enough to allow people to notice something very unusual and extraordinary in the conduct of the individual. It does not begin and end solely with the commission of a crime. Many of the recorded cases of transitory insanity are homicidal, but it is much to be desired that physicians should give particulars of cases both of this and of instinctive insanity, where no crime is committed—cases not legal, but medical—where there can be no pretext for saying that insanity is alleged as a defence. Take a case of this kind: a shoemaker, sober and industrious, gets up one morning to go to his work; his wife notices that his look is wild, and his talk incoherent. He rushes at her with his knife, and is with difficulty restrained. His face is flushed, his pulse frequent and full. In the afternoon he goes to sleep, and when he wakes he remembers nothing of what has happened. This transitory mania is often attended with unconsciousness, contrary to the cases of "moral insanity" and "impulsive insanity," where, as I said, there is always consciousness. It seems to be akin to epileptic seizures, or to be the result of them, or to take the place of them. The epileptic condition, instead of convulsing the body and affecting secondarily the mind, appears to convulse the emotional and ideational centres, and through them to produce violence of act and word. After a genuine epileptic fit we may or may not have transient insanity. The convulsion has or has not affected the brain proper. Further knowledge of the epileptic condition will enable us better to understand this transitory insanity. As regards diagnosis, however, it is to be remembered that it is almost always accompanied by marked excitement and incoherence not to be mistaken. In three instances I have seen there was violent singing, shouting, and gesticulating, and might have been violence had there been no restraint. All these were well in about three or four days. There were no delusions in any of them. Where sudden impulsive acts are committed by patients suffering from monomania or quiet chronic insanity, they generally proceed from a delusion or hallucination, but of these hereafter.

This transitory mania may be confounded with one or two conditions which are very similar in outward appearance and symptoms, but which depend on different causes. One is delirium from drink—not ordinary *delirium tremens*, but the frenzy of a man who is mad drunk. I have known such a patient sent to an asylum who was quite well in twelve hours, to the great consternation of those who sent him. How far this state absolves a man from legal responsibility is a question jurists are not yet agreed upon. Another state somewhat akin is the violent hysterical attack we sometimes see in females, arising from temper or from a small amount of drink, as violent as mania, but more under control and more transient.

To conclude, cases occur of a spasmodic or transitory mania, during which acts of great violence may be committed, there being for the time a visible change in the look and demeanour of the patient, and which may pass off in a few hours or days, leaving no trace of insanity. There is here also a morbid stimulation of the cerebral centre, resulting in morbid and irregular act, without the intervention of the mind proper. The act is not the result of diseased will, but is independent of will, involuntary, and often unconscious.

INSANITY WITH DELUSIONS.

From the consideration of certain forms of insanity in which there is little apparent intellectual aberration, I pass to those where the intellect is manifestly disordered, not only the feelings, but also the ideas being perverted in the shape of *delusions, illusions,* and *hallucinations.* Authors use these terms in various senses, and use them interchangeably; but the all but universal interpretation of them is as follows:—*Hallucinations* are false or fancied perceptions of the senses, as, for instance, when the eye or ear fancies it sees or hears something when there is absolutely nothing to see or hear, when perhaps it is the time of the darkest and stillest midnight. *Illusions* also are false perceptions of the senses, with this difference, that there is a foundation for them. There is a noise, or there is an object, but the patient thinks it some different noise or different object from that which it really is. Illusions may occur to every one. The *mirage* of the desert, the spectre of the Brocken are illusions; but they differ from those of the insane in this, that a number of persons together will all see them, whereas the illusion of the insane appears real to him alone: his companions hear nothing and see nothing, or hear and see things as they really are, not as they appear to him. A *delusion* is a false belief of some fact, not a false perception of one of the senses: it is a categorical proposition, false by reason of the diseased brain of the person who believes it, and set down as false by others because it is contrary to common experience of the laws of nature, or to former experience of similar things, or is contrary to the knowledge of some or the evidence of the senses of the majority of mankind. There is no infallible test of delusions, and often when in signing a certificate you mention one, you will be obliged to state how and why you know it to be a delusion, for many which have been so considered have turned out to be facts, and not fancies.

The pathological conditions of delusions, illusions, and hallucinations must be closely akin, though probably not identical. The actual organs of sense are involved in illusions. You recollect I said in my first lecture that "the conscious feeling aroused in the highest cerebral centres may be converted into an idea in no way adequate, which does not correspond to the feeling." This would produce a delusion; but if we say a sensation of the external eye or ear is converted into an idea in no way adequate, we have exactly the account of an illusion. Hallucinations, on the contrary, start up in the idea-region from previously stored ideas, without external sensation, and as we store our ideas chiefly by the eye or the ear, and carry on our trains of thought mainly by words or mind-pictures, so it comes that hallucinations of hearing and seeing are far more frequent than those of taste, or smell, or touch. We cannot localise the seats of these in the brain, but it is certain that chronic hallucinations are most unfavourable as regards prognosis, and point probably to a change in the cell-tissues. In cases that recover illusions are more frequent than hallucinations.

We may divide delusions just as we distinguish illusions from hallucinations. On the one hand, we may be able to trace them and find a feeling converted into an idea which does not correspond, as in the case of illusions. Thus, for instance, a man feels low or uneasy, and his idea is that men are conspiring to ruin him, or that he has got an incurable disorder, or that he has committed the unpardonable sin. This man's bodily health is probably much deranged, and by improving this, and by care and treatment, we cure his insanity. On the other hand, when a man in apparently robust health takes up a notion that is not traceable to any feeling, that apparently originates in the wrong association of ideas, when he asserts that he is a teapot, or a comet, or a monkey, and retains this notion without depression or excitement, he seldom recovers from this so-called monomania. As in the case of chronic hallucinations, there is probably change in the brain cells, which appear to be the organs of *idea*, while the whole nervous system throughout the body seems to be the seat of *feeling*. At the outset of insanity we find altered feeling, often vague subjective emotion, sad or cheerful; in the chronic state we observe change of idea, hallucinations, and persistent delusions. At the outset we can often trace the delusions and connect them with external events. The man of business thinks he is ruined or a millionaire; the clergyman thinks he has committed sin; the soldier that he is commander-in-chief. But later they wander away from the primary idea, as we do in dreams, and we cannot always retrace the path. As every feeling must be one of pleasure or pain, we have pleasurable or painful ideas arising in connexion with it, but these often remain long after the feeling has passed away. Another feature of delusions—and here also are they like dreams—is their personality. They all concern the patient. He is robbed, ruined, doomed to everlasting punishment, or a millionaire, or king. Self is in all, self-feeling is converted into a concrete self-reality, into shape and circumstance, affecting not others, but self; just as in a dream we ourselves are always present. This predominance of self-interest is characteristic of the lower mental condition of the animal, the child, and the savage. The degenerate mind of the insane man reverts to the lower type from whence it sprang.

Delusions may be roughly divided into those of depression and those of excitement, into painful or pleasurable. One man thinks he is watched, robbed, ruined, damned; another, that he has invented a wonderful machine, that he is rich, noble, a king. The prognosis of the former is the more favourable. Melancholia is more curable than mania. I have known patients recover after six and seven years of deep melancholia, but never after such a period of mania. Delusions which are constantly changing are more favourable than the fixed and persistent. When they remain constant and unchanged for a twelvemonth or more, and the bodily health has recovered, and all emotional disturbance has nearly or altogether passed away, there is little hope of cure. They may not be numerous, there may be only one or two, the patient may be in other respects rational, orderly, and quiet, what is called "partially insane," or "monomaniacal," and considered by many a responsible person, yet such an one will have to be pronounced incurable and hopeless.

In the same degree chronic hallucinations are unfavourable, and these are chiefly of *hearing*. The number of incurable patients who hear voices is very large, and they are a dangerous class, for whether voices of angels or devils, they obey the command, and regulate their lives and actions by it. Many a murder has been committed by the order of invisible beings, and patients will not always reveal this. There often seems to be a kind of pact between them and the voice, which makes it a point of honour not to repeat what passes. Sometimes they will for years conceal the fact that they hear voices at all; sometimes they will bitterly complain of the way they are tormented by them, yet they will implicitly obey their behest.

Hallucinations of *sight* belong rather to the acute and febrile stages of insanity. Comparatively few chronic cases see visions, except those affected by progressive organic disease. The most curious, if they are to be called hallucinations, are those of mistaken identity, when a patient asserts that his friend is not the person he once knew, but somebody else. This appears to me rather a delusion or false belief than a hallucination or illusion of sight; but it shows how closely connected are delusions, hallucinations, and illusions. In other acute diseases, as fevers or delirium tremens, sight is the sense most frequently affected by hallucination. I have often met with hallucinations of *smell*. Patients think that they smell noisome exhalations of graves, or that their food is offensive, or that a horrible odour exhales from their own bodies. In my experience these have not been chronic hallucinations, but have passed away as the patients recovered.

Taste is affected similarly, and it is most difficult to say if this be hallucination or delusion. This, too, is mainly a symptom of the acute stage.

There are many curious phenomena connected with hallucinations of *sensation*, whether internal or external. Hallucinations of the muscular sense are an example, akin to the feeling of powerlessness we so often experience in dreams; and from the panic of nightmare we may faintly conceive the terror of the insane mind ever haunted by an incubus, knowing no waking till it is cured.

These different hallucinations may exist singly or together—usually we find them co-existing with delusions, often with illusions also.

ORIGINAL COMMUNICATIONS.

TOBACCO SMOKING IN DISEASES OF THE NERVOUS SYSTEM.

SEX IN DISEASES OF THE NERVOUS SYSTEM.

THE FORM OF AMAUROSIS COMPLICATING LOCOMOTOR ATAXY.

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TOBACCO SMOKING IN DISEASES OF THE NERVOUS SYSTEM.(a)

THE question as to the influence of a widely-spread habit on health is one of very great importance. The ill effects of smoking have no doubt been much exaggerated by some, and yet, perhaps, too much underrated by others. It is a subject which with difficulty admits of precise investigation, and in its present stage, at least, certainly not of investigation on the numerical method alone. My object in writing this communication is rather to offer suggestions for method in further clinical investigations than to put forward any conclusions. There are already decided convictions on this matter, but unfortunately these convictions are very much opposed to one another. Lately, however, the question has been put more closely in reference to one particular nerve affection. Now nearly two years ago Mr. Wordsworth drew attention to one particular form of amaurosis, which he believes to be caused by tobacco smoking.

The chief point in Mr. Wordsworth's paper (*Lancet*, July 25, 1863) for my present purpose is embodied in the following quotation. Speaking of the obvious difficulties besetting such an inquiry, he says:—"I think there may be some conclusions to this purpose deduced from the greater frequency of atrophy of the optic nerves in men than in women (of which I suspect there is little doubt), though the other causes are more likely to affect the latter—for instance, needlework, etc."

More recently, Mr. Hutchinson has brought together many clinical observations on this subject. The most important conclusion at which Mr. Hutchinson arrives from an analysis of his facts is the following:—

"That it [amaurosis, meaning the well-known form of amaurosis with the ophthalmoscopic signs of atrophy of the optic nerves] occurs in large excess in adult *males*; typical and *uncomplicated* examples of it being very unfrequent in women."

This conclusion as to sex, which tends to confirm the above-quoted statement by Mr. Wordsworth, is worthy of great attention. For although smoking is a very common habit in men, it is a very rare one indeed in women. If a further series of observations show this conclusion to be correct, as a matter of fact, it will demand great consideration in writing of and in thinking on the natural history of amaurosis. But although it might point to *something sexual*, it would not be safe to put it down to the masculine habit of tobacco smoking until much more positive and negative evidence had been obtained. In his paper just referred to Mr. Hutchinson considers the question of sex from many points of view. For instance, he points out that men are more liable to receive blows on the head. Indeed, he considers smoking as but one of the things to be borne in mind in thinking of what may be provisionally called the sexuality of disease. The difficulties of the subject are many, and have been ably stated(b) by Mr. Ernest Hart and Mr. Carter.

(a) Read before the Hunterian Society April 19, 1865.

Being a Physician, my experience of ophthalmic Medicine is necessarily limited. I do not, therefore, venture to give an opinion as to the influence of tobacco smoking in causing any particular defect of sight, but I wish to make the subject of study a more general one by bringing forward for clinical investigation Progressive Locomotor Ataxy, and also the General Paralysis of the Insane. These two diseases are rarely found in women. We could then investigate more generally, and still precisely, as to the influence of sex in producing or predisposing to diseases of the nervous system rather than to disease of one particular nerve tract—the optic. We should have a wider field for investigating, not the influence of tobacco smoking alone, but of other sexual peculiarities, habits, vices, &c.

Let me say again that I submit that tobacco smoking is but one of the things to be kept in view in this investigation. This widening of the subject need not confuse the inquiry by making it more complex; for—on a scale sufficiently broad to avoid error, especially the error of attaching too much importance to accidental circumstances—amaurosis can only be studied by the ophthalmologist, progressive locomotor ataxy by those practising generally, and general paralysis by Physicians to large asylums. Although then there would be more work there would be more workers; and yet when working singly the workers would have a bond in unity of purpose, as their ultimate object would be the same. For although the *Diseases* of the nervous system to be investigated are widely different as groups of physiological symptoms, the pathological question, or at least, the most important part of it is as to the effect of tobacco smoking, other sexual habits, peculiarities, or vices in leading directly or indirectly to degeneration of the elements of a certain *Tissue*—the nervous.

It seems pretty clear that there must be something to determine the so great preponderance of males in patients suffering under progressive locomotor ataxy. Duchenne(c) has seen this disease four times only in women, and Trousseau but three times. Romberg, who speaks of the same, or at least of a similar class of symptoms, under the name of tabes dorsalis, says "scarcely one-eighth of the cases are females." I may mention, although it can add but a drop to the ocean of the experience of such men as Trousseau, Duchenne, and Romberg, that I have never seen the leading symptom of progressive locomotor ataxy in a woman.

The difference is not so great in general paralysis, or paresis, but still it is sufficiently striking to arrest attention in an inquiry like the present. This, however, is a disease which rarely comes under my notice, and therefore I have nothing to say of it from my own experience. Dr. Sankey has kindly supplied me with statistics which show that males are affected much oftener than females.

In choosing these three diseases, I by no means think that other affections of the nervous system should not receive attention, but it is, I submit, convenient to begin with these "progressive" forms of disease; for unless we take great pains to be precise, our minute inquiries into a subject so loose might easily lead to false conclusions.

The ophthalmologist has the great advantage of being able to see the nerve tissue affected or supposed to be affected by tobacco smoking, &c. Of course, the utmost care must be taken to describe the ocular changes, as "amaurosis" is now-a-days little better than a loose name for blindness from deep changes in the eye or head; and as the Physician constantly meets with defects of sight in cases of disease of the nervous system, he must study the intra-ocular changes accompanying or producing amaurosis to some extent. Although the inquiries into the causes of amaurosis and progressive locomotor ataxy must necessarily be to a great extent distinct, they cannot be entirely separated. For amaurosis occurs in locomotor ataxy, so that the Physician must use the ophthalmoscope to give a rational scientific meaning to the symptom blindness; and, on the other hand, the ophthalmologist ought, I think, to keep in mind that "uncomplicated" amaurosis may be but the first symptom in a series—the beginning of progressive locomotor ataxy.

Some years ago I had the pleasure of being Clinical Assistant at Moorfields to Mr. Dixon, Mr. Poland, and Mr. Hutchinson. I then took notes of twenty-one cases of amaurosis; in each there was white atrophy of the optic nerve discs. I may here remark that when in this paper I use the term "amaurosis" without qualification, I mean blindness with the ophthalmoscopic signs of white atrophy. But this term, even thus qualified, is, as I shall shortly point out, far from being a precise one.

In a letter published in Mr. Carter's translation of Zander on the Ophthalmoscope, Mr. Wordsworth describes the ophthalmoscopic appearances which he has met with in smokers. It is especially to be observed that Mr. Wordsworth describes two stages, one of hyperæmia and one of anæmia—the condition of atrophy being only approached.

"I believe that the earliest changes, observed in tobacco cases, are those of increased vascularity of part or the whole optic disc.

"After an uncertain period, the nerve is very unequally coloured, part being over vascular and part anæmic. In several cases that I have seen, this has been very palpable, about one-half of each nerve being so changed. In more advanced stages, the outlines of the disc have been observed to be undefined, the choroidal margin being blurred, and the area of a bluish-grey colour. Lastly, the conditions of white atrophy are approached. I say approached, for I have never seen this appearance so distinctly marked from tobacco as from cerebral disease. Nor have I met with any case that has ended in *total* loss of sight. . . . In many smokers that I have examined, I have almost invariably found the optic disc hyperæmic, even where this physiological condition has not prejudiced vision."

But in thus carefully detailing the appearances he has most frequently met with, I do not understand Mr. Wordsworth to imply that other forms of atrophy of the optic nerve are not to be considered in the inquiry. Indeed, we want not only positive proof that a certain form of amaurosis from atrophy does depend on smoking, but negative proof that certain other forms of atrophy do not. We must, then, not be satisfied with simply stating that the nerve is atrophied. There are at least two kinds of white atrophy. Now, the cases I noted at Moorfields cannot have the precise value they would have had if the ophthalmoscopic appearances had been noted as carefully as Mr. Wordsworth suggests. The following short analysis loses much of its value from this neglect, but yet has some points of interest:—

SEX IN DISEASES OF THE NERVOUS SYSTEM.

Of the twenty-one cases thirteen were in males and eight in females. This disproportion is comparatively slight; but on further analysis it will appear that the proportion of cases of uncomplicated amaurosis in males is very great.

Females.—In two there were obvious symptoms of organic disease during life, and the diagnosis was confirmed by the autopsies. One followed convulsions in labour; one occurred in a woman aged 74, who had had an attack of hemiplegia several years before. Two cases were in children—one, a girl aged 7, who had had attack of epilepsy soon after the amaurosis began, and the other in a girl aged 7 who had been blind from birth. Then I wish to mention prominently a case in a woman who had severe pains in the legs. Lastly, there was but one case in which there were no symptoms beyond the amaurosis.

Males.—In seven there were no symptoms beyond the amaurosis. In five there were pains in the legs, or numbness, and in one (a boy) the amaurosis was congenital, the patient being the brother of the girl mentioned in the list of females as being blind from birth. All these would generally be called "uncomplicated."

(b) See report of a meeting of the Hunterian Society, *Lancet*, Nov. 7, 1863, for remarks by Mr. Critchett, Mr. Wordsworth, Mr. Ernest Hart, Mr. Solly, Mr. Couper, and Mr. Hutchinson. Mr. Carter's observations are to be found in notes to his translation of Zander on the Ophthalmoscope.

(c) Dr. Bazire, in his translation of Professor Trousseau's lectures, has added an appendix to the one on Progressive Locomotor Ataxy. He there relates eight cases of ataxy. Of these patients seven were males, and one was a female. Dr. Bazire alludes fully to this circumstance, and the following paragraph is especially interesting. He says:—"This relative proportion of the female sex has not been noticed in the case of progressive locomotor ataxy alone, but seems to obtain in all forms of disease of the spinal cord, as would appear from a table published by Dr. Brown-Séquard showing that of 177 cases of paraplegia, 128 occurred in men, and only 49 in women.

In addition to the above there was a case of amaurosis of one eye in a man.

In the cases which come under my care at the Hospital for Epilepsy and Paralysis, and at The London Hospital, amaurosis is evidently but a symptom of a series, just as loss of speech is, and generally a subordinate one. The proportions of the two sexes in the cases I have observed at these Hospitals is not so unequal—viz., sixteen males and twelve females—*if cases of amaurosis with locomotor ataxy be excluded;* of these there were six cases—all males. Moreover, except in the cases of ataxy, the atrophy in these cases has been of the kind which follows neuritis.

Looking at the notes of the cases I had under my observation at Moorfields after a wider experience of diseases of the nervous system, I cannot help suggesting that it is more than probable that many of the cases in males which I saw at that Hospital, especially those in which there were pains and numbness in the legs, were cases of commencing locomotor ataxy, or were loosely allied to that disease.

It may be justly remarked that the term "numbness and pains in the legs" is to the last degree vague. But in writing generally of many cases I must use a general expression. The pains, when particularly described in my notes, are recorded as "gnawing," "shooting," etc., such as any Physician who has paid attention to progressive locomotor ataxy will recognise as being frequently met with in that disease. In taking notes of cases for scientific purposes it is most important to get the patient to describe these subjective symptoms as carefully as he can. When they are faithfully described, it is of less importance how they are named, but to name them as "rheumatic" without description would lead to error. The use of a loose *name* necessitates careful *descriptions* in actual cases. It will be observed that these pains are noted to have occurred in but one of the female patients. A few months ago I made a post-mortem examination on the body of a male patient who died amaurotic, and who during life had had symptoms of ataxy. This patient used to describe his pains very vividly. He said they were gnawing, and "like a dog biting him suddenly." I found disease of the posterior columns(d) in the dorsal region of the cord. This case shows, I think, the relationship of "uncomplicated" amaurosis to locomotor ataxy. The patient's sight failed gradually, and was lost in two years. Twelve months later pains in the legs began, and it was several years after that before any notable difficulty in walking occurred. The optic discs in this patient were *well margined,* and the vessels were of good size.

THE FORM OF AMAUROSIS COMPLICATING LOCOMOTOR ATAXY.

I repeat, that in speaking of pains in the legs accompanying amaurosis, I mean pains of a particular character—viz., like those accompanying locomotor ataxy. Now, I by no means wish to assert that these pains with amaurosis should lead us to diagnose commencing progressive ataxy, but they are certainly often definite enough to command particular attention in any methodical investigation of amaurosis, and quite definite enough to be admitted to the class of symptoms to be investigated as regards sex, tobacco, etc. In diseases of which the real pathology is so much disputed as amaurosis and locomotor ataxy, we can do little more than group our cases from clinical symptoms. This is certainly not a desirable kind of order, but it is the only one, I submit, that is at present practicable; and if not scientifically exact, it, at all events, will render what one has to say intelligible, and will render a better one possible. Whether, then, there be a real relation betwixt what we call uncomplicated amaurosis and locomotor ataxy, there is, at least, a clinical gradation in the symptoms from one to the other, case by case. And it is this gradation which shows, I submit, the scientific importance of these pains. They are a link betwixt "uncomplicated amaurosis" and locomotor ataxy.

Thus we have (1) amaurosis without pains in the legs; (2) amaurosis with pains in the legs only; (3) amaurosis with pains in the legs and difficulty in co-ordinating the movements of the legs; (4) pains in the legs and difficulty in co-ordinating the legs without amaurosis; (5) amaurosis without pains in the legs and with difficulty of co-ordination. I could now put five patients in a row showing the above sets of symptoms. I speak of the kind of disc (which I shall shortly describe) I saw in the patient who died with disease of the posterior columns. I have now under my care at the London Hospital a case which shows the connexion of amaurosis with pains in the legs, and as these pains are like those in locomotor ataxy, I may say the connexion of amaurosis with one, at least, of the symptoms of this disease. The patient, a man, 45 years of age, came to me for symptoms of debility and nervousness of no very definite character. Finding that he was blind, I took the opportunity of investigating the causes and relations of the amaurosis. His sight began slowly to fail ten years ago, and it was four years before he was absolutely blind as he now is. The optic discs are quite white, but they are well margined, the arteries are small, and the veins also are rather small. This patient has no difficulty in walking, and finds his way from my room to the chair for the ophthalmoscope in the next room easily and quickly without any help. He had never had any difficulty of this kind except when he had had pains in his legs, and then only at the moment when they seized him. He had therefore never had the essential symptom of ataxy, but still the pains were sufficiently characteristic to show some relation betwixt the two diseases. He had had them for three years before the blindness began, and for seven years afterwards. They were severe shooting in both legs, coming on suddenly. He remarked spontaneously, "I can compare them to nothing but a flash of lightning." I may just add that he had not smoked much—never more than half-an-ounce a week—he had been temperate, and had not, he assured me, been addicted to sexual excesses, marital or otherwise.

In considering the causes of white atrophy, we ought, therefore, to keep continually in mind that it is not always (1) the result of a gradual and slow process, but frequently (2) the remains of an acute one. If Mr. Wordsworth's researches had no greater merit than that of putting this prominently before us, they would have great value. As I have just remarked, there are at least two kinds of atrophy of the optic nerve, or at least two sets of ophthalmoscopic appearances. Perhaps, as a Physician, I should speak more safely if I were to say that there are but two marked kinds in patients who come under our care for diseases of the nervous system *par excellence.* These two forms of atrophy are in general alike, but they present particular differences. There is one in which the disc simply whitens, and often changes slowly; and another in which its edge is ragged and irregular, or in which it gradually merges into the red fundus. There is often much pigment around it, and its arteries are generally very small and its veins comparatively large.

I have traced the second kind of atrophy many times from the well-known condition called neuritis. (Swollen disc, arteries lost, veins large, and scattered effusions of blood.) This kind of atrophy is the one found in the amaurosis which occurs with hemiplegia and with epileptiform convulsions (generally unilateral). It is the kind of amaurosis which follows disease of the hemisphere. Now, my experience of cases of amaurosis with locomotor ataxy is not large enough to enable me to speak with certainty of its exact ophthalmoscopic appearances. In the case alluded to, in reference to the pains in the legs, and also in which, at the autopsy, there was disease of the posterior columns, the discs were white, but well margined, and their vessels of fair size. I will mention a third case in association, although it belongs to a different category; I mention it chiefly for contrast.(e) A patient consulted me for difficulty in walking and defect in sight. He had a swollen optic disc, the arteries were lost in the discs, and blood was effused about them. He could then, however, see fairly, and could read. When his eyes were shut, he could stand, and even walk, but had great difficulty in doing so. He afterwards became almost quite blind (the discs whitening), and then, although he retained great power in his legs, could not walk a step, nor, indeed, stand without assistance. I confess I thought this to be, if not a pure case of locomotor ataxy, at least one resembling it; but at the autopsy I found a tumour at the base of the brain, pressing on the left crus cerebri, left side of the pons and crus cerebelli. The corresponding lobe of the cerebellum was smaller. This case is a valuable one, in showing the use of the ophthalmoscope in diseases of the nervous system, and points strongly to the importance of making a precise record of the ophthalmoscopic appearance in this class of cases, even when the amaurosis is but a subordinate symptom.

(d) The specimen has since been carefully examined by Lockhart Clarke. See *Lancet,* June 10, 1865.

(e) *Medical Times and Gazette,* June 17, 1865.

In this case of tumour, before death the discs cleared up, so as to present appearances generally resembling (although more extreme, the arteries being scarcely visible) those of Fig. 6, Plate xi., in Liebreich's Atlas. In the case in which I found disease of the posterior columns the discs looked like that represented by Fig. 11, Plate xi., as regards shape and edge; but they were white, and not blueish-grey. Moreover, Liebreich says the arteries in Fig. 11 are diminished in size; if so, I must retract what I have recorded as to their size in my case, as they were no larger than in the figure. I will just add what Liebreich says of Fig. 11:—"Fig. 11 shows a colouring of a greyish-blue, which, without being absolutely characteristic of spinal amaurosis, still seems to be produced particularly in this affection." Now, tabes dorsalis, from which this amaurotic patient was suffering, presents the essential features of the disease described by Duchenne as "ataxie locomotrice progressive."

I take it for granted that the tobacco inquiry will not be closed until much more clinical work on both sides, and therefore I urge that the ophthalmologist should study amaurosis in reference to other cases of disease of the nervous system, especially locomotive ataxy, of which it is but one symptom in a series, and I believe sometimes the first of the series. Again, Physicians should take equal care in describing the opthalmoscopic appearances in patients in whom the amaurosis is but a symptom; for although, as I have remarked, their inquiries are in a great measure distinct, they must merge at some points on common ground.

Dr. Richardson, in his recently-published work on Tobacco, says that smoking gives rise to a condition of the retina in which images of objects remain on it for a short time after the eyes have been withdrawn from the objects. This, in intelligent people, might be a delicate test of the influence of tobacco. Dr. Richardson observes that in some people it comes on after temporary excess in smoking, and disappears when the practice is abandoned.

To Dr. Richardson's researches, and to those of Mr. Solly and Dr. Edward Smith, the general inquiry has been very much indebted. In this paper I merely offer a few suggestions for further work, and refer to the labour of those authorities whom I have mentioned in it for much that has been actually done in the matter. It is very easy to offer suggestions for work, but in thus giving them I have freely uncovered my own shortcomings, and have given the results of my own work, so far as it goes. My object in writing is by no means to come to any conclusions, but to endeavour, if possible, to introduce as much method into the inquiry as I can by contributions from my own field of scientific labour.

The researches of Dr. Hammond are particularly interesting. He finds that tobacco-smoking increases the quantity of phosphates and sulphates in the urine, but not the quantity of urea. This, it is believed, points not so much to general waste as to waste of nervous tissue in particular. It would certainly be difficult to understand why, from such wasting of nerve-tissue, one particular tract of the optic nervous system should especially suffer by this drug; but there does seem to be good evidence that certain poisons affect particular divisions of the nervous system. Thus, woorari is said to poison the motor nerves and not the sensory, and strychnia the sensory and not the motor. Again, the action of lead-poison is at first very local, affecting the extensors of the forearm on both sides; and thus, as in "tobacco amaurosis," we have an affection at once very local and very symmetrical. It may be that the action of lead is direct on the muscle, and not indirectly, by injuring the nerves to those muscles; but the principle is still the same as regards the localisation and symmetry of the action of a poison on certain widely-spread tissues.

The Late Dr. Babington, F.R.S.—The will of this gentleman, who died on April 6 last, at his residence in George-street, Hanover-square, has just been sworn under £6000, the whole of which he has left to his son, Mr. S. P. Babington.

Leeds Dispensary.—Mr. T. R. Jessop, of Park-square, was yesterday, at a special meeting of the trustees, unanimously elected an Honorary Surgeon of this valuable Institution. The subscribers and the public cannot be otherwise than gratified to find that this appointment has been bestowed upon a gentleman whose services as House-Surgeon at the Infirmary for several years were performed so ably as to give universal satisfaction.—*Yorkshire Post.*

ON A CASE OF

ARSENICAL POISONING BY MAGENTA-DUST, USED IN LITHOGRAPHIC PRINTING.

By W. WHALLEY, M.R.C.S., etc.

The well-known colouring agent magenta is obtained by boiling amyline with arsenic acid; the colouring matter thus produced is dissolved in alcohol, and forms the magenta dye. It has been said that all the arsenic is separated from it, and none remains in combination. This may be so as a general rule, but the subjoined case proves the possibility of an exception to it:—

On Tuesday, March 13, 1866, I was called to attend a boy aged 13; in appearance he was tall and pale; the lips, nose, and eyelids were swollen, and the skin hot; he complained of his throat feeling dry, with a dry cough, severe headache, and intolerance of light, urine scanty; great prostration of strength; felt sick and nauseated; the tongue was coated with a brown fur, and the bowels had not been acted upon for four days, and there was loss of appetite. His mother states that when he arrived at home on the previous Thursday evening he complained of shivering and feeling unwell; in the night he got out of bed, complained of colic, and was so giddy that he was unable to get into bed without assistance. On Friday nearly all the symptoms already enumerated were present. The mother attributes the cause of his complaint to "magenta-dust," which he had been using in printing on the afternoon of Thursday. She states also that in October last he was employed for two days dusting with "magenta," and on that occasion he suffered from a similar attack. I procured a small quantity of the magenta-dust, which on examination was found to consist of rice starch for a body or base, impregnated with magenta, and containing an amount of arsenic more than sufficient to account for the above symptoms, which symptoms readily succumbed to treatment, for in about ten days the boy was convalescent.

It is probable that in this case the arsenic was taken into the body through the mucous membrane. Some of the coloured pigments containing different preparations of arsenic are known to the workmen, and the requisite precautions adopted, but they are not cognisant of the fact that "magenta-dust" contains arsenic.

Bradford, Yorkshire.

ROUGH NOTES FROM PRACTICE.

ON A CAUSE OF "IN-GROWING TOE-NAIL."

By B. NICHOLSON, M.D.,
Staff Surgeon, New Zealand.

While playing rackets in 1858, one of my great toes was trod on, and the bruise was felt for a day or two. Some three or four weeks afterwards I again began to feel an occasional and momentary pain, as though the bruise were still making itself felt; and when it continued it was put down to my rheumatism settling in a weakened part. When, however, it became more frequent, I made a close examination, and finding that it was seated just below the inner edge of the nail, I lifted the nail gently and found beneath it an accumulation of epidermis or kind of flattened soft corn. This was removed with my penknife, and with it the pain and soreness. It had acted like a foreign body, and the nail pressing it into the soft parts beneath had acted like the leather of a boot on an unpared corn. Had it remained, I saw that the parts around would have become irritated, red, and swollen, have pressed on the edge of the nail, and becoming ulcerated produced the so-called in-growing toe-nail. Some months afterwards a friend complained of soreness and irritation in the same spot, and there was a little redness and swelling there. Afterwards I had a third and then a fourth case where the irritation and swelling were greater, and nothing but ulceration wanted. In each I either proceeded as before or recommended the patient to do it for himself, telling him what he would find; and this, with a day's rest and a strip of isinglass plaster, was in each sufficient. The observation itself is trifling, but the disease when once established is a nuisance to the Surgeon, and a by no means inconsiderable trifle to a patient.

I would add that when the disease is established I have found the cork compressor, recommended in some of the journals a few years back, useful, or a bit of gutta percha moulded to the shape. And for the last eighteen years I have found that when the nail has been removed, the best, least troublesome, and most comfortable treatment is a compressing shield of gutta percha or thin flexible lead, removed every third or fourth day, with, if necessary, the slightest touch of bluestone in the intervals. Indeed, whenever a nail is lost, this (after any acute phlegmonous symptoms have subsided) is advisable. The solid compression reduces any increased swelling far more readily than mere strapping, the soft parts formerly pressed on by the nail heal more readily and healthily under its substitute, and the nail itself grows up evenly and shapely.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

THE LONDON HOSPITAL.

CASES OF CHOLERA.

The number of cases is still less, and the severity of the disease is diminished. Probably, however, the diminution in number is due to the fact that a large Hospital has been opened in Commercial-street. Dr. H. G. Sutton has been appointed to take charge of this temporary Hospital, and we hope shortly to be able to report the results of his treatment of cases admitted under his care.

As regards treatment of cases at the London Hospital, we may mention that the injection of fluids into the veins is still being tried in a few cases, and in two the results have been favourable. Dr. Beigel's plan—the subcutaneous injection of water—has been tried in a patient in collapse. This patient died. One patient has recovered who was treated by draughts of warm water.

Statement of Cases admitted into the Cholera Wards of the London Hospital for the week ending August 30, 1866.

	Cholera.		Choleraic Diarrhœa.		Cases of Diarrhœa treated as out patients, Aug. 23 to 30.
	Males.	Females.	Males.	Females.	
Aug. 24, 46th day .	4	1	3	3	112
„ 25, 47th „ .	2	1	1	6	105
„ 26, 48th „ .	3	8	6	3	94
„ 27, 49th „ .					120
„ 28, 50th „ .	—	2	3	4	155
„ 29, 51st „ .	5	2	1	4	86
„ 30, 10 a.m. .	2	1	—	2	54
	16	15	14	22	726

Ages.	Cholera.		Choleraic Diarrhœa.	
	Males.	Females.	Males.	Females.
1 to 10 . . .	3	4	4	1
11 „ 20 . . .	1	2	4	2
21 „ 30 . . .	5	2	1	6
31 „ 40 . . .	1	3	2	6
41 „ 50 . . .	3	2	2	2
51 „ 60 . . .	2	—	1	3
Upwards . . .	1	2	—	2
	16	15	14	22

	Cholera.	Choleraic Diarrhœa.	Total.
Recoveries	36	22	58
Deaths	11	2	13
Remain	52	40	92

From the Outbreak.

	Cholera.	Choleraic Diarrhœa.	Total.
Admissions. . . .	495	184	679
Recoveries	177	129	306
Deaths	266	15	281
Remain	52	40	92

Total out-patients treated since the outbreak, 9494.

GUY'S HOSPITAL.

CASES OF CHOLERA—DEATH OF A WHOLE FAMILY.

Two cases of cholera have been admitted since our last report from this Hospital. The first of these is a sad one in every respect, and doubtless many of our readers have seen an account of it in the newspapers. It was stated in the newspapers that the patient spoke pathetically of his condition, and that he was careless about recovery. We were told at the Hospital that the poor fellow never spoke at all, and was, indeed, scarcely conscious. We obtain the facts of his case from reports by Mr. Brown, B.A., and Mr. Hartree, B.A.

S. D., aged 31, a carrier, was admitted August 24-25 (at 12, midnight), and died at 2.15 p.m. He lived at 35, Rouel-road, Blue Anchor-road, Bermondsey.

He, his wife, and family were all well on the 22nd. On the 23rd his wife was taken ill, and died the same day. Two of his children were taken ill on the 23rd, in the morning, and both have died. Very soon after his wife's death, the poor fellow was himself seized with the disease, and he also died. Thus a whole family have been swept away by cholera. No one else in the house or near neighbourhood was known to have been affected. We have been informed that a communication has been discovered betwixt the cistern for the drinking water of the family and the water-closet, and this circumstance may perhaps help us to account for the sudden and almost simultaneous seizure of a whole family.

The patient was admitted in a state of collapse. His pulse was imperceptible, and his temperature was only 96·8°. He had frequent rice-water vomiting and purging. He was almost unconscious, and it was impossible to get any history from him. He died at 3.15 p.m.

We may mention briefly the treatment adopted. The following was ordered to be given every four hours:—℞ Spt. chloroformyl. ♏xx.; tinct. opii ♏v.; ol. menthæ pip. ♏v.; mist. camph. ℥j. Besides this, one enema was given, consisting of wood charcoal (℥jss.) in starch.

The other case is that of a man, 39 years of age, who came from the same district as the patient whose case we have just given. He worked at the London Docks. He was admitted on the day of our visit to the Hospital, and we therefore defer giving any report of it.

THE MIDDLESEX HOSPITAL.

CASE OF CHOLERA—DEATH—AUTOPSY.

(Under the care of Dr. GREENHOW.)

The following is an interesting case, and among other things shows that deaths from cholera in Hospitals do not necessarily point to the fact that the epidemic is prevailing in their neighbourhood. The cases we recently reported from St. George's Hospital are also illustrations of this.

Richard C., aged 66, a sandwich-board man, who had been living at a lodging-house in Daset-street, Spitalfields, applied for relief at the Hospital on the 11th inst. at 4 p.m. He stated that he had been for the last few months badly off for food, but was in fair health up to that morning at 10, when, as he was following his occupation in Oxford-street, he was suddenly seized with diarrhœa and a feeling of faintness. He was purged four times prior to admission; had no sickness, and walked to the Hospital. Whilst in the out-patient department he was sick, vomited, and a loose fluid motion ran from him, and being very prostrate he was admitted an in-patient.

In Dr. Greenhow's absence he came under the care of Mr. Waymouth and Dr. A. Stephen.

To Dr. Stephen we are indebted for the notes of the case.

At 4.30 p m the patient when seen was quiescent in bed; had a worn-out appearance, an anxious expression, sunken eyes, and the face a faint dusky hue. The hands and feet were rather cold, and the right thigh slightly cramped. No pain in abdomen; temperature in right axilla 96·4°; tongue moist and tremulous; lips and tongue somewhat cooler than usual, with considerable thirst; pulse 78, and weak; heart sounds faint, but normal; breathing 32, equal and feeble; respiratory murmurs natural, and the voice strong and distinct. The mental faculties were clear, and the senses unimpaired. At 4.15 he passed a dark fluid motion, like beef-tea, and another at 4.45 lighter in colour. Five grains of calomel were given at once, and the haustus potassæ citratis effervescens, with fifteen minims of the spiritus chloroformi and a grain of calomel, was ordered to be taken every half-hour. Hot bottles and blankets were placed about him, and ice given to suck, with cold water to drink at pleasure in small quantities.

At 5 p.m. rapid collapse took place; the tongue, lips, and breath became cold, the voice broken and hollow, and the eyelids began to droop. The pulse was weaker, but now 85. At the same time came away from him involuntarily in bed a copious fluid motion, resembling rice and water much more than the previous evacuations, and which recurred again at 5.30 and 6.30 p.m. It then stopped until 4.30 a.m., when a similar, but very slight motion took place. Between 5.30 p.m. and 9.30 he became sick, and vomited on seven different occasions a dark olive-green fluid. At 7 p.m. the pulse was 88, and temperature 96.6°. By 7.30 the leaden hue of the face was more marked; the skin over the hands and face was shrivelled and shrunken, and finger nails dark in colour. The eyelids were closed; he answered questions hesitatingly, and lay on his back apparently in a drowsy state, but not unconscious. No recurrence of the cramp had taken place, but had some slight and occasional pain over the abdomen. By midnight his voice was quite gone; a cold, clammy sweat was felt over the trunk, and his pulse could not be counted. The temperature then was 96·8, and the medicines were ordered to be given now every hour. He was sick and vomited again at 2 a.m. At 4 a.m. the axillary temperature had fallen to 95°, and the body generally felt cold, without any perspiration. No urine was passed from the time of admission. Sinking of the bodily powers continued to go on from the onset of collapse without any show of rallying, and he died at 6.10 a.m. of the 12th, twenty hours from the time of his first feeling ill.

At the post-mortem, 30 hours after death, were found irregular, but old, adhesions on both sides of the thorax. The anterior and middle lobes of right lung were almost exsanguineous; the remaining portion was charged with tarry-coloured blood. The left lung was in a similar state to the right. A few cretaceous tubercles were found at the apices of both lungs. Pericardium normal, and heart of rather a large size, with the valves natural and right auricle and ventricle distended with tarry fluid blood. The kidneys were small, and cortical substance appeared somewhat wasted. The œsophagus was injected, and of a bright pink colour. The stomach contained remains of the calomel. The mucous membrane of the remainder of the alimentary canal was pale, except within one foot of the anus, over which space it was injected. The contents of the small intestines were of a nearly fluid kind and light yellow colour, with a very small quantity of fæcal matter. The larger intestines had similar, but paler, contents. The solitary glands were not discernible, and only a few of Peyer's patches were visible.

GERMAN HOSPITAL, DALSTON.

CASES OF CHOLERA—INTERNAL TEMPERATURE—CONDITION OF URINE.

(Under the care of Dr. SUTRO and Dr. HERMANN WEBER.)

The number of cases admitted since the last report amounts to four, one of them only having been accompanied with collapse, and that not in a severe form. In this case the temperature in the axilla on the second day of collapse was 97° F., while that in the rectum was 100·5°; on the following day it was, in the axilla 97·6°, in the rectum 99·5°; and, again, a day later, in the axilla 98°, in the rectum 99·1°. Dr. Weber remarked that he had also found, in several other instances in which he had examined for it, that during the collapse the temperature in the rectum was more or less above the average of health; that it had been in one case of severe collapse as high as 103°, while in the axilla at the same time it scarcely exceeded 95°; that with progressing recovery the temperature in the rectum had decreased, while that in the axilla had increased.

In one of the cases lately admitted there was no diarrhœa at all, but only vomiting, and yet the whole aspect of the patient pointed to a mild form of cholera; there was also suppression of urine during two days, succeeded by albuminous urine during two further days.

In the case of T. L., mentioned in the two last reports as No. 5, the eruption left at first yellowish-brown pigment spots, and ten days after the outbreak of the eruption or exanthema desquamation commenced, which resembled that of scarlet fever, the epidermis coming off in large pieces, especially on the arms and fingers.

With regard to the specific gravity of the urine, it was stated in the last report that it had varied in different cases from 1062 to 1025; the latter figure ought to have been 10025; in one instance it was even as low as 1002, with a quantity of 16 ounces in 24 hours, on the first day after the cessation of the suppression.

It may still be remarked that in several of the cases where the diarrhœa and sickness at the time of admission had been considerable, these symptoms disappeared within a few hours after the patients had been put to bed and had been treated only with ice, without any food or medicine.

LIMEHOUSE DISTRICT CHOLERA HOSPITAL.

CASES OF CHOLERA.

(Under the care of Dr. WOODMAN.)

From July 28 last, up to August 25, there have been admitted to this Hospital 134 cases of cholera and diarrhœa from this district, 6 cases of cholera from St. George's-in-the-East, and 10 other cases of fright, colic, etc. Drs. Woodman and Heckford have furnished us with the following statistical returns:—

		Males.	Females.	Total.
Admitted .	Cholera . .	49	73	122
	Diarrhœa .	5	13	18
Died . .	Cholera . .	12	28	40
	Diarrhœa .	1	0	1
Discharged cured .	Cholera . .	27	33	60
	Diarrhœa .	5	5	10

It will be observed that the mortality in cholera cases only is under 33 per cent. Various plans of treatment have been adopted, and a record of all has been kept. It would be premature to give the statistics of these at present, as some have yet been tried only in a few cases. The much-vaunted camphor treatment of Rubini, although in some cases of collapse it appeared to be useful by causing an increase of warmth and acting upon the skin, as proved by an almost instant and general flush, yet fell far short of the expectations formed of it, the deaths under its use being fully 30 per cent. Castor-oil was the most unsuccessful of any. Dr. Billing's is now the favourite treatment for collapse. All alcoholic stimulants have been abandoned, except in the stage of reaction or during convalescence. Of the deaths, thirty-one occurred in the first (cold) stage, and nine in the second, or that of reaction. The shortest time in which cholera proved fatal was twelve hours; the longest eleven days, reckoning from first seizure.

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SATURDAY, SEPTEMBER 1.

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REGISTRATION OF DISEASE.

The registration of disease is a project which has been mooted over and over again during the last twenty years, and which has been lately the subject of an elaborate report by a committee of the British Medical Association. The report was able and comprehensive, and perfectly unobjectionable, for it contained a scheme which is already in operation partially, and which was once carried out systematically, but which failed for want of that one thing which the Association cannot, and indeed ought not to be called upon to contribute—and that is money. Nine years ago a "Weekly Return of Existing Disease" was issued by the Medical Officers of Health of London. It need scarcely be said that they have materials for such a return in abundance—nay, those materials, or abstracts of them, are published in their several reports, and may be collected from them. From April, 1857, to October, 1858, Dr. Conway Evans and Mr. Pittard, and after them the late lamented Dr. R. D. Thomson, edited these returns, which were printed at the expense of the Government; but an economical fit came on, and the Lords of the Treasury buttoned their pockets, and the publication ceased. What is wanted is, not a new scheme, but some money. We are not without hope that the Registrar-General and his coadjutor, Dr. W. Farr, may set the thing going again shortly.

It is clear that a publication of the sort might be so contrived as to answer one or both of two purposes. It might be drawn up at leisure, at the end of a year, and might serve as a record of the quantity and kind of sickness which had been observed during that year at all the public institutions within a given area. There are plenty of materials for such a publication—say, for London during 1865—for all the Medical Officers of Health possess them, and use them in their annual and other reports. What is wanted is some one with the leisure and zeal to collect and elaborate them and a moderate sum for printing.

But if such returns are to be published weekly, so as to give an account not only of what *has* been as a matter of history, but of what is *going* on now for the sake of prevention or other practical purposes, the difficulties and cost of the undertaking must be fairly met and provided for beforehand. For such a return, completeness and punctuality are essential—the publication is a mockery without them—but how are these to be insured?

Look at the Registrar-General's Weekly Return of deaths. The materials for this are gradually accumulating during the week, in separate entries, each of an indisputable fact—that is, a death, and of the cause of death—which there is time, before signing a certificate, for the Practitioner to ascertain. These entries, made gradually during the week by a paid officer, or by a regularly appointed deputy in his absence, are copied as they stand on Sunday, and posted in time to reach Somerset House by 10 a.m. on Monday, when they are tabulated, printed on Tuesday, and issued to the public on Wednesday morning. One hundred and thirty-five district Registrars supply the materials direct.

But, for a weekly return of existing disease, the machinery is much less simple and perfect. Let us assume that the returning officer is the Medical Officer of Health. In order to insure absolute punctuality on his part, the process ought to be one of duty, and not performed from mere zeal or love of science—it ought to be paid for; and if he be absent or engaged he ought to have some trustworthy deputy. Anyhow, Monday morning finds him, not with his materials sent off and his work done, as it finds the Registrar, but with all his materials to get, and his work to begin.

He has to get returns from each of the parochial Medical officers, and from some officer, lay or Medical, of every charitable institution in his district. Some Medical Officers of Health collect materials from eleven or twelve persons or institutions. But each of these returns is a work of zeal or love, not of duty, and, with human nature as it is, it is quite unreasonable to expect that mere voluntary effort shall supply the requisite material and work with the punctuality which ought to be the valuable characteristic of such a publication as we have in view. As it is, some Medical Officers of Health have great difficulty in obtaining correct returns even for their monthly or quarterly reports.

As steps towards the desired end, we would suggest that the Poor-law Board might require, or might assist in requiring, a regular weekly return from every Poor-law Medical Officer. Every charitable institution might do the same, by a resolution of its governing body. Moreover, one curious and easily accessible return might be got of the number of children absent on account of illness, or alleged illness, from all schools supported or assisted by public funds; and from our own experience we may say that the amount of instruction lost in this way is surprisingly great. But, anyhow, *money* is required; and it is perfectly futile to expect a large mass of national statistics to be compiled by gratuitous efforts.

An additional difficulty to be met is one of diagnosis. Many patients entered in the books of institutions have their diseases not named; many are entered as having "fever" who go out to work or play after a dose of castor oil, and not a few are first entered as having "fever" or "sore-throat" who afterwards have the word "scarlet" added.

We must not close this article without repeating our commendation of the efforts of the Manchester Sanitary Association, and of the recent labours of Drs. Philipson, Morgan, and Ransome.

THE CHOLERA.

The cholera epidemic still shows a tendency, but not in any marked degree, to decrease in severity. The following tabulated figures show the daily numbers of deaths from cholera and diarrhœa from Wednesday the 22nd to Wednesday the 29th of August, both inclusive :—

	Districts.											
	West.		North.		Central.		East.		South.		Total.	
	Cholera.	Diarrhœa.	Cholera.	Diarrhœa.	Cholera.	Diarrhœa.	Cholera.	Diarrhœa.	Cholera.	Diarrhœa.	Cholera.	Diarrhœa.
August 22 ..	1	4	2	2	3	1	25	3	4	4	35	14
,, 23 ..	—	—	2	4	1	3	26	4	9	6	38	17
,, 24 ..	2	2	2	2	1	4	26	6	4	5	35	19
,, 25 ..	—	2	1	4	1	1	25	10	9	5	36	22
,, 26 and 27	1	2	3	7	3	4	36	8	10	7	53	28
,, 28 ..	1	—	2	2	2	3	22	13	4	5	31	23
,, 29 ..	—	2	1	3	—	3	22	8	6	6	29	22

It seems pretty certain also that diarrhœa is becoming much less prevalent in London. In reference to the mode of propagation of cholera, many interesting facts have come to light. One would scarcely have imagined, after all that has been said and done in reference to sanitary matters—the publicity given to the instructions issued by the local Boards of Health in regard to preventive measures—the danger of a want of cleanliness, and the influence of fæcal discharges—that the following cruel experiment should have been perpetrated; such unnecessary uncleanliness as it exhibits is really criminal:—A woman lodging at the top of a house in Red Lion-street, Wapping, was attacked by cholera; her slops and filth were emptied down the rainwater pipe, which communicated with the water-butt below. The other people in the house drank the water contained in the butt, and five out of the nine died of cholera.

Medical men are freely avowing themselves contagionists; the spread of cholera from the Eastern to other districts has taken place so deliberately as to have made it an easy matter to investigate carefully into the history of isolated outbreaks, and a good deal of evidence of the transportation of the disease from infected to non-infected places and houses has been collected. The following illustration was kindly given us by Mr. Mason, Dr. Buchanan's able assistant:—A man had been working at Stepney in a house in which nine cases of cholera occurred; he came home with diarrhœa, having, however, previously been with his wife to the funeral of a brother who had died of cholera, and who was seen by the wife in his illness; the day after the father was attacked by diarrhœa, his child took cholera and died. The next day the whole family of five moved to a relative's house, in order that their room might be disinfected, slept there only one night, and then returned home. The child of the relative sickened of cholera and died, and the rest of the family in which the cholera first occurred have been all seized by diarrhœa within the last two days.

The result will be interesting to note. Two deaths have already been recorded in Little Pulteney-street. A woman coming from an infected district—Poplar—brought her son with her; he was attacked by cholera, and died; she suffered from choleraic diarrhœa, and recovered; the uncle to whose house they came was much frightened, and was seized suddenly in the churchyard at Poplar, whither the boy had been taken to be buried, and died the next day. Several inmates of this man's house have since suffered more or less from diarrhœa. Again, a woman lent a dress in order that a friend might wear it at the funeral of a person who died of cholera. The owner wore the dress on the following day, and was seized not long afterwards with choleraic diarrhœa, which proved fatal. The deceased seems, however, to have been very much alarmed lest she might perchance take the disease.

It is difficult to divest oneself of the idea that something is, or has been, radically amiss with the supply of water in the eastern districts, when such occurrences as the following happen:—On August 15 two fire-plugs opposite Regent's-place, Commercial-road, were drawn, and a very considerable quantity of small "mussel" shells, about the size of a shilling, were discharged—at least a bushel—according to an eye-witness. This is one of the things that the East London Water Company will be called upon to explain. Where did the shells come from, for it is wholly impossible that they could have been placed from without about the plugs? No doubt they had travelled along the supply pipe some distance. We cannot believe that the mussels were bred in the supply pipes; either the filtration would seem to have been imperfect or impurities are admitted after filtration, which thus becomes a farce.

RELATIVE MORALITY AND FECUNDITY OF SCOTCH AND ENGLISH WOMEN.

The Twenty-seventh Annual Report of the Registrar-General of England contains a very interesting analysis of the causes which *appear* to show that English marriages are less fruitful than those of Scotland. Our Scotch friends have, it seems, been glorifying themselves a little prematurely. They have asserted that marriage is more productive with them than it is in England, and thus the inference is drawn that the fair sex with us is not up to the mark in their power of fulfilment of the destiny of women. The Registrar-General amply vindicates the honour of his countrywomen, and the result of his investigations on the subject will probably astonish the Scotch statists, and make them chary of similar self-assertion in future.

It is admitted that the proportion of births to married women is less in England than in Scotland, but the ratio of illegitimate births is also less; and, taking the women of all classes collectively in the two countries, a very slight difference in the birth-rate is in favour of England. This apparent paradox is explained by the circumstance that the proportion of recognised wives in the population is much lower in proportion in Scotland than it is in England, and as the fecundity of wives is to that of spinsters as 13 to 1, a slight difference in the proportions alters the birth-rates of the two populations. The difference in this respect between England and Scotland is great: in England 52 in 100 women of the age 15-55 are wives, 48 only are spinsters and widows; in Scotland the proportions are reversedly 44 recognised wives to 56 spinsters and widows.

Out of 1000 children born in England 65 are illegitimate; the corresponding proportion in Scotland is 89, and thus in an equal number of children the bastards are as 3 in the South to 4 in the North. This great difference is due, it is believed, chiefly to the fact that in Scotland marriage legitimates all children of the parties born *before* the marriage; consequently, "it is quite certain that many of the children registered as illegitimate in Scotland will be legitimated by the subsequent marriage of their mothers; the number is not always recorded, as the mere fact of marriage regular or irregular legitimates offspring; but assume the numbers to be 2129 out of 9271 illegitimate births, then it follows that an indefinite number of the women returned at the census as spinsters in Scotland are living in a state of quasi-marriage described in the books, and fairly expecting if they have children to see those children legitimated by subsequent marriage; they are kept in an uncertain state, hovering between concubinage and marriage, to which there is nothing corresponding in England, and they would nearly all, if they lived under the English law, be explicitly married. If the numbers of these women are taken at 57,608 and added to the wives of Scotland (age 15-55), the numbers of wives *de præsenti* and wives *de futuro* will be 440,879, giving birth to 97,143 children annually, leaving 426,183 spinsters and widows corresponding to the same class in England, and giving birth to the same proportion of illegitimate children."

This explanation, everybody must admit, is much more consonant with reason than the notion that there is any essential difference in the organisation, the fecundity, or the virtue of the women of the two countries. And the conclusion, that legitimation *per subsequens matrimonium*, although it is acknowledged in almost every European nation, is a very doubtful advantage, "inasmuch as the benefit to existing illegitimate children is purchased by multiplication of their numbers, uncertain connexions between the sexes, and extensive disorganisation of family life," will, we believe, be fully endorsed wherever the subject is candidly and dispassionately considered.

ROUGH NOTES ON SYPHILIS.—No. I.

THE PHAGEDÆNIC TYPE OF SYPHILIS.

These papers are necessarily discursive. The writer follows no regular course; and, as he journeys on, he will often leave the main road for a bye-path, in order to examine anything he may find in his way.

There is a form of syphilis which has always appeared to the writer as possessing some peculiar characters. It is fortunately not a very common form, for it is a dangerous and formidable one, difficult of treatment under any circumstances, and peculiarly so in this respect—that, so far from being amenable to mercury, it is commonly much aggravated by it. The writer alludes to that form of syphilis in which a tendency to phagedæna, sloughing, or unhealthy ulcerative action characterises the syphilitic lesions. In dealing with this subject we must sacrifice scientific accuracy to practical utility, and gather under one and the same term cases which hang but loosely to it. By phagedæna, for example, we mean, strictly speaking, a peculiar process of molecular disintegration, giving rise to ichorous discharges, and very different from the ordinary forms of sloughing or ulceration. But, for the present, we propose to include all those types of syphilis which are accompanied by a low and unhealthy action.

It is sometimes stated in books that, in these forms of destructive inflammation, the action which is taking place in a primary lesion may save the patient's system from syphilitic infection. It is assumed that the death of the part involves the destruction of the poison; that they both cease to exist; and that on separation of the slough an ordinary sore is left requiring only ordinary treatment. Now, in the writer's opinion, this is quite incorrect. So far from the destructive form of inflammation in a chancre being a safeguard to the constitution, the severe character of the disease becomes impressed upon its earliest manifestation. You can often foretell from the character of the initial lesion what the subsequent ones will be.

The error has probably arisen in this way. The sloughing, phagedænic, and allied actions are infinitely more common in the local soft inflammatory sore; and again, from the idea that by an early destruction of the chancre we can effectually guard against constitutional symptoms. The virus of the soft sore may give rise to a very rapid form of inflammation; the inflammatory products are effused into the meshes of the tissue, the circulation is impeded or stopped, and the attendant swelling gives rise to a constriction of the tissues at some part about the base of the chancre; a dusky spot appears in the centre of the disease, which becomes darker, until it ultimately assumes the characters of a moist slough. Whether the surface left on detachment of that slough shall be healthy, shall granulate and cicatrise, depends upon the absence of all constriction, and the absence of the virus, or at any rate upon the diminished inflammatory reaction set up by it. If there be some strangulation present, so that the tissues cannot yield to the swelling, sloughing will continue. The way to remedy this is to incise the base freely, so as to take off the tension. It is ridiculous to expect that the application of any lotion to a sloughing prepuce, for instance, can stop the morbid process. So long as there is the tense semi-strangulated half-phymotic condition remaining, it will continue. But there may be no such tension, and yet the destructive process appears. In that case the tissues have imbibed the poison, a specific inflammatory action is maintained, the natural powers are insufficient, and the part perishes in the struggle; but it perishes piecemeal and slowly. An unhealthy irritable ulceration results, and this is, in reality, often only a series of attempts to bring about a healthy action without the power to accomplish it. Whilst a tissue is perishing bit by bit, the adjacent parts are being infected by the imbibition of unhealthy fluids, ready to perish afterwards under the influence of inflammatory action. These are the cases for strong nitric acid, or the application of bromine, which has been found so efficacious in Hospital gangrene by the American Army Surgeons, the lotion of potassio-tartrate of iron, opium, a good diet, and a well-ventilated apartment.

To return, however, to the subject with which we are more immediately concerned. The *true syphilitic*, the *infecting, chancre* may assume this sloughing or phagedænic form, and in two ways—first, it may be primarily phagedænic; secondly, it may become so at any time during its progress. Those who hold that induration of the primary sore is an essential property of the constitutional affection will deny the first proposition, but the writer's experience has quite settled the point to his own mind. He has seen cases—and two he distinctly remembers—in which the syphilitic virus gave rise to a destructive inflammation, eventuating in sloughing, without being preceded by any appreciable induration whatever. Such cases are unquestionably very rare. By far the most common is for sloughing or phagedæna to attack the indurated sore. Sometimes an unhealthy and rapid form of ulcerative action will appear and continue in a chancre until the induration has been completely destroyed, when the action ceases. This we can quite understand. The effusion at the base of the sore, forming its induration in fact, is sufficient to interfere with the maintenance of its nutrition; if it impedes it only, layer after layer will perish; if it prevents it altogether, the whole mass will slough out.

But sometimes this ulceration will be advancing at one part while induration is proceeding at another. In this case the induration is generally of a peculiar kind—peculiar in quality as well as quantity. In quality, it is rarely very dense, or circumscribed with that precision peculiar to the ordinary form of chancre—it is leathery instead of wooden to the touch. In quantity, it may be large as to surface, but deficient as to depth. When this kind of chancre appears, an induration may creep round the prepuce, and a phagedænic ulceration follow on its heels. The writer purposely draws his description from his own observation. He is describing the disease as it has appeared to him, and he must say that the subsequent history of these cases has been bad. What has characterised the primary sore has equally marked the secondary and tertiary lesions - a tendency to the production of a lowly organised lymph, a proneness to suppurative or ulcerative action, infiltration of tissues of the throat and soft palate with lymph, degenerative softening of such lymph, and disagreeable ulcers as a consequence, troublesome affections of the scalp, larger and more solid swellings of the skin and mucous membranes in the place of the earlier papules of secondary syphilis, rupitic eruptions on the skin and scalp, or wheal-like tubercular prominences which ulcerate, suppurate, or take on the serpiginous kind of ulceration. These observations are quite in accord with those of Bassereau, Diday, Dr. Babington, and others.

We propose to speak of the causes and treatment of this variety of syphilis in our next paper.

THE WEEK.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL.

A FEW weeks ago scarlet fever made its appearance amongst the patients of Queen Charlotte's Lying-in Hospital, which had been closed since the 1[illegible]th, ostensibly for the annual cleansing. The first case was that of a single young woman, who felt ill about a week before her admission on June 13, and who came from the country, in the first instance, to the "Home" of the Hospital in Marylebone-road. On the second day after admission into the Hospital, she was attacked by scarlet fever, the rash being well marked; but she recovered. On June 16 a woman (No. 2), who came from Notting-hill, was admitted with a sore throat. She had scarlatina the third day after her confinement, and recovered. A single girl (No. 3) was confined on the 18th. Fourteen days afterwards she was attacked by scarlet fever, but recovered. Her child, however, died of the disease. On July 16, F. P. (No. 4), single, from the country, was admitted; she was confined the next day; had scarlet fever on the sixth day, and recovered. Another single woman (No. 5) was confined on July 21 in a ward with two others. She is a country girl, and is the only one of the three who took scarlet fever, which attacked her on the fifth day after her confinement; but she recovered. On July 27 a married woman (No. 6) was admitted and confined. She was attacked by the disease, and recovered. Then a single young woman (No. 7) came in ill on August 3. Her child was stillborn and apparently dead two or three days. This patient died with a rash over the whole of the belly very much like that of scarlet fever. No case of the disease was subsequently observed for several days in the Hospital. On Sunday, August 12, a single girl, T. (No. 8), was admitted from the receiving home, 157, Marylebone-road, and placed in a "clean" ward. Before she was confined another single girl, R. (No. 9), was admitted on the 13th (Monday) from 157, Marylebone-road, at 10 a.m., and confined at 3 p.m. In the meanwhile, two or three other women were confined. On Tuesday night T. was found to be feverish, with a rash out upon her, and was taken to an empty ward, and confined the next day, when R. was attacked also by scarlet fever. The other women, confined at the same time and in the same ward, escaped. Both R. and T. appear to have been together at the home in Marylebone-road with the girl who originally had the disease in the Hospital two months before. Both died. A woman, M. (No. 10), single, delivered by the midwife who examined T. before she was supposed to have scarlet fever, was attacked and recovered. On Tuesday, the 14th, the day R. was confined, another single girl, B. (No. 11), was confined, and she contracted the disease and died. Several married women escaped the disease altogether. Thus, out of eleven patients attacked, four died, besides the child of one mother (No. 3), who recovered. The origin of the mischief seems to be traced to the original case, which occurred on June 14. The utmost care to secure isolation and prevent inter-communication was taken by the officials.

AEROZOIDS.

Mr. Glaisher's "blue mist" seems likely to stir up a lively discussion as to its nature, and several suggestions of a totally different kind in reference to its cause have already been made. As its dependence upon the presence in the atmosphere to an unusual extent of minute vegetable germs has been hinted, it may be as well to point out that the spores of fungi are probably always present to a greater or less extent in the air, especially at this time of year. Spores and sporules are essentially ubiquitous, being readily carried by the wind, and transported from the spots where they are originally produced. Though they exist in the atmosphere in seasons when the public health is very good, yet it is remarkable that they *abound* coincidently with the prevalence of epidemic disease; we have it recorded that rust and mildew have sprung up so rapidly upon articles of food and garments as to have appeared to herald approaching plagues, and to have been mistaken for "blood rain," striking consternation and terror into the inhabitants of many a city. So-called "blood rain" is said to have been the forerunner of the plague of Rome. The present year has been especially characterised by the prevalence of all kinds of rusts, moulds, and mildews, upon vegetation in general, more or less all over the world, to a marked extent at the Cape and in Ireland. We therefore must expect to find the air at the present time thoroughly well charged with the germs of minute vegetable life. Suppose it be shown that the blue mist is due to a special abundance of fungi elements, it does not follow that the phenomenon has to do with cholera. The co-existence of the "mist" and cholera may be only a coincidence. The same depressing influences that render the human family subject to epidemic diseases also affect vegetable life in general, and predispose it to the attack of parasites—a view which is held by many trustworthy observers. It would be strange indeed if there were not some relation between diseases of plants and animals. Aërozoids, we suspect, are, in the majority of instances, germs of the uredo and penicillium.

FROM ABROAD.—BRUSSELS REGISTRATION RETURNS.

M. Janssens has just published the Brussels Registration Returns for the first six months of 1866. On January 1 the city had 189,338 inhabitants—viz, 92,805 males and 96,532 females. During the six months there have occurred 2281 (1173 male and 1108 female) legitimate *births*, and 713 (367 male and 346 female) illegitimate births, or a total of 2994 births, the proportion of natural to legitimate births being, therefore, about 30 per cent. There were 52 (23 male and 29 female) twins. During the six months 876 *marriages* were solemnised, and 10 divorces decreed. The *deaths* in the same period amounted to 2847 (1454 males and 1393 females), including 201 infants born dead. The deaths rose from the monthly minimum of 384 in February to the maximum in June of 667, the present outbreak of cholera having then commenced. Of the deaths, 857 took place in Hospital and 1990 *à domicile*, these last numbers comprising 837 in a state of indigence, being mostly victims of the cholera. In fact, had it not been for the ravages of this disease, the mortality of the six months would have been much below the average. Thus, variola and scarlatina furnished 59 deaths below the average, as did tubercular meningitis. Phthisis, however, furnished 44 cases above the average; organic diseases of the heart and apoplexy each 29 cases above the average; and pertussis 28 cases above. Phthisis increases its ravages every year, causing far more deaths than the cholera and all other epidemic diseases united. In the short space of the four years 1862-65 it caused more deaths (3222) than have occurred from cholera (2883) since its invasion in 1832. The suicides were only 11, the average number being 16. As to the ages in the 2646 deaths, not counting those born dead, 534 occurred below 1 year; between 1 and 5 years there were 379 deaths; between 5 and 20, 183 deaths; between 20 and 40, 460 deaths; between 40 and 60, 457 deaths; between 60 and 80, 459 deaths; and above 80, 89 deaths. In the four Hospitals of the town there were admitted during the six months 9976 patients, 7891 were discharged, and 840 died.

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

(*From our Special Correspondent.*)

The British Association for the Advancement of Science has this week concluded its labours at Nottingham, and a success has been achieved which has rarely before been equalled, not to say surpassed. The number of members has been large, the papers practical, and the entertainments princely. Our local Medical brethren have exerted themselves to the utmost, and there is but one expression of opinion, that the principal local secretary, Dr. Robertson, has performed an amount of labour which, calculated by physical exertion alone, could hardly be described. In fact, upon no man has the hard work of the secretariat so heavily fallen, and it would be difficult to find any man who could have borne it with more patience, skill, and unflagging zeal.

In the department of Physiology there has been a large attendance, and the papers have created great interest. Professor Humphry, of Cambridge, presided, and essays were read by Drs. John Davy, Sibson, Richardson, Gamgee, Foster (of Birmingham), Norris (of Birmingham), and others. Dr. Davy's paper was on the Colour of the Skin; Dr. Sibson on the Mechanism of the Heart; Dr. Gamgee read on Carbonic Oxide in its Effects on the Blood; Dr. Foster on the Sphygmograph, and on Change of Colour in Mulatto; Dr. Norris on Muscular Irritability, and the Relations between Muscle, Nerve, and Blood; Dr. Cobbold, supplementary report on Entozoa; and Dr. Richardson, a report on Amyle, Demonstrations of Local Anæsthesia, and the Comparative Vitality of the Jewish and Christian Peoples. Discussions of great interest followed, in which Professor Humphry, Professor Hughes Bennett, Dr. Camps, Dr. Grierson, Mr. Wyatt, Dr. Macadam, and Dr. E. Smith took part. In our next number we shall have the opportunity of placing before our readers abstracts of these papers and discussions; meantime we may report that the Profession was efficiently represented, and that in no section was the science purer, or the advance more definitely marked.

Amongst the subjects of a general kind submitted to the section was one by Sir James Alexander, in the shape of a paper on the Pollution of Rivers. The subject was very warmly discussed, the general feeling being that not only were the sanitary conditions of the country endangered, but that many important sources of wealth were thrown away, by the prevailing system.

In the ethnological department Mr. Dunn held a conspicuous place. Dr. Bence Jones presided over the chemists, and Professor Huxley over the biologists.

The great topic of discussion during the whole meeting has been the opening address of the President, Mr. Grove. Mr. Grove belongs to a sister profession, but so much has he done for physical, and we may say indirectly for physiological, science, that we almost claim him as our own. His introductory address was entitled "Continuity in Nature," and from beginning to end it was a development of the Darwinian theory of the creative act. Much difference of opinion may be raised on this theory, but on all hands it was admitted that never was any position more faithfully, more candidly, more earnestly, or more eloquently advanced. Towards Medical studies Mr. Grove has shown also a friendliness, a comprehension, a defence of that which is highest in Medicine, and a knowledge of the advancement of our science and art, which, we believe, few men living out of our sphere could have manifested. In a discussion on animal heat in the Physiological department this power of appreciation of Medicine was singularly marked, and led us only to wish that the distinguished jurist and physicist had by some lucky fortune been enrolled in our clan.

ABSTRACT OF THE PROCEEDINGS OF THE BRITISH MEDICAL ASSOCIATION.

SCIENTIFIC PAPERS AND DISCUSSIONS.

Upwards of twenty-seven papers were promised to be read at the Association, but, owing to the length of the discussions on special and selected subjects, some of these were withdrawn by the authors, and others, the authors not being present, were accepted as read. The following papers, rendered in abstract and placed in alphabetical order, were read and commented on :—

CANCER : A NEW METHOD OF TREATMENT, BY WHICH MALIGNANT TUMOURS MAY BE REMOVED WITH LITTLE PAIN OR CONSTITUTIONAL DISTURBANCE.

By W. H. Broadbent, M.D. (London).

The attention of the author was directed to the treatment of cancer under the following circumstances :—In 1864 he was consulted by a lady suffering from cancer of the breast. By his advice, the breast was removed by Mr. Walter Coulson. The disease returned, and was again removed in August, 1865. In May of the present year, a tumour was growing more rapidly than ever near the cicatrices of the former operations. It was decided that no further removal was advisable ; and, unless something could be done, a miserable fate was before the patient. The hypodermic syringe is now in the hands of every Physician ; and it seemed to the author that by it some fluid might be injected into the tumour which might so far alter its structure and modify its nutrition that its growth might be retarded or arrested. After considering the various substances which presented themselves to his notice, he selected acetic acid, for the following reasons :—1. This acid does not coagulate albumen, and might, therefore, be expected to diffuse itself through the tumour ; and the effects would not be localised at the point injected. 2. If it entered the circulation, it could do no harm in any way. 3. Acetic acid rapidly dissolves the walls and modifies the nuclei of cells on the microscopic slide, and might be expected to do this when the cells were *in situ*. 4. It had been applied with advantage to common ulcerations. On May 18 the first injection was practised. The tumour was of about the size of a small egg, and a patch of skin of about the size of a shilling had become adherent to it. The needle was introduced through sound skin an inch or more from the part involved in the disease, and passed to the centre of the mass. About thirty minims of dilute acid (one part of acid to one and a half or two of water) were injected. It gave little or no pain. Next morning a bulla containing dark bloody fluid was found to occupy the patch of adherent skin. May 23 : This portion of skin dry, hard, and horny ; the adjacent part of the tumour not so hard. Again injected. The patient, residing in the country, was not again seen till June 7, when the piece of skin mentioned was found detached from the surrounding sound skin ; and a probe could be passed in all directions to a distance of three-quarters of an inch or more between the tumour and the healthy structures. A little discharge issued from the fissure mentioned. Injected on this date, and again on the 9th, the acid used being rather stronger. It gave a little pain, and swelling and tension of the parts around followed. On June 13, and a few days afterwards, there was a free discharge of fluid and solid portions, with relief of the swelling, etc. No fœtor whatever attended this discharge, which afterwards diminished greatly. Seen again on June 26, when, on external examination, the tumour was found to be much smaller ; and, on passing a probe into the opening, it entered a large cavity extending on all sides. Part of the walls seemed free from malignant structure, but at several points a crust of cancerous deposit remained. On attempting to inject, it was found too thin to retain the fluid, which either entered the tissues and gave great pain, or made its way into the cavity. The cavity was stuffed with lint saturated with dilute acid, and the case left in the care of the family Medical attendant, who was to inject as he saw opportunity. July 13 : No impression made on the remaining disease, which had, in the opinion of the Medical man, extended somewhat. Carbolic acid was tried for a few days as an application, but discontinued, and the cavity dressed daily with strong acetic acid by the Medical attendant, and injections practised daily. This energetic treatment gave much pain, and excited inflammation all round. When again seen by the author on August 4, there had been considerable hæmorrhage, which had been arrested by free application of tincture of sesquichloride of iron. The result, however, was apparently the entire removal of the remains of malignant disease ; and, when last seen, a healthy granulating surface was left at every point. Three other cases were related by the author. The author further formulated certain conclusions from the experiments detailed, and stated the cases to which, in his opinion, the treatment was not applicable. Guided by his experience, he considered large quantities of dilute acid preferable to stronger acid ; and he would not, without great hesitation, attempt the destruction of any tumour which had not involved the skin. His aim had originally been, as stated in the early part of the paper, not necrosis of malignant tumours, but a modification in their nutrition. The theoretical grounds for this hope were, that cancer owed its malignancy to its cellular (to use a nomenclature now almost antiquated) or fœtal structure ; and that in acetic acid we had an agent which might be expected to diffuse itself through the tumour and reach the cells, and, having reached them, to effect changes in their structure, and affect them vitally, while it could scarcely do harm. The results he had brought before the Profession at the earliest possible moment. The ultimate value of the treatment he left to be decided by a more extended experience. It was important to use large quantities of dilute acid, and not to have the acid too strong.

Mr. Samuel Hey felt any suggestion for the removal or palliation of cancer to be very important. He should be glad to put these suggestions in force. Some such method seemed most likely to succeed—as the constant application of tincture of iron (iodine blistered the surface, and probably increased the tumour), so as to penetrate the surface. The latter method had been known to keep patients alive three or four years. But all this would not prevent his using the knife, if he could do it freely and properly. In one case, some years ago, he had removed a cancer from the breast, and after eleven years the patient had died of a cancer in the other breast, the cicatrix in the first case being perfectly sound.

Mr. T. Heckstall Smith said it was true that cancer was constitutional, and must have its course constitutionally before it was developed in tumour. It was important to ask whether they had exhausted the means of detecting the cancerous constitutional tendency and trying to attack it by remedial agencies. He believed it might be detected before the local development took place ; and for some years he had been trying the effect of arsenic in such cases. It was the best tonic he knew. Upwards of forty-three years ago he had found old Practitioners had said nothing short of an arsenic course would prevent the relapse, which was so dangerous ; and he had never seen any injurious effect from its use. He gave five minims of Fowler's solution three times a day with meals—when food was being taken. Then, when the effect was produced, he reduced the dose to one minim.

Dr. Andrew said he had had a case of lupus affecting the eye, in which he had been giving half a drachm of Fowler's solution for the last three months, and now it was almost cured. He had gone as far as thirty-five minims, and the patient had not been quite well under it ; but there had been no irritation.

ON THE TREATMENT OF THE PEDICLE OF OVARIAN TUMOURS BY THE ACTUAL CAUTERY.

By I. B. Brown, Esq. (London).

Mr. Baker Brown read a paper on the treatment of the pedicle of ovarian tumours by actual cautery. This practice had been adopted by the author in thirty-six cases, twenty-three of which had previously been given to the Profession in two papers read before the Obstetrical Society. Mr. Brown now gave in detail thirteen more cases. The following analysis will show the result of this treatment :—Of the whole number, five have died, of which two occurred in the first twelve and three in the present series. In not one of these had death resulted where the cautery had been used alone, with the exception of the second ; here death was due to hæmorrhage from the site of an adhesion in the utero-rectal fold, which could not safely be reached by the actual cautery. In the remaining four, one or more ligatures had been used in addition to the cautery, the latter, from various causes, not having perfectly secured the pedicle. In these four, the causes of death were respectively—1. Peritonitis, with hypertrophied heart and thickening of aortic valves. 3. Peritonitis ; no autopsy allowed. 4. General peritonitis. 5. Shock ; a small quantity of coagulated blood on the stump. Mr. Baker Brown drew the following conclusion from his experience of this treatment :—That it is preferable in all cases first to employ the cautery. Should this fail, no harm has been done, and the ligature may be resorted to without disadvantage. The method of using the clamp was fully explained, and a newly improved instrument was exhibited. This clamp possessed parallel blades, and the bone, formerly fixed to the back of the clamp to diminish heat during division, was now separated, except by two long rivets, from the blades.

(DISCUSSION.)

Mr. MEADE, of Bradford, thought the originator of this plan must have taken his idea from the common operation of spaying pigs.

Mr. BROWN: Quite so.

Mr. FOLKER said it was one advantage of the clamp. He had had a case of operation on the womb some time ago; and on his way to this meeting he had seen the woman, and learned from her that regularly since the operation, on the day before menstruation, she had considerable weeping from the pedicle, continuing till menstruation commenced. This would be got rid of by Mr. Brown's method.

Mr. BROWN said Mr. Meade was quite right as to the plan having been taken from the spaying of sows, and he readily admitted his obligation to Veterinary Surgeons for the hint.

ON SECONDARY CANCER AFFECTING THE LUNGS.

By Henry Day, M.D. (Stafford).

Dr. Day based his remarks on two most interesting cases of secondary cancer of the lungs that had occurred under his care in the Stafford Infirmary. Both of these cases terminated rapidly from the secondary disease after operation. The author appeared strongly inclined to believe that cancer of the lung was more frequently a sequence of cancer of bone than of any other primary cancerous development. He reported experiments in which attempts were made to produce cancer by inoculation, and showed that these experiments gave no countenance to the supposition that the disease could be transmitted by inoculation. At the same time, cancer, he thought, was really a local error of nutrition. The paper, which could only be read in brief, created much interest.

(DISCUSSION.)

Dr. RICHARDSON said that the idea that cancer in the lungs was preceded by cancer in bone was a new thought to him, but certainly every case he had seen had been so preceded.

Mr. SAMUEL HEY corroborated the fact by a large number of cases. In one case he had removed three parts of the scapula, with a large tumour, the patient being removed in four days, and afterwards dying of cancer in the lungs. He had never known but one case recover and remain well; and thaa was a child of twelve months, with a tumour under the ear. This was three years ago, and the child was now alive and well.

Professor STOKES had seen a good many cases of cancer of the lungs, and he was not prepared to deny what had been said. But they should be cautious in assuming that cancer in the bone, more than other forms of cancer, invariably preceded cancer in the lungs. Certainly there were other forms of local external cancer with a peculiar tendency to be followed after operation by cancer of the lung. The most common illustration was the testicle. There must be something in every case to cause the cancer; the same as in the pustule of variola. In the present state of knowledge, it was extremely difficult, perhaps impossible, to draw the line; but there were several curious facts connected with the localisation of cancer. The ordinary case of encephaloid cancer of the liver, where the liver was full of cancerous matter, with no signs of cancer in any other part of the system, was a very interesting instance. Another was what appeared to be an example of pathological transformation—where a pathological product had been produced (say a secretion in the pleura, as the result of simple pleurisy), and then, even after absorption had gone on for some time, what fluid remained unabsorbed was transformed into cancer. He rather thought there were other examples of cancer in the lung, independent of cancer in the bone. No doubt if a patient, after having cancer of a limb, got almost any pulmonary symptoms, they might conclude that he had cancer of the lung. There had been a remarkable case in the Sligo Infirmary under Dr. Little. A young man was brought in, simply dying from a diseased leg which had been neglected. Dr. Little conceived that the only possible way to save life was to amputate above the knee; which he did with the happiest result. Hectic fever went away, and in four or five weeks the patient had increased a stone and a half in flesh; but he came back shortly complaining of pulmonary irritation, and died in a fortnight after readmission, when it was found that both lungs were converted completely into cancerous masses. The rapidity of growth in isolated cancerous masses was very singular. He had seen a case in which, three days before death, two large tumours formed on the front of the abdomen; and during those three days they grew almost "under the eye."

Mr. MOORE thought secondary cancer of the lung was on the whole very rare; and when it did occur it was almost solely in the case of medullary cancer, which might start from the testicle, or the bone, or any part where the original tumour might have been. The lung was exempt from primary cancer as a rule, but he had seen it there. It was explicable, as it seemed to him, in the same way as they understood cartilage came into the lung from a cartilaginous tumour. He had recently had a case of cancer of the glans penis, which discharged into the blood quantities of its living contents, which were passed on by the circulation, and produced disseminated cancer over many parts of the lungs. The mechanism of the disease in the lungs was quite distinct. It precisely corresponded with that which Mr. Paget had brought forward some years ago, of cartilage of the testicle and of the lungs. As they went on, they came nearer and nearer to understanding how the disease advanced; and the more they understood that the nearer they should come to understanding how it arose. Such cases confirmed his view that cancer was inoculable from part to part of the same person. He had had a case of an old lady with a pendulous tumour of the breast, which ulcerated and hung down, the ulcerated surface coming in contact with a healthy part of the skin; and the healthy skin at that point gradually gave way and became a distinct cancerous ulcer, while the intermediate skin remained healthy. Thus the cancer was inoculated. He had seen a post-mortem examination where there had been a cancer on one side of the vagina, and the ulcerous surface had come into contact with the healthy surface of the opposite side, and caused an ulcer there which exactly fitted the development on the diseased side of the vagina. He had seen the same thing in the tongue, where there had been inoculation from the upper part of the tongue to the palate, from the constant pressure of the cancerous mass upon the healthy surface. The only difficulty was in passing it from one animal to another; but it seemed to him that it would pass when the cancerous surface was pressed against the healthy surface.

Dr. DAY said his idea was that the whole was not the result of what seemed to be considered cancerous diathesis, but simply an error of nutrition. Professor Stokes had misunderstood him if he thought he meant to infer that cancer of the lungs was always preceded by a cancerous condition of the bone.

Professor STOKES said he had not thought so; but that Dr. Day thought cancer of the bone more likely to precede cancer of the lungs than any other form.

Dr. DAY did not feel himself in a position to answer Mr. Moore's suggestion about inoculation, as he had never himself made any experiments on that point. But there were some experiments recorded in the French *Gazette Médicale*, in which the experimenter had succeeded in inoculating some tumours, but had failed after cancer. He was not surprised that there should be such outbreaks as Mr. Moore had described in the neighbourhood of the first outbreak; and he did not think it proved that cancer could be inoculated.

ON LOOSE CARTILAGES IN THE ARTICULATIONS, AND A NEW INSTRUMENT TO EXTRACT THEM.

By H. Dick, A.B., M.D. (London).

Dr. DICK argued that the seat of the loose cartilages is generally the knee-joint, but also the elbow-joint in some rare instances is affected. Dr. Dick pointed out that sudden pain and following swelling in walking should rouse at once our suspicion. The history of the origin of those loose cartilages is obscure; they are, as a rule, quite loose in the articulations, but cases are on record where those bodies were found fixed to the joint. The author asks the question—"Do they grow after they become detached?" Future observation may perhaps solve the question. The size of the loose cartilages is that of a lentil or a large bean. They have all the anatomical elements of cartilage, but bone also has been discovered in them. The diagnosis is easy when large, difficult when small; and in the latter case mistakes are possible. The author insists very strongly on the sudden pain in walking as a symptom indicating foreign bodies in the joint. The mode of treatment is only Surgical; internal or external remedies have no effect upon the complaint. The removal of the loose cartilages from the joint is the only remedy, and the removal is either radical or palliative. Amongst the palliative treatment Dr. Dick mentions the fixing of the loose cartilage by galvanic electricity. The radical cure consists either in taking out from the joint the foreign body by a direct cut, or by the subcutaneous method. He condemns very strongly the operation by open wounds, as dangerous to life or leaving behind anchylosis. The only safe method is the subcutaneous incision, but the operation as practised is of difficult execution. For the last reason Dr. Dick makes the subcutaneous incision with a peculiarly shaped instrument, which is like a pair of scissors, each blade having sharp edges, and which, when closed, has the form of a lance, but when introduced and opened can act as a forceps. The operation is performed with this instrument after the rules laid down in the subcutaneous method. The foreign body is fixed by an assistant, and when the points of the scissors (after making the subcutaneous thrust) come in contact with the foreign body, they are opened and used as a forceps; the cartilage is seized and cautiously extracted, and care taken that no air enters the wound. The author particularly recommends to let go the foreign body when near the skin puncture, to shut the instrument, and to withdraw it shut, and to press out with the finger the foreign body. The reason of the last proceeding is because the external puncture would be too large if the instrument were taken out opened and the foreign body in it. After the operation the wound is closed after the principles of subcutaneous wounds, and the limb kept quiet with a well-padded splint. The author then related a case treated by electro-galvanism, where two needles were passed in the joint, and by that proceeding the foreign body was fixed to the walls of the joint, where it could no longer interfere with the function of the joint. Chance led Dr. Dick to adopt this method. He looks on the treatment by electric needles as palliative, and thinks it worth while to be tried; the fixing of the needles in the joint does not produce any pain. Dr. Dick draws the following conclusions:—1. That in the present state of morbid physiology very little is known of the origin of loose cartilages in the articulations. 2. That loose cartilages should only be removed by the subcutaneous method, and the most safe and easy way of removing them is by the subcutaneous scissors. 3. That when the loose cartilages are very small, say of the size of a lentil, the electric current through insect needles may be tried with advantage. 4. That open cuttings in the joints, as was formerly practised, cannot be too strongly condemned.

(DISCUSSION.)

Mr. CHRISTOPHER HEATH thought that, although the instrument was very ingenious, it would not answer for large cartilages, because it would be difficult to catch them; and the joint might be torn, and air admitted, in consequence of the size of the instrument and the incision it made.

ON THREE CASES OF COMPOUND DISLOCATION OF THE ASTRAGALUS, WITH REMOVAL OF THE BONES.

By T. T. Griffith, Esq. (Wrexham).

Mr. Griffith's was an admirable practical paper, admitting of no condensation or abstract. It gave the particulars of three cases in which the author had removed the astragalus, the removed bones being themselves laid before the Society.

(DISCUSSION.)

Mr. SAMUEL HEY would suggest whether, in a case that was not compound, they should cut down and remove the bones, or wait till sloughing was caused before they interfered. In a case of dislocated astragalus, with a wound communicating with the section, he should remove the bone entirely without any attempt at reduction. The advocates of this method shortened the process greatly; and it was a question whether they should make a simple dislocation into a compound condition when it was sure to become so in time if left to itself.

Mr. GRIFFITH said it had been settled by a greater authority than himself that the rule of practice was not to disturb a simple case; but where inflammation came on, the practice would be to enlarge the wound and remove the astragalus. But that would not justify the making a simple into a compound case.

Mr. WILLIAMS said that if nature made the effort unsuccessfully, and the limb was entirely dislocated, he thought they were justified in waiting and making a secondary operation. If the foot remained twisted, they were justified, and the operation was attended with very little risk.

ON REMOVAL OF THE LACRYMAL GLAND FOR THE RADICAL CURE OF INVETERATE CASES OF LACRYMAL ABSCESS.

By J. Zachariah Laurence, Esq. (London).

Mr. Laurence did not claim the priority of the practice, for P. Bernard performed the operation twenty years ago. Still it had not been systematically pursued. The first case in which Mr. Laurence extirpated the lacrymal gland was that of a young man whose eye constantly watered, from the lacrymal puncta and canaliculi having been obliterated by caustic soda. After fruitless efforts had been made to restore the perviability of the canaliculi, Mr. Laurence removed the lacrymal gland. The result was highly satisfactory. Within four days, the watering of the eye had entirely ceased, and it was not unduly dry. Six months after the operation, the patient was again seen, and the relief was found to be permanent. The facility and success of the operation stimulated Mr. Laurence to inquire how far it was applicable to cases of inveterate lacrymation generally. In the prosecution of this inquiry, Mr. Laurence had removed nine lacrymal glands in eight cases, which he reported in detail. It would be sufficient, however, to notice here the results which had followed the operation. The principal symptoms in each case had been constant watering of the eye, repeated lacrymation, abscess and fistula of the sac. The duration of the disease varied from one to twenty-five years. In most instances, the ordinary treatment of probes had been ineffectually tried. After removal of the lacrymal gland in these cases, the disappearance of the watering of the eyes was immediate and permanent, as far as Mr. Laurence's observations extended, some of which had lasted for a period of six months. It did not appear that the operation had caused any undue dryness of the eye; but in every case it had remained normally moist after the operation. Mr. Laurence remarked, that another consequence of removal of the lacrymal gland for abscess of the sac was, that the abscess healed, and the discharge of pus from the puncta ceased. Mr. Laurence considered removal of the lacrymal gland applicable to those cases of inveterate lacrymal fistula which other methods, after a fair trial, have failed to cure; the operation offering the best prospect of a radical and permanent cure. Mr. Laurence concluded by a description of his method of performing the operation. He makes a transverse incision of three-fourths of an inch in length into the orbit over the upper and outer third of the orbital edge; he then divides the external commissure of the lids with scissors; and, by connecting the outer ends of the two incisions, forms a triangular flap, which is thrown up. The lacrymal gland is thus easily exposed, secured by a sharp hook, drawn forwards, and removed. The edges of the wound are then united by sutures. The linear scar of the incision is inappreciable, it being lost in the folds of the upper eyelid.

ON THE TREATMENT OF ACUTE RHEUMATISM.

By J. Birkbeck Nevins, M.D. (Liverpool).

The author advocated the employment, from the very first, of steam baths and subsequent cold affusion, even when the patient could not be moved from bed; and of quinine and iodide of potassium in combination, even though there might be all the febrile symptoms usually present. The employment of opium was scarcely necessary, and only in the most moderate quantities. The benefits stated to result from this treatment were, first, the speedy abatement of pain and of sweating; secondly, the early recovery of strength and convalescence; and, thirdly, the unusual absence of heart complications or of relapses.

(DISCUSSION.)

Dr. FALCONER said he had brought several cases of acute rheumatism which had occupied his attention during the last six months. Of eighteen cases there had been one death. There had been one male and three females of the number with heart disease. Four had had relapses; three he had treated with injection of morphia. There was one thing with regard to what he might call the auxiliary treatment—that, in all these cases, the patients had been put into blankets. He found the use of blankets in such cases mentioned in the *Medical Miscellany* of 1810, so that it was not so new as was often supposed. They wore a sack of flannel, with an opening on the left side to allow of the examination of the heart. Cotton wool was used where there was heart disease, and belladonna administered. He had never used the blister, and he had made a point of combining iron with the alkaline treatment, employing the bath from the first, and using an injection of quinine and iron. He hoped to have an opportunity of tabulating these cases, and going more completely into the matter. He believed it would be found that the temperature of rheumatism was 103·6°; and if it reached anything like 104°, they might be certain there was a complication approaching.

Dr. Stewart thought the blanket one of the greatest of all means of treatment in rheumatism. He used it as a sack, to prevent chill. His orders were always that the patient should not be allowed to rise, but was to be kept in bed, and the bowels kept open. He felt convinced that chill was very much the cause of complications. As to temperature, he thought he had found it 101° and 102°, and rarely more than that; but he had not yet got his results on that point. As to the alkaline treatment, he had much the same views as Dr Falconer. During the last twelve years he had used it largely, and had not found it prevent heart-complications, or that they went off after it more generally than after expectant treatment. In one case, where he had been obliged to suspend the alkalies, the heart complication had come on at that precise moment.

Dr. Markham thought a great deal of mischief had been done by Dr. Dickinson's excellent paper, with the cases proving the excellent effect of alkaline treatment. It had been forgotten that those were selected cases, which had had no heart affection when brought in; and they had been taken as though they were average cases. Everybody knew that the very fact of cardiac disease being absent was a proof that cases were not serious.

Professor Bennett understood the paper now read to advocate the good effects of quinine, and he should like to hear that brought out. It was some years since he had made any very careful trial of the alkaline treatment. It had occurred to him to ask, how long does rheumatism take to get well of itself? Until that point was settled, how could they determine what to do? He regretted that they had not had out that discussion on Dr. Stewart's paper on the previous day. Who could venture to say this or that treatment was or was not successful, if he did not know how long the disease was likely to last of itself? He had tried everything—there was no drug he had not tried—in rheumatism, and he found them all pretty much alike. He had tried nothing, and the result had been the same. He had tried the blanket, with the same result. They had given the alkaline treatment a most careful trial in Edinburgh, and it had seemed to him to shorten the duration of the disease a little. In Edinburgh they saw a great deal of rheumatism in servant-girls, on account of the system of washing adopted there. Girls got up very early in the morning to wash, and in all weathers, without care as to clothing, they alternated carelessly between the hot steaming kitchen in which the washing was done and the open air, often bitterly cold, where they hung the clothes to dry. He thought he had observed that where a strong young girl of this sort was seized with rheumatism, the acute symptoms had a tendency to disappear in about six or seven days; and if there was much complication, it would disappear in about fourteen or fifteen days. If the girl were weak, they found that murmur at the heart for which formerly violent remedies—mercury and so on—were given. Then, as, under the influence of rest and good diet, and warm comfortable treatment, the patient got stronger, the murmur went away. In the old time, when mercury was given in these cases, it generally so happened that the murmur went away about the same time as the mercury touched the gums; and so it was concluded that the murmur went away in consequence of the mercury touching the gums. Now mercury was not given, and yet the murmur went away as soon. They had come to the conclusion in Edinburgh that, in one of the healthy cases he had named, if alkalies were used—they gave nitrate of potash—instead of being seven days, the average duration of the acute symptoms was six days and a half. He had given nitrate of potash regularly ever since coming to that conclusion. His view was that acute rheumatism cured itself. Dr. Warren, of London, had once said that six weeks in bed was the best cure for everything; and he had noticed that of Dr. Stewart's cases on the previous day, the average duration was forty-two days, which was very near six weeks.

Dr. Stewart was understood to say that the average was less than forty-two days.

Dr. Markham suggested that the great point was cardiac disease, whether or not the heart was affected. It was said that the alkaline treatment prevented this.

Dr. Day had tried the alkaline method in numerous instances, and was of opinion that no remedy produced such curability. In his hands blister treatment had been very satisfactory, and he was able to publish an extended account of cases in which he had proved it. The average duration of those cases was not more than nineteen days. Some years ago Dr. Mitchell had published a book in America, in which these cases were traced to spinal origin. In Philadelphia a Hospital had been established during the late war, and it was there found that where there was a nervous affection there had been rheumatism in the same limb, and treatment of the spine was adopted with success. He had almost always found spinal irritation, and that this treatment was satisfactory.

Mr. Samuel Hey had found that a blister, wherever applied, diminished the acute symptoms It seems to eliminate the poisonous condition to a greater and better extent than anything he had seen.

Dr. Richardson confirmed this view.

Dr. Nevins said the discussion had not turned upon the point he had wished to ventilate—the early employment of steam-baths in bed, and the combination of iodine with quinine. He had seen very little of cardiac complications whilst he had been using this method. He had avoided blisters, not wishing to add to the patient's sufferings. He believed in the efficacy of cantharidine introduced into the system; and he had used tincture of cantharides as an internal remedy, and in chronic rheumatism had found it exceedingly valuable.

REMOVAL OF THE ENTIRE TONGUE; WITH SOME PRACTICAL ILLUSTRATIONS OF THE METHOD.

By Thomas Nunneley, Esq. (Leeds).

Mr. Nunneley exhibited the tongue of a patient. The organ had been removed by him for the relief of cancer, by means of the écraseur, and the case had done well, the patient regaining the use of his speech in a remarkable degree.

REDUCTION OF LOCAL DISLOCATIONS BY MANIPULATIONS.

By Thomas Nunneley, Esq.

In this communication Mr. Nunneley explained that dislocations, even of an extreme kind, might be successfully treated by manipulations without any of the extreme forcible attempts so often made by Surgeons. It was necessary, however, in these efforts to have the patient thoroughly under the influence of chloroform or other general anæsthetic. At the close of his paper, Mr. Nunneley said that he had published, twenty years ago, in the *Transactions* of the Provincial Medical and Surgical Association, an account of a number of experiments made by himself on anæsthetics. These had been made use of in France and Germany, without acknowledgment. He pointed out the value of bromide of ethyle and chloride of olefiant as anæsthetics, which did not cause convulsive movements, such as were observed under choloroform; nor did they either oppress the patients or cause nausea. (Cheers.)

AN ABSTRACT OF SOME ORIGINAL RESEARCHES ON THE HEAT OF FLUIDITY OR LATENT HEAT OF ANIMAL BODIES.

By B. W. Richardson, M.D. (London).

Dr. Richardson gave a brief description on his recent researches on the heat of fluidity of the tissues of the body. These researches were entirely new, and opened up a wide field of thought in the science and practice of Medicine. The author had been led to them by the observation that when a part of the body was frozen, at the moment of freezing there was always a rise in temperature, indicating the evolution of heat previously insensible. This fact led him to determine the heat of fluidity of blood, fat, albumen, gelatine, brain matter, blood corpuscles, and other structures. Having briefly entered into details on these points, the author illustrated his subject by referring to various physiological phenomena, dwelling particularly on the function of the blood corpuscles. These, he said, played a part previously unrecognised. They were the bearers of heat by rendering heat liberated in the pulmonic circuit latent, and conveying it to the tissues to be there redelivered in the process of condensation. Fatty substances, in like manner, rendered heat latent in the pulmonic circuit, and conveyed it to the extreme parts. (See Dr. Richardson's paper, *Med. Times and Gaz.*, Aug. 4.)

ON FEEDING BY THE VEINS.

By B. W. Richardson, M.D.

Dr. Richardson exhibited an instrument which he had invented for feeding by the veins. It has already been described in the *Medical Times and Gazette* for August 4. We must defer till we can find room for a separate article our account of this paper and the following discussion.

ON THE MYOGRAPHION OF M. BEZOLD.

By W. Rutherford, M.D. (Edinburgh).

Dr. Rutherford gave a description of the new myographion of Von Bezold, with experiments therewith demonstrating the rapidity with which nervous influence travels in the frog.

During the whole of Friday the author exhibited the instrument in action in one of the Committee-rooms. The rapidity of action was marked by a fine stylet on a blackened cylinder.

ON THE PRESENT STATE OF VACCINATION IN ENGLAND.

By A. B. Steele, Esq. (Liverpool).

Mr. Steele's paper was as eloquent as it was argumentative and learned. He demonstrated at the outset the good effects of efficient vaccination, showing by tables how small-pox had decreased in countries where the law had rendered vaccination compulsory. He then dwelt upon the aspects of the question in relation to England. He was an advocate for compulsory vaccination, and was strongly opposed to the proposition that every Medical man should be a public vaccinator. Unfortunately, there was no time for discussion on this great subject.

THE TREATMENT OF TEDIOUS LABOUR IN THE SECOND STAGE.

By J. Thorburn, M.D. (Manchester).

The author first referred to the strong denunciations of "meddlesome midwifery" contained in all modern British text-books. These, the natural reaction from an opposite state of things, had in many points been carried too far, and had led to a discrepancy between the practice and preaching of eminent accoucheurs. For the sake of testing this, he discussed the appropriate treatment of a case where the presentation is natural, the os well dilated, the head begun its descent, there is no manifest obstacle and the parts seem apt for delivery, the uterine pains are of average strength and frequency, and there is no constitutional disturbance, but matters have been *in statu quo* for a couple of hours or thereabouts, and there is a strong probability of lingering labour, though it may ultimately terminate naturally. Such cases occurring frequently, there are three courses open—to trust entirely to nature, to give ergot, or to use the forceps. The first course is authoritatively laid down by all recent British writers as the most natural, and therefore the safest. To set against this view, there is the certainty of much longer suffering, the possibility of exhaustion, which may be suddenly developed, increased risk of metritis from over-exertion, of sloughing of the soft parts, of hæmorrhage from inertia, of rupture of the uterus, and the possibility of having to fall back on one of the other plans under less favourable conditions. None of these events may be very likely, but they are all possible; and any procedure which will diminish one or all of these dangers without substituting equal risks should be adopted. Ergot does not, in the author's opinion, fulfil this condition; for, although it may succeed in speedily terminating the labour, it may also fail, and involves a greater risk to the child from spasmodic or unintermitting pressure, or from its poisonous action (?), and it greatly increases the danger of rupture of the uterus and retained placenta. By forceps, speedy delivery is certain, undue uterine fatigue is obviated, and all chance of rupture from straining is abolished. The author endeavoured to show that, in proper hands, there is no corresponding disadvantage; that sloughing of the soft parts and torn perinæum, so far from being more, are less probable; that there is no risk in thus carefully and slowly emptying the uterus; that the pain of labour is diminished; and that the risks to the child are lessened in such a case. He protested against the invariable rule of arguing the question on the ground that the operator may be unskilful; such an argument never being used in discussing the general advisability of any other Surgical proceeding. He concluded that, contrary to the opinion of Murphy and others, there are cases in which it is advisable to interfere merely for the purpose of abbreviating labour, and that the Practitioner is not liable, in such a case, for any consequences that ensue, except such as are clearly traceable to his own neglect or maladroitness; and agrees with the American accoucheur Hodge in emphatically condemning the "practice which permits the agonies of labour to be unnecessarily prolonged, or the safety of the mother or child to be jeopardised, from the timidity or ignorance of the accoucheur respecting an agent whose employment necessarily involves no danger."

(DISCUSSION.)

Mr. E. JONES had had considerable practice in the use of the forceps, and had not experienced the difficulties mentioned by Dr. Thorburn. In cases of tedious labour he had tried large doses of opium—forty minims of liquor opii—and found it either rested the system or terminated the labour.

Mr. BAKER BROWN understood Dr. Thorburn recommended doing something, and that quickly, instead of the old law of doing nothing. He had, as a Professor of Medicine, taught the principle so many years, and, as an operative Surgeon, had seen so much of the ill effects of doing nothing, that he could but be glad to find the former advocated. In this day no man had a right to let a patient die for the want of such an effort. If they did not let women remain in labour, they would not have those frightful lesions which it was his privilege to cure. Out of about one hundred cases he had treated, 90 per cent. were attributable to protracted labour. The idea that they were produced by the use of instruments was a farce and a bugbear.

DEMONSTRATIONS AND SHORT LECTURES.

THE ENDOSCOPE.

By Christopher Heath, Esq. (London).

Mr. Heath gave two demonstrations on the endoscope, with brief descriptions as to its use.

LOCAL ANÆSTHESIA.

By B. W. Richardson, M.D. (London).

Dr. Richardson gave a demonstration of his method of producing local anæsthesia, with directions for various operations. He explained, as a new truth, that the principle of general anæsthesia is identical with that of local anæsthesia, the difference being that in general anæsthesia the brain is cut off from the local part, and in local anæsthesia the part is cut off from the brain.

OVARIOTOMY.

By Spencer Wells, Esq. (London).

Mr. Wells performed the operation of ovariotomy on two patients before 120 members of the Profession at the Chester Infirmary on Friday, the 10th. The one patient was an aged, the other a younger woman. Mr. Wells wished in both cases to operate after the production of local anæsthesia; but from the number of spectators present the patients were timid, and so chloroform was used. At the date of writing this communication (August 20), we have heard that both these patients are doing well. After the operations, Mr. Wells gave a short and instructive lecture on the details of the process.

PAPERS RECEIVED AS READ.

The following papers were received as read:—

By W. Camps, M.D. (London): Is there any Evidence to show that the Par Vagum—the Pneumogastric Nerve—is concerned in the Production of the Epileptic Paroxysm?

By James Paget, F.R.S. (London): A Case of Herpes in part of the Distribution of the Right Inferior Maxillary Nerve.

By Erasmus Wilson, F.R.S. (London): On Lichen Planus; the Lichen Ruber of Hebra.

By Spencer Wells, Esq. (London): On the Mode of Dealing with the Pedicle in Ovariotomy.

By Erasmus Wilson, F.R.S. (London): On a probable Necessity for the Revival of the Leper Hospitals of Great Britain.

SPECIAL DISCUSSIONS ON PRACTICAL AND STATE MEDICINE.

In continuance of the plan originated at the Leamington meeting, certain portions of time were allotted for discussions on special subjects selected by the Committee of Council. The openers of the debates were to be Dr. Sibson, in conjunction with Mr. Timothy Holmes, Dr. Patrick Stewart, Mr. Baker, and Dr. Christison. Unfortunately Dr. Christison was prevented from carrying out his part of the work, much to the disappointment of many members who had expected an additional treat from the learned Professor's speech.

WHAT IS THE INFLUENCE OF HOSPITALS ON HEALTH AND MORTALITY?

This subject was first offered for discussion by Dr. Sibson and Mr. Holmes.

Dr. SIBSON called attention to the mortality in Hospitals from certain special diseases. The tenor of his argument was to the effect that residence in Hospital and treatment largely reduced the mortality from all diseases except one—viz., phthisis pulmonalis; and even in respect to this disease there was no general and absolute rule, the stage of the disease being the point on which the influence of residence turned. The latter part of Dr. Sibson's essay related to the construction of Hospitals.

Mr. TIMOTHY HOLMES followed on the same side, contending that the common opinion as to the influence of Hospitals in favouring the mortality due to various forms of disease was not correct.

Owing to want of time, there was no discussion on this subject. The observations of Dr. Sibson and Mr. Holmes were received with much respect and enthusiasm.

ARE THERE ANY TRUSTWORTHY FACTS AS TO THE ORIGIN OF PYÆMIA?

Mr. **Alfred Baker**, of Birmingham, opened this question. His paper was a most comprehensive examination of the whole matter. He did not himself undertake to do more than place before the members the prevailing theories as to the cause of pyæmia and its pathology, but he showed definitely, as we think, that the word, in the general sense in which it is now used, is a misnomer.

(DISCUSSION.)

Professor **Bennett** opened the discussion. He was of opinion that the theory which attributed the disease to the presence of pus in the blood was no longer tenable. He held that there were varieties of the malady constituting in fact distinct disorders, and he looked forward to advancement by the discovery of a sounder and more definite pathology. Dr. Bennett then, with his usual analytical skill, endeavoured to place before the audience the facts that were known as apart from the speculations by which the facts are recommended.

Dr. **Stokes** said that the so-called pyæmic state had been hitherto considered too exclusively in its relation to injuries or Surgical operations. He considered that the study of the spontaneous or non-traumatic cases of the disease should engage more of our attention. Such cases were not uncommon in the Hospitals of Dublin. The disease was not produced by any influence of the air of an Hospital, as patients were brought in labouring under the symptoms recently developed. Its most common form was one in which it at first simulated rheumatic fever, and indeed was often mistaken for that affection. This disease was excellently described by the late Dr. Ephraim McDowel in a paper published in an early number of the *Dublin Medical Journal*, entitled "Observations on Periostitis and Synovitis," the presence of pus being taken as indicative of inflammation. The disease, however, was easily to be distinguished from rheumatic arthritis, at least in most cases, by the typhoid character of the fever, the prostration, state of the tongue, and cerebral symptoms. The swelling, too, was generally more in the immediate vicinity than in the cavity of the joints, and was commonly attended with some degree of œdema. In many of Dr. McDowel's cases considerable purulent deposits were found in the serous membranes and the parenchyma of organs. The head of the tibia was often denuded of its periosteum. Dr. Stokes could not help thinking that this disease should be placed in the category of the pyogenetic fevers, such as glanders and small-pox, the pus being the secondary product of a preceding special morbid condition of the body, in which, like the others, the entire system for a time becomes, as it were, a laboratory for a specific product.

Dr. **Richardson** related his researches on the synthesis of pyæmia, describing the means by which the poisonous product could be obtained from the secretions of wounded surfaces. He stated that in his opinion the poison was alkaloidal, and was derived from the albuminoid matter thrown out of the wound. The cause of such development was meteorological, a condition of oxygen under which special products were formed. In connexion with this subject Dr. Richardson dwelt on the importance of observing the phosphorescence of healing surfaces.

Mr. **Spencer Wells** believed that there were varieties of type, and could not agree with Dr. Bennett in the belief that pus was never found in the blood. There was a form of pyæmia in which pus cells were actually seen in the blood, and he himself had seen such an example. He supported Dr. Richardson's views as to the cause of pyæmia in one class of cases, but was of opinion that the fluid from the wounded surface which yielded the poison separated by Dr. Richardson must be taken during the lifetime of the patient.

Mr. **Nunneley** inquired of Dr. Richardson whether the disease propagated from the poison direct could be further propagated from the animal secondarily infected, also whether ordinary albumen could be made to undergo changes that would render it poisonous.

Dr. **Richardson** answered both questions in the affirmative.

Mr. **Henry Lee** said that perfectly healthy pus could be injected without inducing disease, but that decomposition rendered the purulent matter active as a poison.

Mr. **Moore** briefly and ably defined the conditions included under the general term pyæmia, and his experience as to the origin and nature of the malady.

Mr. **Jonathan Hutchinson**, in a speech of great clearness and thought, touched upon four points. 1st. He held that the previous health of the individual had no relation to the occurrence of the disease. 2ndly. That the disease is not, in the ordinary sense, contagious. 3rdly. That it was most frequent after recent injuries involving bone; and 4thly, that the external wound may seem quite healthy, and yet that the disease might be present.

Dr. **Edwards** spoke of pyæmia as occurring after certain forms of uterine disease, mentioning a most interesting case in illustration.

Mr. **Baker Brown** said that the case of blood-poisoning just mentioned was not at all uncommon after the operation of division of the os and cervix. Mr. Brown had seen many such cases, but he believed that if great care was taken in plugging the cut surfaces with oiled lint, so as to exclude the air from the vagina entirely, all forms of blood-poisoning would be avoided. Mr. Brown felt certain that in operations on the female genitals the poison was taken up by the veins. He spoke from the experience of very many hundreds of cases of operations on these parts.

Dr. **Day** inquired whether, in the experience of any member present, pyæmic symptoms had followed any kind of subcutaneous incision. This important question elicited no answer.

Mr. **Baker**, in a few words, expressed his thanks to the Association for the manner in which his paper had been received, and his profound satisfaction with the admirable discussion it had elicited.

IS THE EXPECTANT TREATMENT TO BE RELIED UPON IN ANY FORM OF ACUTE DISEASE?

This question was opened by Dr. Patrick Stewart in a paper singularly calm, careful, conscientious, and lucid. Dr. Stewart confined his observations almost exclusively to one disease, and adduced a large number of cases in which, under his own observation, the expectant treatment had been fairly tried. On the whole, his facts tended to show that the expectant treatment in this one particular malady was slightly inferior to a moderate active treatment.

(DISCUSSION.)

Dr. Richardson and Dr. Bennett took part in the discussion, which would evidently have been most interesting if time had permitted. Dr. Richardson showed that Michael Albertus was the real author of the expectant treatment, as well as of the dogmas *similia similibus curantur*, and *contraria contrariis curantur*. He next analysed the 278 diseases of mankind, showing that of these the expectant treatment could not be of service in more than thirty-two.

REPORTS OF COMMITTEES.

THE MEDICO-LEGAL COMMITTEE

reported, through the Honorary Secretary, Dr. Tuke, that their labours were not completed. They were reappointed: asked to report at the next meeting.

REGISTRATION OF DISEASE COMMITTEE.

Dr. Philipson presented a Report of the Committee for the Registration of Disease, and a scheme by which a weekly or monthly registration of the deaths, and of the relative amount of certain kinds of disease, might be carried on regularly without much trouble or expense in all the chief towns in the kingdom. We make some remarks on this elsewhere.

MEDICAL BENEVOLENT FUND.

The Report of the Medical Benevolent Fund was presented, and adopted.

MISCELLANEOUS INCIDENTS.

THE AMERICAN MEDICAL ASSOCIATION.

Lieutenant-Governor C. C. Cox, M.D., the representative of the American Medical Association, addressed the meeting, and was received with great applause. He said: The Association, Mr. President, I have the honour to represent was organised to meet the growing demands of the Profession in the United States nineteen years ago, and has held regular meetings every year since that period in different parts of the country, with exception of two years during the late war, when its sessions were unavoidably suspended. The subject of Medical education has, from the beginning, received no small share of attention from the National Faculty; and recommendations, looking to decided improvements in the existing systems, have, from time to time, been made to the Profession at large. Some of the Colleges have already adopted, and put in practical operation, the suggestion of extending the lecture term; while others have the proposed change under serious consideration. The Association has also passed resolutions expressing their views of the importance of suitable preliminary education in English, the classics, mathematics, and philosophy, as an essential prerequisite for office instruction, or matriculation in a respectable University. I was gratified to hear my distinguished friend, Professor Hughes Bennett, in his able address before you yesterday, insist earnestly upon this fundamental condition of progress in Medicine. The proposed reform in America also looks to a severance of the lecturing and examining departments, or the adoption uniformly of a system (now in use in a number of the States) by which the Professors are relieved of any participation in the final examination for degrees, that function being vested in a State Board of respectable Physicians, appointed by executive authority, properly salaried, and having no personal interest whatever in the College or the candidate. It is evident that these wholesome reforms must be of gradual development; but be assured they will be steadily pushed, and ultimately accomplished. The late war in America (however sad in many of its results) has, it cannot be denied, added largely to our stock of experience in military Medicine and Surgery. "The Surgical History of the War," now in process of publication under the direction of the eminent chief of the Medical Bureau, Surgeon-General Joseph K. Barnes, will prove a work of great extent, variety, and practical importance. No cost or labour will be spared in the press and illustrations. I am sure, when the work is complete, you will agree that, while it must ever remain an enduring monument to the zeal and ability of the Surgical corps of the Army of the United States, it cannot fail to be an important contribution to the Medical literature of the world. While upon this subject you will allow me to express my gratification at learning from your Council's report, last evening, of the improvement, recently secured through her Majesty's Government, in the status and rank of the Medical officers of the British Army and Navy. There has been too little appreciation of this important class of Professional men on both sides of the water. From the foundation of the Government in America the claims of Surgeons to relative rank in the Army have been ignored, and the absurdity has continued of giving to other departments of the service, comparatively unimportant, the highest military distinctions, while that of Medicine, combining eminent ability, and the most important responsible functions conceivable, has been refused any advanced position. The war has taught the Government and the country the value of the Profession.

SOIREES.

Two *soirées* were held—one on Wednesday, at the Grosvenor Hotel; the other on Thursday, at the Music Hall. At the second—the President's *soirée*—Professor Bennett delivered, with photographic illustrations, a lecture on Pompeii. The lesson was charming, and gave great delight, not only to the members of the Association, but to numerous visitors, who would not otherwise have heard one of the masters in Physic outside his special work.

DINNER.

On Friday there was a dinner, and all was therewith over for the year 1866.

We cannot conclude our report without stating that Mr. Bennett, of Worcester, exhibited a photograph of the late Sir Charles Hastings, which for accuracy of detail and artistic tone we cannot too highly commend. The photograph, of large size, is truly a speaking recall of the distinguished founder of the British Medical Association.

Medical Charities.—The late Baroness Truro, only daughter of H. R. H. the Duke of Sussex, after bequeathing the large sum of £20,000 to the fund in aid of the poor and friendless boys of the metropolis not addicted to crime, has also bequeathed £100 to the Nursing Sisters' Institution, Devonshire-square. The residue of her property, after a few more legacies, is to be equally divided between the Seamen's Hospital Ship, the Blind Asylum, Guy's Hospital, and two other Societies not Medical. The Liverpool Town Council has voted £5000 towards the establishment of a new Hospital for infectious and contagious diseases, and has increased the salary of the Medical officer from £750 to £1000 per annum.

REVIEWS.

A Manual of Practical Hygiene, prepared especially for Use in the Medical Service of the Army. By Edmund A. Parkes, M.D., F.R.S., Professor of Military Hygiene in the Army Medical School, etc. Second edition. Pp. 624. London: John Churchill and Sons. 1866.

We have to express our satisfaction at the appearance of a second edition of this book. A good deal of new matter, several fresh woodcuts, and a plate showing more thoroughly the microscopical characters of the different kinds of starch, have been added; whilst the original matter has undergone very careful revision. The work, which still retains its original bulk, has necessarily had a rapid sale, for it is one of the most important that have been issued from the press of late, and one urgently wanted even in this age of book manufacture. We are anxious to point out that though ostensibly intended as the textbook of hygiene of the Army Medical School (and the second portion deals entirely with the case of the "soldier on service"), yet the work embraces the general principles of hygiene applicable to men under all conditions of life; and, placing us in possession of the most recent knowledge in matters of sanitary science in general, should become the constant guide and reference of the Practitioner in all questions relating to the influence of water, air, ventilation, diet; the quality and choice of provisions (with adulterations), of beverages, of soils, sewerage, exercise, and other matters. Hygiene is now being founded upon a thoroughly scientific basis, and foremost amongst those who have done her good service will for a long time stand the accomplished author of this manual. Sanitary science would advance in utility with greater strides if Medical men made themselves more thoroughly conversant with the principles of hygieoe; and when so much facility is afforded by such a work as that of Dr. Parkes, ignorance on our part is indeed reprehensible.

Idiocy and its Treatment by the Physiological Method. By Edward Seguin, M.D. Pp. 456. New York: William Wood and Co.

In the Introduction to this work the author sketches, firstly, "the origin of the methodical treatment of idiots and their congeners," referring to the different feelings with which they are now regarded by the majority of mankind, as evidenced by the "readiness with which all nations encourage the foundation of schools and asylums, and the perfection of different systems of educating idiots;" secondly, "the philosophical history of the idea of training the functions and all the faculties as functions (instead of instructing all children) from its germination to its maturation in schools for idiots, and to its actual fitness for the training of all children." The remainder of the work is divided into four parts.

Part I., headed "Idiocy," deals with its definition, causes the circumstances that favour its production-classed as endemic, hereditary, parental, accidental—the symptoms, the state of speech and intellect, the moral sense, and other facts connected with, the whole representing our present knowledge on idiocy.

Part II. embraces "Physiological Education," which consists, we are told, "in the adaptation of the principles of physiology, through physiological means and instruments, to the development of the dynamic, perceptive, reflective, and spontaneous functions of youth. . . . . Our method, to be really physiological, must adapt itself in principles, as well as in its means and instruments, to the healthy development and usage of the functions, particularly of those of the life of relation; the apposition, to be true, must leave no gap, suffer no discrepancy. Man being a unit is artificially analysed for study's sake into his three prominent vital expressions—activity, intelligence, and will. We consider the idiot as a man infirm in the expression of his trinity, and we understand the method of trainiog idiots or mankind, as the philosophical agency by which the unity of mankind can be reached as far as practicable in our day, through the trinary analysis."—P. 83. The author tells us that the predominance of any one of the functions named constitutes disease, their deficiency at birth, idiocy, etc.; and "that physiological education, including hygienic and moral training, restores the harmony of these functions in the young, as far as practicable, separating them abstractedly to restore them practically in their unity."—P. 84. Now really this means that sometimes certain functions are deficient in activity, and should be developed by exercise if possible. The quotation we have given illustrates the author's style, which is very uncomfortable and somewhat mystifying. This second part includes observations on training by movement, gymnastics, education of the senses, and the like.

Part III., "Moral Treatment," deals with the action of authority and will over the idiot. "In its march it begins with the most profound feelings of pity and charity for the unfortunate. . . . It is throughout a work of devotion."

Part IV., "Institution," includes considerations in regard to the construction and management of houses devoted to the reception of idiots; the groupage of the latter; their outdoor resorts; the duties of teachers, gymnasts, and superintendents.

The Appendix of about 160 pages is made up of sketches, remarks, and partial observations, collected to facilitate the study and illustrate the treatment of idiocy and its congeners—some fifty-seven examples in all.

The work contains some really important material, but it is devoted rather to moral and calisthenic than pathological considerations.

The Poor-law Surgeon's Vade Mecum. By Nugent Charles Walsh, of the Poor-law Board, Barrister at Law. London: Renshaw. 1866.

It is the object of Mr. Walsh, who is well versed in all the technicalities and details of the law, to instruct the Medical officer in the legal and other duties he has to fulfil, and to point out to him the responsibilities he has incurred, and the consequences involved in fulfilling or neglecting them. This object is carried out in so clear and readable a manner that "The Poor-law Surgeon's Vade Mecum" becomes indispensable to those for whom it is intended. Not only does it include the regulations at present in force relating to the relief of the poor in sickness, and the mode of appointment, qualifications, duties, and remuneration of union Medical officers in England and Wales, with an exceedingly useful note on vaccination and public vaccinators; but there are also in the Appendix several important documents with copies of the Medical Acts. To all Professional men "time," according to the adage, "is money;" but this is especially the case with Medical men, and therefore this work would not really be as useful as it is evidently intended to be were it not furnished with a full and comprehensive index which cannot fail to save the Medical officers an infinity of trouble and consequently of expense. We can cordially recommend this conscientious work to Medical officers, and indeed to all interested in the sick poor.

PROVINCIAL CORRESPONDENCE.

SCOTLAND.

Edinburgh, August 6.

The annual ceremony of conferring the Medical degrees took place on Wednesday, August 1, and the large hall which was the scene of the proceedings was crowded, as usual, by gay and interested spectators—friends and well-wishers of a new-fledged addition to the brood of Æsculapius. Twenty-one candidates received the degree of Doctor of Medicine, thirty-nine those of Bachelor of Medicine and Master of Surgery, and three the degree of Bachelor of Medicine. On referring back to official sources of information, we find that in 1858 58 candidates were "capped;" in 1859, 60; in 1860, 57; in 1861, 67; in 1862, 109; in 1863, 82; in 1864, 93; and in 1865, 67. On the present occasion, therefore, the number of degrees conferred was considerably below the average of the last nine. Three gold medals were this year awarded for merit in the theses of the graduates. Of these, one was gained by Dr. Thomas Lauder Brunton, for a paper "On Digitalis, with some Observations on the Urine;" the second, by Dr. Franklin Gould, for a very able dissertation on "The Thermometer in Disease;" and the third, by Dr. Philip Hair, for "Observations on the Arrangement of the Muscular Fibres of the Alligator."

The graduates had the good fortune and unquestionable privilege of being addressed by Professor Christison. It has been the custom, within the last few years at any rate, for the learned Professors who have performed this duty to descant in lengthened—generally lugubrious, and certainly serious—strains on the duties, the conduct (professional and moral), and the responsibilities of the young representatives of the Medical Profession before them, and it must have been regarded as no small compliment by this year's graduates that an infliction of this nature, suggestive of boyhood and of puerile follies, was not prepared for them. The subject of Dr. Christison's lecture was the "Medical School of Edinburgh University," one which it will be at once agreed he is especially fitted by unequalled knowledge to treat of.

The address was introduced by a sketch of the early history of the Medical Faculty in the Edinburgh University, and then the peculiarities of the system of teaching were mentioned. The objection that the extra-mural life of the students tended to foster vice and insubordination was denied, and the assertion that the teaching was too strictly professional was tested by an appeal to facts. In the earliest days of the University the classes were attended by students from all parts of the world, and a review extending over a century shows that the falling-off in the attendance here has been only from those countries where, in the progress of time, Universities have been formed, and that as fast as a new source of supply has been originated the current has flowed greatly to Edinburgh. In the times of Cullen, Black, John Hope, James Gregory, and the second Munro, the classes were largely filled by students from England, Ireland, the United States, and the West Indies; but soon after 1825 Universities of repute were founded on the model of that of Edinburgh, and taught to a great extent by he graduates, in the United States, in Ireland, and in England. The Universities of the Continent, with their unrivalled attractions, were also thrown open to this country, and numerous schools, more or less qualifying for graduation, have more recently sprung up under the fostering care of free trade. At present qualification for the Edinburgh degree may be obtained at fifty schools. Students have flocked to Edinburgh from British America, India, the Cape, Mauritius, Australia, and New Zealand, as these colonies have arisen; and again, as their wants are being locally supplied, the numbers sent from them have fallen off, and may be expected still more to do so. It seems a proof of the soundness of the system and of the vitality of the school that in these circumstances no greater depreciation in the attendance had occurred; for whereas about 1825 the numbers had ranged from 800 to 900, within the last ten years they had varied from 450 to 550. In alluding to the system of instruction by apprenticeship, Dr. Christison pointed out that its chief objection is that it begins at the wrong end—before the student has acquired some knowledge of the fundamental Medical sciences, instead of after. One of the most interesting portions of the address was the statement of the Professor's views on the subject of reform in University teaching. This is required in the organisation of chairs, provision being especially called for in the extension of the means of practical instruction and in the rearrangement of the periods of the sessions. In Edinburgh one session commences in November and terminates at the end of March, and another begins in May and concludes at the end of July. By altering these unequal sessions into two equal ones of four months each, with, as at present, a month's interval, Dr. Christison believes that more natural and proper proportions would be assigned to the different courses which at present occupy periods disproportionate to their relative importance. The great obstacle to the adoption of these reforms is the poverty of the University. Dr. Christison earnestly appealed to those interested in the well-being of the University to follow the example which has been so nobly and liberally placed before them by Glasgow, and at once to remove this reproach from Edinburgh. The legislature had given them the niggardly assistance of £4000 per annum, but "£10,000 a year would place the University only in a condition of present efficiency." The late Rector, Mr. Gladstone, had expressed his surprise at what had been accomplished by the University by apparently the most inadequate means, and, judging by the aid he had granted it, one might suppose that he believes that "scant means are a sure element of success." The total revenue of the University, exclusive of fees paid to the Professors, amounts to £18,500 a year. The most urgent and immediate need is an extension of the means of instruction in the departments of chemistry and anatomy, for both of which the accommodation within the University is absurdly limited. Dr. Christison concluded his very interesting and important address by tendering the good wishes of the Vice-Chancellor and Senatus to the young graduates, and by expressing the confident expectation of their late teachers that they will, in due time, occupy the positions which their University training and assiduity entitle them to attain.

The extra-academical session was terminated some days ago without any special formality. That the school has continued to meet with success may be inferred from an extension which has been made in its class-rooms, by a migration of several of its teachers to a large building immediately adjoining the University—the Minto House, so intimately associated with Professor Syme's early career.

The exodus of worried, toil-worn citizens has now nearly terminated—neither accelerated nor retarded, fortunately, by cholera panic, such as we hear of, sympathisingly, in the great metropolis—and empty streets and gloomily papered windows unmistakably announce the general holiday.

GENERAL CORRESPONDENCE.

UTERINE EPISTAXIS IN CHOLERA, FEVER, AND INFLAMMATION.

Letter from Mr. Spencer Wells.

[To the Editor of the Medical Times and Gazette.]

Sir,—In Dr. Parkes's important letter, published at page 210 of your last number, a question is raised which I trust will elicit more than one reply. Dr. Parkes, with his usual accuracy, distinguishes between the "catamenial flow" and a "uterine bloody discharge like catamenia." But other observers have not been equally precise, and in some recorded cases of cholera we read that "the catamenia" appeared, although they had not been expected for two or three weeks. Even Dr. Parkes himself, evidently by a slip of the pen, says, "In a fourth patient the catamenia, having naturally ceased three days before the attack, reappeared during reaction."

Now, Sir, since we have learned that menstruation essentially consists in the periodical rupture of a Graafian vesicle, and the escape of an ovum arrived at maturity, and that the "catamenial flow" is only one part or concomitant of this complex series of phenomena, we ought to make a broad distinction between the evidence of the progress of this periodical physiological process and other sanguineous uterine discharges. If we observe that in some fevers, and in acute inflammation of some internal organs, and after surgical operations, such uterine discharge is often followed by improvement, we ought no longer to use a term which would imply that ovulation had been hastened by the disease. We clearly want a better term for these uterine discharges, and I have for some time past followed the example of M. Gubler, and used the term "*uterine epistaxis.*" It is quite true that epistaxis is almost always used by us to signify bleeding from the nostrils; but the derivation from ἐπί and στάζω, to flow drop by drop, *stillicidium sanguinis*, admits of correct application to any variety of such gradual bleeding. *Metrorrhagia* is not a good term, as it implies a greater flow of blood than is observed in the cases under discussion. Perhaps *Metrostaxis* would be admissible. It would certainly be convenient.

I was first led to draw the distinction between menstruation and uterine epistaxis by observing how frequently the so-called catamenia came on a few days after ovariotomy, although I had been careful to operate soon after a menstrual period had ceased. I first thought that possibly the congestion following an operation so near the other ovary had led to the hurried maturation of an ovum, and the rupture of its Graafian vesicle. But in more than one fatal case I found no sign whatever of any such irregular ovulation; and I also observed that when there was much traumatic fever after other operations on women (for instance, in a case of amputation at the hip-joint, in an amputation of the lower jaw, in several breast cases, in a case of injury to the head, and in two fractures of leg and arm) a uterine discharge came on, and was followed by an improvement sometimes almost critical, and without any reference whatever to the last or next menstrual period. The relief so afforded led me in some few cases to bleed from the arm when relief was not obtained by free perspiration, copious excretion of urine, diarrhœa, vomiting, or some free secretion of mucus.

Nasal epistaxis, as well as uterine epistaxis, may be observed, alone or together, in different stages of thoracic and abdominal inflammations, in typhoid fever, in the exanthemata, in erysipelas, and in acute pyæmia, and quite independently of menstruation. It is scarcely necessary to add that it may be very important to ascertain the relation which the epistaxis bears to cholera; and it is certainly of great practical importance to distinguish between irregular menstruation, which would probably injure the patient and cause anxiety to the attendant, and a uterine discharge, which has nothing to do with menstruation, but is a natural mode of relief in many forms of fever and inflammation.

I am, &c. T. Spencer Wells.

3, Upper Grosvenor-street, August 25.

INDIAN MEDICAL SERVICE.

[To the Editor of the Medical Times and Gazette.

The Military Secretary, India Office, presents his compliments to the Editor of the *Medical Times and Gazette*, and begs to enclose a list of the candidates for her Majesty's Indian Medical Service who were successful at the competitive examination at Chelsea in March, 1866, and who have undergone a course of instruction at the Army Medical School, together with the total number of marks obtained at the examinations at Chelsea and at Netley.

India Office, August 24.

Name.	Studied at	No. of Marks (Maximum 6900).
Griffith, G.	London	5060
Cameron, L.	University of Edinburgh	5060
Raye, D. O. C.	Ireland	5036
Gage, J. T.	University of Aberdeen	4600
Vesey, R. M.	,, Dublin	4580
Warburton, W. P.	,, Edinburgh	4460
Birch, E. A.	Ireland	4370
Palmer, D. P.	Do.	4320
Keegan, D. F.	University, Dublin and London	4135
Galloway, W. W.	,, Aberdeen	4093
Eades, L. E.	Edinburgh and Dublin	4090
Gray, W.	University, Dublin	4085
Hughes, D. E.	,, Edinburgh	3945
McKenzie, S. C.	,, ,,	3936
Holmested, T.	London	3852
Macpherson, J.	University, Aberdeen	3770
Bowman, R.	Ireland	3767
Laing, A.	Edinburgh	3760
Miller, A. H.	Edinburgh and Dublin	3705
Cody, T.	Edinburgh and Ireland	3670
Nanney, L. C.	London and Glasgow	3637
Raby, J.	London and Edinburgh	3395
Shaunon, P. J.	Ireland	3130
McVittie, C. E.	Edinburgh and Ireland	3023
Cullinau, C. M.	Ireland	2955
Mayer, H. C.	Edinburgh and Ireland	2955
Rickard, F. M.	London	2720
Bateman, D. F.	Edinburgh	2590

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, June 26, 1866.

Dr. James Alderson, F.R.S., President.

A paper, by George W. Callender, F.R.C.S., was read, on

a case of stricture of the urethra, with complications.

Thomas C. suffered for seven years and a half from stricture. He then had an attack of retention of urine, for which his urinary bladder was punctured above the pubes. As no instrument could be passed along the urethra and through the stricture, an operation was performed for his relief which has been suggested for similar cases, but was not practised, by John Hunter. A No. 8 elastic catheter was passed into the bladder by the supra-pubic opening; after which it was armed with a stout stilet, bent to the curve of an ordinary urethra. Guided by the finger, introduced for this purpose into the rectum, the catheter passed readily through the prostate, but was stopped in the membranous portion of the canal; but by withdrawing the stilet a little, the point of the instrument was tilted up, and it then passed easily into, and was felt in, the perineum. A straight metal catheter, introduced from the glans penis as far as possible, reached to the site of the instrument passed from the bladder, lying a little to its right side. Cutting from the perineum upon the extremity of the latter, and then examining the parts from time to time with a probe, the incision was prolonged forwards through callous tissue for about an inch and a half, when the probe slipped up and struck the straight catheter at a point an inch and a half forward, and then emerged through the urethral orifice. Following this probe, passing through the wound in the perineum, and following also the elastic catheter as it was drawn backwards through the supra-pubic opening, a No. 8 elastic catheter was now readily introduced into the bladder, and the treatment was subsequently continued as for an ordinary perineal section. Eleven months later the patient continued well. An instrument was referred to by means of which the urethra was kept dilated whilst the wound in the perineum healed. An account was also given of the removal of two calculi through the hypogastric puncture (enlarged for the purpose); and some remarks were added respecting the hypogastric operation for the relief of retention of urine.

A paper by Mr. T. W. Nunn, F.R.C.S., was read

ON STRICTURE OF THE URETHRA AS A RESULT OF CONSTITUTIONAL SYPHILIS.

1. Constitutional syphilis is frequently the cause of the pathological changes in the urethra which give rise to stricture. 2. Stricture of the urethra so produced is liable to possess the character of being resilient. *Case* 1.—Middle-aged man, who had undergone perineal section, and had not suffered inconvenience for several years afterwards until he acquired constitutional syphilis. *Case* 2.—Middle-aged man, in whom the stricture was unmanageable until constitutional remedies had been employed. *Case* 3.—L. suffered from constitutional syphilis in 1850, subsequently from an obstinate gleet, lastly from stricture. *Case* 4.—L. S. had gonorrhœa in 1852, again in 1854; chancre 1857; six months later, secondary eruptions; and three months still later, stricture. *Case* 5.—The brother of No. 4, nearly similar as regards the concurrence of stricture and constitutional syphilis. *Case* 6.—Had chronic syphilitic disease of the larynx and stricture of the urethra. The stricture would not yield until constitutional remedies were employed. *Case* 7.—P. P., aged 45, has obstinate stricture, having a traumatic origin, but there is a stricture in front of the seat of injury, and the patient has plantar psoriasis, and psoriasis of the scrotum. *Case* 8.—E. H. had a stricture in 1864, following gonorrhœa, in 1865 contracted syphilis; during the acute stage of the constitutional symptoms the stricture was unmanageable. *Case* 9.—W. came under observation in 1864 for gonorrhœa, August 22; had twice previously had gonorrhœa; discharge in the present attack followed connexion after four days. There existed the remains of an indurated chancre with inguinal adenopathy. After the appearance of constitutional symptoms, some months later, stricture was found. *Case* 10.—D. suffered from constitutional syphilis two years since, one year since from gonorrhœa. In January of the present year (1866) had an almost unpassable stricture.

A paper, by Mr. Thos. Bryant, was read, on a case of

ELEPHANTIASIS ARABUM, OR ELEPHAS, SUCCESSFULLY TREATED BY THE APPLICATION OF A LIGATURE TO THE MAIN ARTERY OF LIMB; WITH REMARKS.

The author, having made some general remarks on the disease, related a case of elephas, which occurred in the person of Mary T., aged 25, a native of Carmarthen, the daughter of Welsh parents, who was admitted into Guy's Hospital under his care on October 10, 1865. She was a single woman, of healthy aspect, and had always enjoyed good health, never having had any illness of much importance. Ten years previously she had scarlet fever, which was unaccompanied by any of its ordinary complications; and it was during her convalescence from this disease that her left leg began to swell, the swelling beginning in the calf, and extending upwards towards the knee; it was unattended by pain or any indication of general disease. For two years the enlargement was gradual, when she slept in a damp bed, and after this the disease progressed more rapidly, and extended upwards to the thigh. This increase was still, however, perfectly painless. She was subsequently admitted into the Carmarthen and Swansea Infirmaries, where all kinds of treatment were tried, but without success, the disease gradually progressing. Three years since, some small ulcers appeared in a deep sulcus in the calf, from which a quantity of dark fluid like blood escaped; the ulcers subsequently healed. On admission the left leg was found to be enormously enlarged from the ankle to the groin. To the hand it felt hard and brawny, the skin and cellular tissue being evidently infiltrated with a fibrinous material. Several deep sulci also existed between the folds of integument in the calf. The skin appeared to be coarse, but it was free from the cuticular induration and ulceration which is so frequently associated with this affection. It was also noted that the foot was perfectly sound. The measurements on admission were as follows:—Round the left or diseased calf, 24 in.; round the right, 15½ in.; round the diseased thigh, 28 in.; round the right, 21 in. The temperature of both limbs appeared to be alike. The pulsation in the left iliac artery was clearly to be felt; but the femoral and tibial vessels of the affected limb could not be made out. The patient was kept in bed for three weeks, with the leg well raised on an inclined plane. In the first week the calf had diminished an inch and a half, and the thigh one inch, all œdema having subsided; but after that date no further decrease took place. On October 31 the external iliac artery was ligatured, the patient being under the influence of choloroform. The vessel appeared to be perfectly healthy, and of normal size. The whole limb was subsequently swathed in cotton wool, and raised as before. The subsequent progress of the case was one of uninterrupted success. The limb rapidly became softer and smaller, the calf measuring at the end of the week 19½ in., and the thigh 24 in., being three inches less than it was on the day of operation. At the end of the second week the limb had diminished another inch; and on the fifteenth day the ligature came away from the iliac artery, the limb all this time having been free from pain, and quite warm. By November 30 the wound had quite healed, and the patient's health was very good. By December 30 the calf had become reduced to 18½ in.; by January 31 it measured 16¾ in.; by February 21 it was only 15¾ in.; and on March 15 it measured 15½ in., being but three-quarters of an inch larger than the sound limb. The skin had gradually contracted, and had become natural in its aspect; all brawniness of the limb had also gone. The patient at the present date is walking about with an elastic legging, perfectly sound. In his remarks the author referred to Dr. Carnochan's cases, which were published in 1856, and stated that it was from their perusal that he had been induced to adopt the practice illustrated by the case he had detailed. He then gave a brief outline of Dr. Carnochan's four cases, in all of which a good result was obtained. He alluded to a case of solid œdema of the foot operated upon in 1858 by Mr. Statham, and gave a brief outline of Mr. Butcher's case published in 1863. He quoted also an example of Dr. Fayrer, of Calcutta, and of Mr. Alcock, of the North Staffordshire Infirmary. He then passed on to consider the pathology of the affection, with the microscopical appearances of the structure involved. He alluded to the theory that it was a disease of the veins of the part, and referred to the fact, illustrated by his own case, of the foot being free from the albuminoid infiltration as an argument against the "venous" theory. He quoted Dr. Carnochan's opinion that it was due to a morbid condition and dilatation of the principal arterial trunk of the member affected, and pointed out the fact that this condition was present in only one of the cases related. He then described the pathological condition of a limb the subject of this affection, with its microscopical appearances, and pointed out that it was apparently a disease of the cellular tissue of a part, and that it was essentially due to an infiltration of fibro-plastic elements; the elementary structure of a fibro-plastic tumour and of elephas being identical, excess of nutritive material and of organisable products being present in both. Under such circumstances he asserted that the principle of the operation which had been performed must be looked upon as rational, and the practice based upon it as scientific; for if the disease of elephas be due to an abnormal effusion of tissue-making elements, to an excess of nutrition in a limb, the attempt to check its progress by the application of a ligature to its main artery, by which it lives, must be regarded with favour. But whatever the theory of the practice may be, he proved that the practice itself was a good one, for the success of the cases he had brought before the notice of the Society was clear and unequivocal. They tended to show that a new means had been given to the Surgeon to cure a loathsome and hitherto incurable affection, and another triumph had been achieved for the science and art of Surgery.

Dr. Webster said elephantiasis was a very common disease in Brazil. He referred to the very large size limbs affected by it attained. He remarked, too, on the fact that Mr. Bryant's patient had never been abroad, and on the novel treatment of the case.

Mr. Lee asked if there was any reason to suppose that there was disease of the arteries in this case.

Mr. Gaskoin said that cases of elephantiasis were of great interest. There was a question as to the identity of elephantiasis with elephas. Some say it is not a disease of the skin. No doubt it was a blood disease, and the point of chief importance was to know if the anatomical characters were alike in elephas and elephantiasis. In elephantiasis the blood-vessels were diseased and cartilaginous. Amputation and ligature of arteries were not always successful.

Mr. Hulke said it would be interesting to know if the changes in the arteries had been observed by Mr. Gaskoin himself. In the specimens examined by the Pathological Society no changes had been observed.

Mr. Gaskoin gave references to statements by authors on the subject.

Mr. Bryant said the case he had operated on was elephantiasis Arabum, and not elephantiasis Græcorum. He again referred to Dr. Carnochan's operation, and said that although Dr. Carnochan was led to perform the operation on the hypothesis that there was arterial disease, further cases showed that disease of arteries was usually not present. However, the practice seemed good, although the theory that led to it was not tenable.

Dr. Greenhow said the Committee at the Royal College of Physicians quite agreed that elephantiasis Græcorum and elephantiasis Arabum were quite different diseases. One was a blood disease, the other was local.

Mr. J. W. Hulke gave an account of a case of

OBLIQUE INGUINAL HERNIA ON EACH SIDE, IN WHICH, THE TESTES REMAINING IN THE BELLY, THE HERNIAL SACS DESCENDED INTO THE SCROTUM, AND ALSO ASCENDED UPON THE APONEUROSIS OF THE EXTERNAL OBLIQUE MUSCLE.

A man, aged 27, was admitted into the Middlesex Hospital with strangulated hernia January 20, 1865. The right side of the scrotum was filled with a large irreducible globular swelling, which also reached upwards along the groin to the anterior superior iliac spine. This latter part of the hernial swelling was superficial to the aponeurotic tendon of the external oblique muscle. There was a similarly placed hernia on the other side, not strangulated. The symptoms of strangulation were very acute. Herniotomy was performed three hours after their commencement, but the patient died next day of peritonitis. The right testis was found in the belly; the left hung freely in the inguinal canal, from a mesorchion derived from the parietal peritoneum near the internal abdominal ring.

In reply to Mr. John Wood, Mr. Hulke said both the testes were free and undeveloped.

Dr. J. Langdon H. Down gave an

ACCOUNT OF A SECOND CASE IN WHICH THE CORPUS CALLOSUM WAS DEFECTIVE.

This was another instance of extensive deficiency in the great commissural connexion of the hemispheres of the brain, associated with marked imperfection of the intellectual faculties, similar to the case recorded by the author in vol. xliv. of the *Transactions* for 1861. The rarity of the abnormality was indicated by the fact that this was only the second time the author had met with it in the dissection of 150 brains of idiots.

Dr. Sankey said the case illustrated the facility with which causes were attributed. The mental defect in this case had been put down to masturbation, when it really depended on congenital malformation.

We regret to notice the death of H. P. Fuller, Esq., late of Piccadilly, in his 82nd year, for many years one of the most active and influential Practitioners in the West-end of London.

We hear a rumour that scarlet fever has broken out at Aldershot, especially amongst the children in the married men's quarters, and that the cubical space allotted to the women and children is even less than that given to the inmates of the worst managed workhouses. It may be well for some one in authority to notice the matter.

The Dinornis.—The *Sydney Mail* states that remains of this extinct bird have been found in good preservation at some gold diggings near Nelson. The skull, which is very perfect, measured two feet in circumference. The bones of this gigantic bird had not been long exposed, inasmuch as some of the gelatinous portions were attached to them.

METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

Secretaries' Report, 1865-66.

During the past year fifteen meetings of the Association have been held. six of which were evening meetings for the reading and discussion of papers; six were meetings of the General Purposes Committee; and three were general business meetings.

The ordinary members of the Association amount to forty-two, being the whole number of the Metropolitan Officers of Health, with four exceptions. The Association lost during the year one of its members, Dr. King, of Eltham; he has been succeeded in his office by his nephew, Mr. King. A considerable addition has been made to the honorary members, which now amount to thirty-six. In the following list will be recognised many whose interest and connexion with matters relating to public health are well known:—Dr. W. A. Guy, Dr. R. Angus Smith, Dr. Murchison, Sir Charles Hastings, Mr. Marson, Dr. B. W. Richardson, Dr. Acland, Oxford, Dr. Sieveking, Dr. T. Spencer Cobbold, the Right Hon. W. Cowper, M.P., Mr. Tite, M.P., Dr. W. T. Gairdner, Officer of Health for Glasgow, Dr. Trench, Officer of Health for Liverpool, Mr. T. J. Dyke, Officer of Health for Merthyr Tydvil. In addition to these names, the Association had hoped to number among its honorary members Dr. Babington, whose lamented death occurred before his election could be announced to him; and Dr. Herbert Barker, of Bedford, who had been nominated, but died before the period fixed for his election.

The free use of the Scottish Corporation Hall continues to be kindly granted for the meetings of the Association.

The first subject which occupied the attention of the Association in the session was that of the cattle plague. Although, as a disease of the lower animals, the cattle plague did not fall directly within the province of Officers of Health, it could not fail to have considerable interest for them, as illustrating general epidemic laws, and practically as affecting the milk supply and the management of cow-houses within the Metropolis. A series of questions was sent to each Officer of Health, the answers to which were embodied in a return, a copy of which was sent to the different Vestries and District Boards. In the early part of August last a letter was addressed by the President to one of the Secretaries, which was printed and sent to each member of the Association, containing suggestions for the prevention and abatement of the disease. Some months afterwards very similar measures to those advocated by the President were recommended by Government, and adopted by the Legislature.

The following communications furnished to the Association will prove the range and importance of the subjects which have engaged its attention:—

1. An address was given by the President on "The Sanitary Needs of the Day," in which he drew attention to the evils existing in the crowded parts of the metropolis and the legal powers for remedying them. In view of the suggestions made by the President, the Association subsequently issued a statement, pointing out where amendments were required in the existing sanitary laws.

2. Professor Divers read a paper on "The Practical Results of Water Analysis," in which he entered fully into the evils resulting from the use of impure water for drinking purposes and the best mode of purification. He also described the best method of analysis.

3. A very elaborate paper was furnished by Dr. B. W. Richardson "On the Poisons which produce Epidemic Disease." His object was (1) to prove that all poisons capable of producing epidemic disease are the natural secretions of the body undergoing a modified condition, by which they are rendered poisonous, and which occurs either by contact with a pre-existing poison or by direct decomposition under the influence of atmospheric air. (2) He held that animal poisons so generated are alkaloidal in character (animal alkaloids), holding the same position in the animal economy as alkaloids do in vegetables. (3) He maintained that when once a point of poison is deposited on a secreting surface, as upon mucous membranes, its further increase does not depend on propagation from cell to cell, but from the continuance of the natural secretion, and from the metamorphosis of such secretion into poisonous matter after it is thrown out.

4. Dr. Montgomery read a very interesting paper "On the

Tendency of Religious Festivals and Pilgrimages in India to originate and disseminate Epidemic Disease, with Suggestions as to the Sanitary Precautions to be adopted to prevent Injury to Public Health."

5. A paper entitled "Dwellings of the People in the Metropolis" was contributed by Mr. Begg. This being a subject of peculiar importance at the present time, from the great destruction of dwelling-houses, especially of the working classes, which has lately taken place, was discussed at two meetings, at which the plan of obtaining sites for dwelling-houses by the removal of cow-houses, slaughter-houses, and noxious manufactories, the building of suburban villages, the erection of large blocks of buildings, the purchasing of old houses and putting them into a habitable condition, and the compelling of railway companies to provide within a short distance of the houses they destroyed others of equal rent and size, were each advocated as a remedy for the existing evils.

6. The subject of "Judicial Decisions in the Police and the Higher Law Courts under the Metropolis Local Management and the Nuisances Removal Acts, and their bearing on Sanitary Progress," was introduced by Mr. Burge. In this paper and in the discussion that followed, the difficulty generally experienced in obtaining assistance from police magistrates, the diversity of their decisions, as well as those of the judges in the higher courts, were pointed out, and the need for greater certainty and stringency in sanitary legislation was insisted on.

A "Memorandum of a Plan of United Action in the Case of an Epidemic of Cholera" was carefully drawn up by the President for the use of the Association. It contains suggestions calculated to suppress cholera, fever, and epidemic diseases generally. This Memorandum has been extensively circulated amongst the Vestries and District Boards of the metropolis.

During the present Session of Parliament several Bills relating to sanitary legislation have been introduced into the House of Commons. These are entitled "A Bill to Amend the Law relating to Public Health," "A Bill to enable the Public Works Loan Commissioners to make Advances towards the Erection of Dwellings for the Labouring Classes," and "A Vaccination Bill," brought in by the Government; and a "Bill to provide Better Dwellings for Artisans and Labourers," introduced by Mr. Torrens, M.P. for Finsbury.

The first of these Bills, as the one immediately affecting the powers of Officers of Health, engaged the special attention of the Association. Previous to the introduction of this Bill, the "Suggestions for Amendments in the existing Sanitary Laws," drawn up by the Association some months since, underwent careful revision, and were submitted to Mr. Bruce, Vice-President of the Council, at an interview with him. Many of these suggestions have been embodied into the Bill, and some others have since been agreed to by a Committee of the House of Commons appointed to consider its provisions. It is, however, feared that recent occurrences in the House of Commons may prevent any further progress with the Bill during the present Session. On the important subject of the last-named Bill an interview was had with Mr. Torrens, who kindly accepted the suggestions of the Association made with the view of rendering his Bill more useful.

A new Building Act is in the course of preparation by the Metropolitan Board of Works, which will contain many salutary provisions with regard to the construction of dwelling-houses—their mode of drainage, the width of streets, etc.

The monthly analysis of the metropolitan waters continues to be kindly undertaken by Dr. Letheby, to whom the thanks of the Association are eminently due. The returns furnished by him are regularly published in the *Medical Times and Gazette*, the *Journal of Gas Lighting, Water Supply, and Sanitary Improvement*, and the *Chemical News*.

The above report of the proceedings of the Association during the past year will show the extent of the subjects taken under its consideration, and in its continued watchfulness in whatever relates to the improvement of public health.

George Buchanan, } Hon. Secs.
J. Northcote Vinen, }

July, 1866.

St. Bartholomew's Hospital, Chatham.—The trustees of this ancient charity (founded A.D. 1078) have opened four wards with twenty beds for the treatment of ophthalmic cases. The care of these wards has been entrusted to Mr. J. Z. Laurence, of London.

MEDICAL NEWS.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to practise on Thursday, August 23, 1866:—

George Longbotham, Seaton Carew, Durham; Henry Clothier, Haslemere.

The following gentlemen passed their First Examination on August 16:—

Douglas Wills, Guy's Hospital; John Stanton Cuff, University College.

And on August 23:—

William R. Cortis, Guy's Hospital.

At the Competitive Examination on August 8, 1866, for the prizes annually given by the Society of Apothecaries, the successful candidates were:—1st. James Ryall Rouch, St. Bartholomew's Hospital, gold medal. 2nd. Marmaduke Alexander Lawson, King's College Hospital, silver medal and a book.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Browne, James Crichton, M.D., L.R C.S. Edin., has been appointed Medical Superintendent to the West Riding Lunatic Asylum, Wakefield.

Couper, J., M.D. Glas., has been appointed an additional Assistant-Surgeon to the Royal London Ophthalmic Hospital, Moorfields.

Jackson, Arthur, M.R.C.S.E., has been appointed Surgeon to the Public Hospital and Dispensary, Sheffield.

Jessop, T. R., M.R.C.S.E., has been elected an Honorary Surgeon to the Leeds Dispensary.

Moffat, Dr., has been appointed Resident Medical Officer to the General Hospital and Dispensary for Sick Children, Manchester.

Murchison, C., M.D., F.R.S., has been elected Physician to the Middlesex Hospital.

Nunn, J. R., M.R.C.S.E., has been appointed Surgeon to Warwick Gaol.

Parke, W., L.R.C.P. Edin., has been appointed Medical Inspector of Health for Willenhall, Staffs.

Stewart, Hugh Grainger, M D., F.R.C.P. Edin., has been appointed Medical Superintendent to the Newcastle-on-Tyne Boro' Lunatic Asylum.

BIRTHS.

Coleman.—On 28th ult., at Rosemount, Lower Norwood, the wife of A. Coleman, M.R.C.S.E., of a daughter.

Corbyn.—On July 9, at Lucknow, the wife of Dr. J. C. Corbyn, Inspector-General of Prisons, of a daughter.

Hodges.—On 22nd ult., at Montagu-street, Portman-square, the wife of R. Hodges, M.D. Aberdeen, of a daughter, stillborn.

Lowndes.—On 23rd ult., at Sea View, Ryde, Isle of Wight, the wife of T. M. Lowndes, M.D., Staff Surgeon Bombay Army, of a son.

Smith.—On 25th ult., at Much Hadlam, Herts, the wife of F. M. Smith, M.D., of a son.

Williams.—On the 28th ult., at Reigate, the wife of Walter D. Williams, M.D., of a son.

MARRIAGES.

Appleyard—Macfarlane.—On June 6, at the residence of the bride's father, J. Appleyard, M.R C.S.E., L.S.A., of Mortlake, to Mary S., eldest daughter of John Macfarlane, J. P., M.R.C.S., and Squatter, E-Yeuk, near Mortlake, Victoria, Australia.

Birch—Massey.—On the 15th ult. at St. Stephen's, Dublin, E. A. Birch, M.R.C.S.I., to Caroline Thomasina, second daughter of John Massey, Esq., of Pembroke-road, Dublin.

Clarke—Hawkins.—On August 9, Myrry Clarke, Esq., Surgeon, Jamaica, to Margaret Ann, only daughter of Dr. Hawkins, of King's Lynn, Norfolk.

Dunn—Trotter.—On 23rd ult., at St. John's Church, Holmfirth, Christopher B. Dunn, M.R C.S.E., of Crich, Derbyshire, to Ellen, fourth daughter of E Trotter, Esq., Surgeon, of Holmfirth.

Packman—Barrett.—On the 22nd ult., at Christ Church, Southgate, A. W K. Packman, M.D., of Puckeridge, Herts, to Beatrice Jane, widow of the Rev. G. Barrett, late of Benges, Hertford.

DEATHS.

Bradshawe, W. W., M.D. Erlangen, M.R.C.P. Lond., at Portland-place, Reading, on the 18th ult.

Munn, F. D., M.R C.S.E., L.S.A., of Storrington, Sussex, on the 22nd ult.

Tylecote, E., M.D. Aberdeen, M.R.C.S.E., at Great Haywood, aged 61.

Wilkinson, W., M.D., F.R.C.S. Edin., at Lauriston-place, Edinburgh, on the 14th ult.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATION.

Burnley Union.—Mr. John Heyworth has resigned the Pendle District; area 10,292; pop. 5084; salary £25 per annum.

Bury Union.—The Second Tottington District is vacant ; Salary £30 per annum.

Colchester Union.—Mr. D. P. Morris has resigned the Second District ; area 4729 ; pop. 5870 ; salary £65 per annum.

Potterspury Union.—Mr. Nixon has resigned the First District ; area 9643 ; pop. 6593 ; salary £70 per annum.

APPOINTMENTS.

Burnley Union.—John Heyworth, L.F.P. and S. Glas., L.M., to the Marsden District.

Dudley Union.—Edward C. Haden, M.R.C.S.E., L. S. A., to the Workhouse.

Lanchester Union.—George S. Thompson, M.R.C.S.E., L.S.A., to the Tanfield District.

Toxteth Park Township.—Thomas F. Morrish, M.R.C.S.E., L.S.A., to the Second District.

Royal College of Surgeons.—The Library and Museum of this Institution will be closed from this day until Monday, October 1.

Quekett Microscopical Society.—The first meeting of the second Session, 1866-67, was held in the library of University College on Friday evening, August 24, Ernest Hart, Esq., President, in the chair. After the usual preliminary business, the Secretary announced that the special classes open to all members for the instruction of beginners in microscopic manipulation, which had been so successful during the last Session, would be continued; Mr. Suffolk having again kindly consented to undertake the direction of them. It was proposed to limit the number in each class to fifteen, and, if necessary, several classes would be formed. The next field-day excursion into the country in search of living natural history specimens will be advertised, with the time and place of meeting, in the September number of Hardwicke's *Science Gossip*. Dr. Tilbury Fox, one of the Vice-Presidents, then read a paper "On Human Vegetable Parasites." The author's chief aim was to elicit from the members information in regard to the part played by fungi in the production of diseased conditions of plants, men, and insects, and he confined his remarks to the following points—first, the probability of the frequent existence of the germs of fungi in the textures of healthy living beings, and in situations to which the external air has no access ; the modes by which fungi effected an entrance to those spots ; the fact that parasitic germs enter the systems of plants and animals at a much earlier date than is generally believed, through the soft textures of the young tissues ; that fungi lie dormant a long time in the system, until favourable conditions occur to promote their growth ; that fungi only become sources or inducers of disease when they develope to an undue amount ; that fungi will not flourish on a healthy surface ; the distinctive features of vegetable and animal structures, especially artificial germination ; and the effects, chemical and other, produced by the growth of fungi. Dr. Fox illustrated all these different conditions by a reference to the phenomena of "ringworm" and allied diseases. Mr. M. C. Cooke gave a number of very interesting facts in reference to the parasitism of plants, entirely confirmatory of Dr. Fox's observations ; detailing cases in which the germs of mildew and rust must have entered very early indeed into plants, and even been contained in the seed, developing as the "plant grew up;" also where the elements of rust entered through the first pair of young (cotyledonous) leaves. He also stated that he never looked for parasitic fungi on those plants that appeared vigorous and healthy, but was sure to find them on those which looked sickly or grew in unhealthy places. After a few complimentary remarks from the President and others, a second and short paper was read "On a New Mode of Mounting," by Mr. N. Burgess, who exhibited a number of beautifully prepared specimens in illustration of the process which he recommended. Mr. Burgess uses slides of a much larger size than usual, so that the whole area of a large object can be displayed in the same specimen, and his method is one well worthy of adoption by amateurs. The meeting terminated with the usual microscopic *conversazione.*

Medical Men and their Fees in Lunacy.—A case of considerable importance to the Medical Profession in regard to their contract fees as Medical officers to parish unions, especially in cases of lunacy, has just been heard and decided at the Farnham County-court, Surrey, before H. J. Stonor, Esq., judge. The case created considerable interest, inasmuch as it was calculated to establish a precedent for similar cases in future. The action was brought by Dr. Edward Powell, House-Surgeon of the Farnham Union, who sought to recover from the Board of Guardians the sum of two guineas for certifying to the lunacy of two pauper inmates of the Workhouse, the same being two fees allowed by the Poor-law Board, but which the Board of Guardians refused to pay on the ground that the certificates were given by Dr. Powell in the performance of his ordinary duties, and without entailing any considerable inconvenience. Dr. Powell conducted his own case, and Mr. W. Hollest, Clerk to the Guardians, appeared for the defendants. The facts of the case as detailed by Dr. Powell were to the effect that on August 21, 1865, he attended at the Workhouse before the Chairman of the Board, Samuel Nicholson, Esq., and in his presence, as a Justice of the Peace, certified to the lunacy of a pauper named Sarah Howell. In the month of March of the present year he also certified to the lunacy of a man named James Parratt, at the same place, and afterwards claimed the usual fee of one guinea in each case, to which, in accordance with his contract with the Board, he was entitled. The Guardians, however, rejected the claim, and he subsequently communicated with the Poor-law Board, from whom he received a letter withholding any opinion as to the justice of the claim, and at the same time authorising him, if so advised, to enforce the demand elsewhere. Mr. Hollest, having again stated the grounds on which the Guardians refused the claim, contended that if Dr. Powell had been specially summoned to the house, or had been put to any great inconvenience, it would have altered the circumstances, but it was during his attendance at the house that the lunacy of the paupers was certified to. He also added that, according to the Debts Act of 1859, the claim in regard to the first certificate was not recoverable, inasmuch as it was not made within six months after it was incurred. The Poor-law Board were at liberty to extend that period to a twelvemonth if they thought proper, but they had not done so in the present instance, and even if they had done so the time would expire in the first instance in a few days. His Honour stated that he took full cognisance of the Act of Parliament, and considered that the *onus* rested on Dr. Powell to show that the claim was in accordance with his contract with the Guardians, which had been abundantly proved. He therefore gave a verdict for the plaintiff, with expenses, in the second fee, and observed that in the event of the Poor-law Board giving Dr. Powell permission to proceed with the first, as it had now exceeded the limits of the Debts Act, he would hear it again. There were other Medical gentlemen in court, and the verdict was received with applause.

Cholera Bulletins.—The returns for the Hôpitaux St. Pierre et St. Jean, Brussels, for the fortnight from the 2nd to the 15th August show 376 cholera cases admitted, among which 153 deaths took place, 260 cholera corpses also having been brought to the *morgue.* Although upon the whole declining, the epidemic has of late attacked a much larger proportion of persons in easy circumstances than was at first the case. Comparing the visitation of this year with those of 1832 and 1849, it has already proved of greater severity. Thus the epidemic of 1832 produced 864 deaths, having lasted five months, from June to October, being at its height in August. In 1849 the cholera commenced in May and arrived at its height in August, ceasing in October, 1060 persons having fallen victims to it. The present epidemic is following an identical course, commencing in May or June, and it will probably not terminate before October. It differs, however, in its greater severity, for up to the 1st of August 1200 deaths had already occurred. It is a remarkable fact observed in all these epidemics, as well as in the slighter ones of 1853, 1854, 1855, and 1859, that the cholera has never prevailed in Brussels during March and April. The accounts which have reached us from the different provincial districts in France are very favourable, so that the speedy extinction of the epidemic may be looked for. At Amiens its career may be said to be closed, and all the Paris *internes*, having been entertained at a banquet by the authorities, have returned, bearing with them the well-deserved gratitude and esteem of those they have so disinterestedly and devotedly served. "The devotion of the Medical Profession of Amiens and of the Paris *internes* has well shown," said the Mayor at the banquet, "that bravery is not the exclusive appanage of those who bear arms, however redoubtable may be the foe." Some day, doubtless, we shall have the complete history of this, the most terrible outbreak of cholera that has ever visited any European city, and if faithfully and skilfully compiled, pregnant with instruction it may be. At present, the only descriptive sketch of the town under its afflictions which has appeared in any journal, whether French or English, is that from the well-known pen of "R. D." in our own columns. As to Paris, as far as the few statements which have been allowed to ooze out can be relied upon, the disease, after having become temporarily aggravated both in expansion and severity, seems now to be greatly on the decline, both as regards the proportion of deaths and the number of new cases. The folly of the concealing process is seen not only in adding to the public alarm by the exaggeration it gives rise to, but in preventing the reassurance which should follow authentic statements of the diminution of the disease. The public, being denied all information concerning the disease when at its height, is naturally incredulous concerning statements as to its diminution. To show how strictly prohibition of publicity has been maintained in this matter, we may mention that it was not dared to publish the portion of an important discussion on cholera which took place at the last meeting of the Paris Hospital Society that related to the number of cases treated. Several distinguished Hospital Physicians took part in that discussion; and it seems to have been the result of their general experience that the present outbreak of cholera in Paris has been characterised by a marked absence of premonitory diarrhœa, this occurring only in exceptional cases. Dr. Fritz, the young talented Physician, whose loss is so much deplored by the Medical body, seems, however, to have suffered for a week from such diarrhœa, which he neglected, before he was carried off. The disease, too, has seemed to attack all quarters of the town simultaneously, instead of proceeding from the poorer to the richer quarters, as in former epidemics.

THE following are the last week's Cattle Plague Returns.

Census Divisions.	1. Attacked.			Back cases reported in the week ended Aug. 18, 1866.	2. Result of reported Cases from the Commencement of the disease.				
	Week ended Aug. 4.	Week ended Aug. 11.	Week ended Aug. 18.		Attacked.	Killed.	Died.	Recovered.	Unaccounted for.
Metropolitan Dist.	1	..	..	..	7911	3429	3714	318	450
South Eastern Co. .	..	..	..	..	4880	1705	2539	465	171
South Midland Co.	37	35	24	2	20897	8897	10072	1541	387
Eastern Counties .	6	9	1	..	11499	5456	4855	789	399
South Western Co.	5	6	..	..	1845	739	828	207	71
West Midland Co. .	55	28	30	..	15029	6507	6096	1521	905
North Midland Co.	8	9	7	..	19023	10989	6269	1226	539
North Western Co.	90	50	43	..	73441	26417	35042	8491	3491
Yorkshire . .	13	13	21	..	34641	7982	18360	5938	2361
Northern Counties.	..	..	..	..	8636	4931	2613	974	118
Monmouthshire & Wales . . .	6	6	1	..	8388	1180	5794	1117	297
Scotland . .	..	5	..	..	46866	6263	28091	10707	1805
Totals .	221	161	127	2	253056	84495	124273	33294	10994

This Return shows that 127 attacks were reported to have occurred during the week ended August 18, being a decrease of 34 on the previous week.

The number of "Back Cases" reported lately being now inconsiderable, no estimate in anticipation of such cases is made in the present return.

Fresh outbreaks took place in 20 farms or places where cattle are kept; the number of such outbreaks in the previous week being 33.

Note.—2 Inspectors, who reported cases last week, have not reported in time for this return, viz., for the county of Leicester 1, and Salop 1. These Inspectors reported 3 cases last week.

BOOKS RECEIVED.

Pharmaceutical Journal and Transactions. August, 1866. London: Churchill.

⁂ Contains seven articles of great general and professional interest, especially a paper by Mr. T. J. Miller upon the Colorimetric Method for Estimation of Nitrous Ether in Spirit of Nitre, which, by the bye, is usually less than one per cent There is a quotation from Professor Brewer upon the degrees of heat which seeds and spores of plants can stand without losing their vitality; it seems that their power of germination lasts until chemical changes disorganise their structure, and many curious instances are given in which seeds of Phytolacca decandra after boiling in syrup, Sambucus nigra after boiling in wine, have germinated. The Lewisia rediviva of Western North America may be cooked, and served up cold two years afterwards, and it will be found alive.

British and Foreign Medico-Chirurgical Review. July, 1866.

⁂ This number contains two articles of especial interest at the present time, on cholera. The one entitled "Authorities of Cholera" is an ably written summary, in about thirty pages, of our present state of knowledge in reference to nature, progress, the cause and the treatment of cholera as contained in all the recent works and essays on the subject. We recommend every one to peruse this article. The other is a short critique on the treatise of Dr. Pacini on the specific cause of cholera. Pacini believes that cholera is due to the destructive action of parasites which erode the mucous surfaces, expose the capillaries, and get in through the veins to the blood The loss of the epithelium of the mucous surface is thus accounted for. Absorption is stopped whilst the fluid lymph of the body escapes A third article of very great interest is one by Mr. De Morgan "on a case of excision of a part of the spinal accessory nerve for spasmodic wry-neck." After all else had failed, the sterno-cleido-mastoid muscle was divided without benefit, and then, as the man's health was beginning to suffer, the "trapezial branch of the nerve was sought for as it emerges from the sterno-cleido-mastoid The nerve was traced through the fibres of the muscle, until the common trunk above the division into the trapezial and sterno-mastoid branches was reached, and here a piece about a quarter of an inch in length was cut." The case was cured.

L'Union Médicale July 28, 1866.

⁂ Contains an article by M. Calvy, entitled "Considerations as to the Contagion of Epidemic Cholera." Three deaths occurred in a house situated in a healthy and isolated locality near Toulon, which at the time was free from cholera. Some member of the family who had been in close contact with those who had died from cholera at Marseilles subsequently arrived from the latter place, and it is argued must have brought the germs of disease with him. M. Calvy, making these facts the basis of his communication, discusses the question of special predisposition; the circumstances that favour transmission, such as deficient sanitary precautions and unhealthy localities, and what is termed the *consentement local*—that is to say, certain cosmical, telluric, and aërial conditions, *que Dieu seul connait*—and concludes that the cholera is essentially contagious, and on this ground urges, in so far as the disease may come by way of the sea, the necessity for the adoption of a rigorous quarantine.

The Duality of Venereal Ulcers: a Paper read before the Harveian Society of London. By Dr. Colomiati Meredyth. Hardwicke, 192, Piccadilly. Pp. 19.

⁂ An outline of the doctrines of the dualistic school, the disciples of which, the author says, are abroad many, but in England few. Dr. Meredyth is known to have paid considerable attention to this subject, and his essay gives one the pith of points in dispute, and saves the trouble of labouring through the literature of the subject, which is tolerably diffuse.

Notice sur les Eaux Thermales Sulfureuses de Schinznach (Suisse, Canton d'Argovie). Par le Docteur Aimé Robert. London: Williams and Norgate. Pp. 110.

The baths of Schinznach are recommended for the relief of scrofulous and cutaneous affections, chronic rheumatism and visceral disorders, and are situated about three leagues from Baden, a few minutes' walk from the station on the line from Basle to Zurich; and in this treatise a full notice is given of their special action and mode of administration, and of the peculiarities of the country around.

Accidents to Volunteers: a Lecture delivered to the City of Oxford Companies of the Oxfordshire Rifle Volunteers. By E. L. Hussey, Surgeon of the Administrative Battalion, the Radcliffe Infirmary, &c. Second Edition. Macmillan and Co. 1866. Pp. 32.

⁂ An outline of field Surgery, and well adapted to give a man a reasonable insight into what he ought to do, and what he ought not to do, in case of accident and in the absence or before the arrival of the Medical officer.

Healthy Homes and Workshops: How to be Promoted by Working Men's Clubs.

⁂ A very useful broad-sheet revised by Dr. Aldis, and published by the Ladies' Sanitary Association, 8, Park-street, Belgrave-square.

Pike, on the English and their Origin.—Gazette Hebdomadaire, No. 33 — Macgowan on Malaria.—Bulletin de l'Académie Royale de Médecine de Belgique, No. 5.

On Hay Fever. By Dr. Abbott Smith. Fourth Edition. London: Renshaw. 1866. Pp. 62.

NOTES, QUERIES, AND REPLIES.

◆

He that questioneth much shall learn much.—*Bacon.*

The letters of Dr. R. E. Swyer and Dr. Keeley are too late for insertion this week.

A Subscriber.—Sir James Clark, Bart., Bagshot-park, Surrey.

Le D.—Syphilis rarely produces such an effect; there must be some other cause at bottom. We never prescribe for patients in the columns of the *Medical Times and Gazette*; we can only advise you to consult the oldest Surgeon of eminence within reach. Probably a holiday and sea bathing will be recommended.

Dr. Joseph Rogers and Dr. E. Smith.—We have been favoured with a copy of correspondence relating to these gentlemen. Dr. Joseph Rogers, in a letter to Dr. E. Smith, complains that at page 67 of Dr. Smith's Report on Metropolitan Workhouses, he (Dr. Rogers), as "the Medical officer of the Strand Union, is made to say 'that I could not devote so much time to my duties as my conscience told me I ought to do.' I do not know (continues Dr. Rogers) whether I read these words as you read them; but the only construction which I can put upon them is, that the smallness of my salary is the cause of my not doing my duty conscientiously in the Strand Workhouse. I must request you to be so good as to inform me whether you put a similar construction on these words, and, if not, to tell me what you do put upon them." As Dr. Smith did not reply, Dr. Rogers addressed a letter to Mr. Farnall, C.B., in which he says:—

"I would ask you to inform me whether you have any remembrance of my having made any statement at the visit paid by you and Dr. Smith to the Strand Workhouse which would justify him in holding me up to public reprobation as he has done in his report. You were present during the whole time Dr. Smith was questioning me, and I know that you heard all that passed."

Mr. Farnall replies:—

"All I can say is, that I have taxed my memory to try and ascertain, if I could, what really passed, and I have come to the conclusion, from my long knowledge of your great integrity and your most unselfish nature, that Dr. Smith must have misunderstood your expressions; I certainly took no notes of the conversation between you and him, but I feel that you could not entertain the sentiment which you consider is attributed to you."

Dr. Rogers goes on to complain that Dr. Smith gave an inexact account of his ideas as to cubic space; he further intimates that Dr. Smith is actuated by "personal hostility," and supposes that difference of opinion as to cubic space is one reason for this hostility; and a complaint made by Dr. Rogers to Mr. Villiers of the "hurried and imperfect manner" in which Dr. Smith made his inspection of the Strand Union Workhouse, another. The whole of Dr. Rogers's letter leaves us in doubt whether he were not the first to throw a stone. Anyhow, it is better that differences of this sort should be hushed up amicably between men of character and position, each of whom conceives that he is doing his own duty in his own way.

A Subscriber to the Hunter Statue Fund inquires what has been done with the surplus funds after payment to the sculptor, and which sums it was understood were to be invested in the production of a gold medal for public competition. Write to Mr. South, the Honorary Secretary.

Dr. Martin.—The will of the Baroness Truro has just been proved. Mr. Charles Norris Wilde is a grandson of the late Mr. Norris, a former member of the Council of the College of Surgeons, to which Institution Mr. Wilde is the legal adviser. Lord Truro was his uncle.

A Provincial Student.—There will be an examination in arts, &c., at the Apothecaries' Hall, towards the end of September. If you pass that, you can commence your Hospital studies on October 1, *not otherwise.* There will be no preliminary examination at the College until December.

Associate King's College, Leeds.—The testimonial presented to Sir Wm. Fergusson, Bart., was engraved in the *Illustrated London News* of last week. Sir William will deliver the introductory address at King's College on the opening of the Session.

An Advertisement.

As, fortunately (with all deference to the author of "By the Way," in the *Englishwoman's Domestic Magazine*, who seems to regret that English journalists are so unfettered), we have no censor of the press, our newspapers ought to be careful not to abuse their privileges, and should be especially careful to exclude mischievous and immoral advertisements. The following was clipt from a contemporary bearing date August 11:—

"DIPLOMA (Medical) to be DISPOSED OF, a bargain.—Address, or call, etc., etc."

Our official *Argus* has seen the diploma. It is from an institution in New York, is duly signed by the *Examiners* (?) who have had the impudence to leave the space for the name blank, so that the name of John Potter Sargeant or that of any other man could be inserted on his release from prison. The College of Surgeons have drawn the attention of the American Minister to the subject.

An Opening for Practice.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Being desirous to return to England, I am anxious to meet with a locality where there is an opening for a Consulting Physician and well-trained accoucheur.

I am, &c.

20, Clarinda-terrace, Kingstown, August 28. A. M.

COMMUNICATIONS have been received from—

Dr. Bateman; Dr. Rogers; Dr. Murray; Mr. Spencer Wells; Dr. Blandford; Dr. B. W. Richardson; Mr. J. Chatto; Dr. Warter; Mr John Wood; Dr. Swyer; Dr. Keeley.

BOOKS RECEIVED—

Annual Report of the Surgeon-General, United States Army, 1865—Mackall, On Physical Force—Mackall's Essay on the Life in Nature—Mackall, On the Law of Muscular Action—Nelson, On Asiatic Cholera—The American Journal of Medical Science, No. 103—Da Costa's Medical Diagnosis, second edition—The Cholera Map of Ireland—Kingsford, On Cholera—Mechanical Treatment of Cholera, by a Physician—Sedgwick, On Cholera.

NEWSPAPERS RECEIVED—

The Ormskirk Advertiser—The Daily Southern Cross.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 25, 1866.

BIRTHS.

Births of Boys, 1050; Girls, 992; Total, 2042.

Average of 10 corresponding weeks, 1856-65, 1742·0.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	732	745	1477
Average of the ten years 1856-65	599·4	586·5	1185·9
Average corrected to increased population..	..	..	1304
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	3	3	5	5	6	6	15	3
North ..	618,210	8	5	17	2	7	18	21	12
Central	378,058	4	5	7	—	5	3	13	13
East ..	571,158	8	11	4	1	7	10	41	198
South ..	773,175	11	11	6	3	14	9	39	39
Total ..	2,803,989	34	35	39	11	39	46	129	265

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·773 in.
Mean temperature	61·2
Highest point of thermometer	74·3
Lowest point of thermometer	45 0
Mean dew-point temperature	57·0
General direction of wind	Variable.
Whole amount of rain in the week	0·32

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 25, 1866, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending Aug. 25.	Deaths.		Temperature of Air (Fahr.)			Rain Fall.	
				Corrected Average Weekly Number.*	Registered during the week ending Aug. 25.	Highest during the Week.	Lowest during the Week.	Weekly Mean of the Mean Daily Values.	In Inches.	In Tons per Acre.
London (Metropolis)	3067536	39 3	2042	1400	1477	74 3	45·0	61·2	0·32	32
Bristol (City) . .	163680	34 9	93	73	‡158	77·5	46 0	61·4	0·70	71
Birmingham (Boro')	335798	42·9	212	163	133	72·0	47·2	60·2	0 03	3
Liverpool (Borough)	484337	94 8	331	281	503	69·6	55·0	63 1	0·06	6
Manchester (City) .	358855	80·0	256	203	‡198	75 5	48·0	61·2	0 19	19
Salford (Borough) .	112904	21 8	73	57	44	74 0	47·0	60·5	0·12	12
Sheffield (Borough) .	218257	9·6	156	115	107	70 6	49·0	57 8	0 14	14
Leeds (Borough) .	228187	10·6	179	116	149	73·5	52·0	59 7	0 25	25
Hull (Borough) .	105233	29·5	82	49	39	..	..	.	..	..
Nwcastl-on-Tyne, do.	122277	22 9	93	65	76	67·0	50·0	57 3	0 00	0
Edinburgh (City) .	175128	39·6	108	84	78	64·7	48 0	58·3	0 30	30
Glasgow (City). .	432265	85 4	327	252	190	65 3	50·4	58·2	0 55	56
Dublin (City and some suburbs) .	318437	32·7	155	†156	123	..	..	..	..	..
Total of 13 large Towns . . .	6122894	34·4	4107	3014	3175	77 5	45·0	59·9	0·24	24
	(1863)				Week ending Aug. 11.	Week ending Aug. 11.				
Vienna (City) . .	560000	..	..	..	..	..	..	§ 60·4	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·773 in. The barometrical reading increased from 29·55 in. on Monday to 29·94 in. on Saturday.

The general direction of the wind was variable.

* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 57·7°.

APPOINTMENTS FOR THE WEEK.

September 1. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p.m.

3. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

4. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

5. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St Thomas's, 1½ p.m.

6. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

7. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8 p.m. Meeting of Council.

LIEBIG'S FOOD FOR INFANTS & INVALIDS.

Prepared strictly from the Formula of
Baron Liebig, by

HOOPER,

OPERATIVE CHEMIST,

TRADE MARK

Sold in Tins, 1 lb., 1*s.*; 3 lb., 2*s.* 6*d.*; 6 lb., 5*s.*,
by all Chemists and Druggists,
and direct from Mr. Hooper's Establishments,
7, PALL MALL EAST,
And 55, GROSVENOR STREET.

Wholesale of Barclay, Edwards, Newbery, all Patent Medicine Warehouses, and Wholesale Druggists.

WHY NOT USE THE BEST?

"MAIZENA"

Is the ONLY "PRIZE MEDAL" CORN FLOUR. It was also reported by Jury of 1862, London,
"EXCEEDINGLY EXCELLENT FOOD."

It is superior to the best Arrowroot; makes in short time, and at trifling cost, delicious Blanc-mange, Puddings, Cakes, Omelets, Creams, and scores of other dishes, and is always an invaluable Food for INVALIDS and CHILDREN. Sold in Packets, with directions, by Chemists, Grocers, &c.
N.B.—The price is *no more* than for inferior articles.

TRY IT ONCE.

EXTRACTUM CARNIS "LIEBIG."

LIEBIG'S FOOD for INFANTS.
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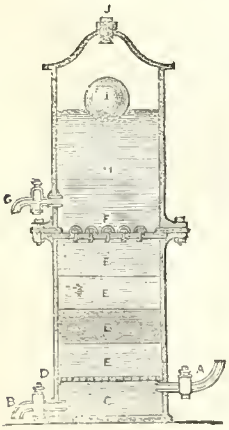

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ORIGINAL LECTURES.

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APPENDIX TO A

COURSE OF LECTURES ON THE RELATIONSHIP OF CHEMICAL AND MECHANICAL DISEASES,

BEING A SKETCH OF THE ACTION OF MEDICINES.

By H. BENCE JONES, M.D., F.R.S.

INTRODUCTION.

PERFECT knowledge of the action of medicines can only be obtained when the action of each force in each medicine upon every force in every texture of the body can be estimated.

Hence this outline must be most imperfect and incomplete, but it may serve to indicate the direction in which future progress lies, and perhaps to give an earnest of the results which after years of research may be attained.

The law of the conservation of energy entirely does away with every supposition that food or medicine can create or annihilate any force. Food can create no new force, but can only transfer the energy that is latent in the different substances that are eaten or drunk, so as directly to increase or to diminish one or other or all of the actions that take place in the body, or to increase or to diminish the resistance to these different actions.

Medicines also, like food, can carry latent energy into each part of the body, and they may become active within by increasing oxidation, nutrition, secretion, motion, and sensation, or by their properties they may put a check upon these functions by increasing the resistance or by altering the conditions necessary for the conversion of latent energy into active force.

At the present time only the first sketch of the application of the law of the conservation of energy to the action of medicines can be drawn. First, because our knowledge is as yet too imperfect; secondly, because the interdependence of the different forces that act within us renders the exact estimation of each very difficult; thirdly, because a most complicated system for regulating the different motions in the body exists in the nerves, so that the action of every force can be promoted or prevented by means of the circulation; and, lastly, because the actions of many medicines are themselves complex, having an opposite effect at different times or in different doses.

The healing art may be separated into two grand divisions—the one chemical, and the other mechanical.

From the first division the practice of Medicine has arisen, and from the second Surgery.

The great functions of Medicine are chemically to affect, qualitatively or quantitatively, first the working, and secondly the repair, of the organs and structures of the body.

As I have in the preceding course of lectures chiefly considered the processes of oxidation and nutrition, so here I shall now, for the purpose of clearness, dwell only on the action of medicines as influencing oxidation and nutrition in the different textures of which the body is composed, although a multitude of other actions exist which I shall not attempt now to bring before you.

But, first, you must entirely banish from your minds the notion that diseases are catastrophes or separate entities to be destroyed within or to be ejected, like devils, without, by which a perfect cure only can be obtained; and you must more and more be possessed by the fact that all diseases are the increase or diminution or qualitative modification of the never-resting correlated forces which constitute life.

The oxidation and the nutrition that occur in the body are affected by medicines in at least two ways.

First, directly by the passage of the medicines into the different textures of which the body is composed; in these textures oxidation is promoted or retarded, and nutrition assisted or prevented.

Secondly, indirectly by the action of the medicines on the nerves that regulate the circulation; whereby the flow of blood through the vessels is increased or diminished.

Although nutrition and oxidation in the body are dependent the one upon the other, and cannot be separated in action, yet to obtain some clearness in our ideas on the effect of medicines I shall separate them by dividing remedies.

1st, into those that promote or retard oxidation. A: Directly promoting oxidation within each particle of every texture. B: Indirectly promoting oxidation through the medium of the nerves acting on the heart and blood-vessels. C: Directly retarding oxidation. D: Indirectly retarding oxidation.

And, 2ndly, into those medicines that promote or retard nutrition. E: Directly promoting nutrition in each particle of every texture. F: Indirectly promoting nutrition through the medium of the nerves acting on the heart and blood-vessels. G: Directly retarding nutrition. H: Indirectly retarding nutrition.

Until lately we possessed no definite knowledge of the diffusion of medicines after they entered into the blood. We now know that crystalloid food or medicine passes through the walls of the capillaries and through the membranes of textures and through cell walls as readily as though no membrane intervened between the blood and the parenchymatous or intracellular fluid. According to the diffusive power of the crystalloid substances in the liquor sanguinis, and in the inter- and intra-cellular fluid, the same substance will be found in equal quantities in these different places. Hence, by dialysis, all crystalloid medicines act as directly on the textures as on the blood; and no crystalloid medicine can be limited in its action to the blood alone.

When the crystalloid substances enter the different textures, they act according to their chemical power; and according to the actions going on in the different textures, and even in different parts of the same textures; and according to the chemical and physical properties of the substances of which the different parts of the different textures are composed.

In addition to this direct action the diffusion of the medicine into the nerves that regulate the circulation leads to an indirect action upon the processes going on in the different textures. The increased or diminished action of the heart and the expansion or contraction of the small arteries lead to an immediate alteration in the circulation of blood through any part, and this promotes or retards the chemical circulation or the rate of diffusion from the capillaries into the textures.

Thus, not only are the actions of oxidation and of nutrition dependent the one on the other, but even the direct and the indirect actions of medicines upon oxidation and upon nutrition are also dependent the one on the other; although for clearness, as I have said, I shall endeavour in this sketch to keep these two actions as separate as I can.

PART I.

The first great division of medicines consists of those which directly or indirectly promote or retard oxidation.

A. Medicines that directly promote Oxidation.

1st. Iron is probably one of the most certain remedies we possess, and when used in right quantity and at the right time, it seems as though its progress could be watched and its benefit accurately determined by the improved colour of the blood.

When a soluble salt of iron is taken in a few hours, some part of it is converted into a sulphuret, or is reduced to the state of oxide in the bowels, and thus losing its solubility and power of diffusion, it is thrown out as perfectly useless as if it had never been taken.

Another part escaping precipitation remains dissolved, and passes in from seven to ten minutes, when the stomach is empty, into the urine, where it may be detected, partly oxidised, if capable of oxidation, by the ordinary chemical tests; and this part also is of no use unless some local action of iron on the urinary passages or bladder is required.

A third part, instead of passing off in the urine, diffuses from the liquor sanguinis into every texture, and into the blood-globules and white corpuscles, making a greater formation of hæmatocrystallin, and thereby promoting that combination with protagon on which the production of new blood-globules depends.

These blood-globules exercise a chemical action on the oxygen of the air with which the membrane of the air vesicles transmits, and they and the fibrin together appropriate the incoming oxygen and carry it to the capillaries, whence it must diffuse into each structure to support the oxidation which takes place everywhere.

Hence, speaking generally, the more iron we absorb, the more blood-globules we form, the richer also the muscles become in hæmatocrystallin, and the more oxygen is taken to the capillaries, and the more oxidation proceeds in the tissues and in the blood.

2ndly. Oxygen itself, and still more ozone, may be considered as direct promoters of oxidation. From the time of Dr. Beddoes and Mr. Boulton to our own time, by inhalation or imbibition, these remedies have been used, but hitherto there has been no general recognition of their worth at all comparable to that which exists regarding the value of iron. Theoretically, ozone, if not oxygen, ought to be a most potent remedy in the treatment of diseases arising from suboxidation, but as yet the right mode of using these agents, except as fresh air, has not been discovered, and probably until some means is found of keeping up the continuous action of these gases no considerable benefit will follow their use as medicines.

3rdly. Alkalies furnish out of the body and in the body the most marked evidence of assisting in oxidising actions.

Very many substances are included in the class of alkalies, and probably no two of them have the same degree of action, although all have a general resemblance. Different alkaline substances diffuse into the blood and into the textures at different rates, partly on account of difference in the power of diffusion, but partly also on account of the amount of similar substances already present in the tissues. Thus, for example, carbonate of soda, carbonate of potass, carbonate of lithia, and phosphate of soda will pass in and out of the textures at different rates, according to the amounts of these substances already present in the fluid that saturates these tissues. The greater the difference between the quantity of substance in solution on each side (inside and outside) of any membrane, the quicker will equilibrium by diffusion be produced, and the sooner will the greatest possible action of the substance be obtained; and when the equilibrium is produced no further passage of the substance into the membrane will take place.

In the *Medical Times and Gazette* for September, 1865, I have given some account of the action of alkalies on organic substances and of the rate of passage of some alkalies into and out of the textures; and from the experiments there related you will see that there is every reason to believe that alkalies do act most powerfully by directly promoting oxidation. Wherever they diffuse they chemically assist the action of the oxygen there, and ultimately lead to the formation of carbonic acid. Hence the most efficacious alkalies are those that pass in most readily, and can be taken in the least neutralised condition. Thus caustic alkalies are more potent than subcarbonates, and carbonates more potent than bicarbonates.

4thly. Chlorine, iodine, and bromine are substances closely related in chemical properties, and all promote oxidation in the body by taking hydrogen from water and thereby liberating oxygen. Thus these substances act even more strongly as oxidisers than oxygen itself acts. For example, solution of blue indigo may be exposed freely to the oxygen of the air without being oxidised; but on adding chlorine, iodine, or bromine to the solution, oxidation immediately occurs.

When combined with alkalies these substances have sometimes a very different effect from that which they possess when free, for iodine is to iodide of potassium as chlorine is to common salt. But, like common salt, iodide of potassium is decomposed by some organic acids; thus we see it is decomposed on the skin when used as a lotion or as ointment, and thus hydriodic acid may be liberated in the textures, and this acid sets free iodine when air or free oxygen is in contact with it.(a) Hence, when the oxidising action is certainly required, chlorine, iodine, and bromine should be used in the free state, and the combinations of these substances with alkalies will not always produce the same amount of action as the free substances themselves are able to effect. That the neutral compounds possess strong actions is well known in Medicine, and the power even of common salt to form chemical compounds with the innumerable neutral substances that occur in the body, as for example the compounds of salt and urea and salt and sugar, shows that the iodides and bromides, wherever they penetrate, act chemically (though not as oxidisers always) on a multitude of organic and inorganic substances with which they come into contact.

5thly. Nitrates, chlorates, permanganates, and iodates are occasionally given on the supposition that they liberate oxygen in the body, but there is as yet no proof that any of these substances can give rise to an increase of oxidation in the textures. Alkaline permanganates and nitrate of silver are so rapidly decomposed on touching any organic substance, that they must be deoxidised long before they can pass out of the blood into the textures. The permanganate of potass can scarcely have passed the lips before it has given up part of its oxygen to the mucus of the mouth. Hence, probably, the efficacy of all these substances is quite independent of their chemical power as oxidisers.

6thly. Many other substances when taken in any quantity have a strong chemical action—for example, salts of zinc, salts of copper, salts of antimony, and salts of mercury; of all these, the salts of mercury are the most remarkable on account of the use that has been made of them in the treatment of almost every disease in England. Salts of mercury belong to the class of irritant poisons; substances that act chemically on the organic matters with which they come in contact, causing increased chemical action. The more soluble the preparation, the more violent the action on the different organic and inorganic substances with which it comes in contact. The solubility of corrosive sublimate in a solution of albumen, and the solubility to a slight degree of calomel in common salt, probably is the cause why these substances are capable, the one quickly, the other slowly, of passing into every texture of the body, and when there, the same increased chemical action takes place as we see occurs in the gums as the earliest sign of the constitutional affection by mercury. This increased chemical action cannot occur without increased chemical oxidation taking place in the same part at the same time. So that mercury salts, instead of stopping inflammation, actually cause increased oxidation, and the efficacy of mercurials in inflammation depends on a power of exciting the secretions and of irritating the mucous membrane from the stomach downwards, by which the bile is made to pass into the duodenum and mucus into the intestine, and on a chemical action on fibrin and albumen which stops the coagulability of the liquor sanguinis, and renders effused fibrin less cohesive, and so more easily removed by absorption, than it otherwise would be. Its reputation as an antiphlogistic probably is greatly due to its combination with opium, of which it corrects the chief inconveniences—namely, stoppage of the action of the liver, bowels, and other organs.

7thly. Many organic substances—as, for example, croton oil, castor oil, elaterium, ipecacuan, jalap, aloes, and many others—contain some oily or extractive matter, which acts on the outer or inner skin, and when absorbed gives rise to increased chemical action, whence come heat and oxidation, and more rapid circulation and quicker nutritive changes. If the increased chemical action rises to a sufficient height, then the increased circulation causes mechanical obstruction and congestion, and inflammation is the final result.

8thly. Counter-irritation must be considered as an oxidising action. The simplest example is friction, which not only acts by promoting mechanically the circulation of the blood, but the increased heat from the mechanical action gives rise to increased molecular change; in other words, to increased chemical action. External heat in all its different methods of application or production—as, for example, poultices, fomentations, water-dressings, flannels, cottons—acts in the same way as an equivalent amount of mechanical action would do. Increased thermal action cannot exist without increased molecular action.

Electricity differs from mechanical, thermal, or photal motion in its capability of passing into each texture according to its conductivity or resistance. Hence this form of motion may penetrate far deeper into different structures and affect actions in parts of the body far beyond the reach of mechanical or of thermal force.

B. Medicines that indirectly promote Oxidation.

The causes that determine the force and frequency of the heart's contractions are so many and so complicated that it is with the greatest difficulty that the effect of medicines on the circulation can be determined by experiment.

Among these causes are, first, the action of the nerves; secondly, the action of the muscular structure itself; and thirdly, the chemical and mechanical quality and quantity of the blood, and its relative proportion to the system of vessels in which it is contained.

The present state of our knowledge regarding the influence of the different nervous systems upon the circulation shows that at the centre and probably also at the periphery a highly complex nervous action, partly stimulating and partly checking the contractions of the heart and vessels, takes place.

That a stimulating and a checking action of the nerves on the heart exists, and is in the highest degree complex, is evident from the following facts:—

1st. The heart, at least in cold-blooded animals, when removed from the body goes on beating. Hence there must exist in the heart itself a centre of rhythmical action, the seat of which must be placed in the ganglionic cells which are disseminated through the heart's substance.

(a) See *Annales de Chimie*, March 1866, p. 376. M. Payen on Iodide of Potassium.

2ndly. On cutting the cervical portion of the ninth pair of a warm-blooded animal, the frequency of the heart's pulsations is remarkably increased, and on tetanising the extremity of the nerve, which is still by its cardiac branches in connexion with the heart, its motion is slackened, and may even easily be stopped altogether. Hence the ninth pair must be regarded as the heart's inhibitory nerves.

The inhibitory action can also be exercised through the same nerves by stimulating the parts of the brain between the calamus scriptorius and the corpora quadrigemina from which these nerves arise, and this leads to the conclusion that there exists in this part of the brain a centre which incessantly controls by means of the ninth pair the rhythmical action of the centre in the heart itself.

But the perfection of the machine and the complexity of the nervous action do not end here.

3rdly. The action of the heart may also be stimulated by tetanising the cervical portion of the sympathetic nerve, and hence there is reason to believe that there is somewhere in the upper part of the spinal marrow a stimulating centre connected by the sympathetic fibres with the ganglionic cells of the heart.

4thly. On the other hand, experiments on the heart of cold-blooded animals removed from the body can only be explained by the assumption of an inhibitory centre, situated in the septum atriorum (or common substance of the two auricles in frogs). Thus, then, there exist at least four different centres of nervous action:—A stimulating (or musculo-motory, as it is called) centre in the heart, and an inhibitory centre there also, and these counteract each other. Then there is a similar pair of centres in the brain and spinal marrow, connected, apparently, with the corresponding centres in the heart by two sets of nerves, the ninth pair and the sympathetic.

A poisonous agent may be carried to and act on any of these four centres, and thereby stimulate or check the heart's motion. Thus, for example, digitaline does not act upon the heart itself or on the nerves in the heart, but upon the inhibitory centre in the brain; its effect is produced through the ninth pair, for when these are cut digitaline does not act.

Still further complicating the nervous action, the inhibitory centre in the brain is in connexion with the sympathetic nerve, so that the action of the heart can be stopped by reflex action of the sympathetic nerves. Thus Bernstein has shown that when the two trunks of the sympathetic nerve in the abdomen are isolated (as can easily be done in the frog) and tetanised, the heart is seen to stand still as long as the ninth pair are entire.

As the sympathetic nerve and the ninth pair regulate the action of the heart, so the same power of contracting and relaxing the muscular fibres of the blood-vessels in the sublingual salivary glands, according to the experiments of Claude Bernard, is exercised by the sympathetic nerve and the chorda tympani.

If the filaments of the sympathetic nerve alone as they enter the gland are tetanised, a highly concentrated saliva is secreted, and the blood flows out of the gland of a dark colour. If, on the contrary, the chorda tympani alone be tetanised, saliva is secreted copiously, containing no great proportion of solid matter, whilst the blood that flows out of the gland is brightly coloured, like arterial blood, and sometimes the arterial impulse can be distinctly traced beyond the gland into the veins.

These results, so far as the colour of the blood and the abnormal pulse in the veins, can only be explained by assuming that the small blood-vessels in the gland are caused to contract by tetanising the sympathetic nerve, and that they are caused to dilate by tetanising the chorda tympani.

It is possible that a similar arrangement prevails throughout the whole circulatory system, but hitherto the existence of nerves which cause the vessels in general to contract has alone been demonstrated.

The consideration of the causes that disturb the circulation becomes still more complicated when the power of the muscle itself and the action of the fluid that circulates in the vessels and the resistance at the periphery have to be taken into account.

The power of the muscle itself may be affected by medicines, by nutrition, or by resistance. For example, it is most probable that veratrine stops the action of the heart in a totally different manner from digitaline, by affecting the muscular structure of the heart itself without the intervention of the nerves.

Moreover, the quantity of the blood and the average or total pressure which exists in the whole or in a part only of the circulation have been proved materially to affect the heart's power and frequency of action. Whenever an abnormal resistance is set up in any part of the system, as is, for example, the case in so many of the affections of the different textures of the kidney comprised under the name of Bright's disease, the action of the heart is increased, just as the action of any voluntary muscle has been recently shown to be increased, by adding to the weight it has to lift; and whenever the proportion which the bulk of the blood should normally bear to the capacity of the vascular system is altered by the contraction of the small arteries, the increase of average pressure thus produced increases the frequency of the pulsation of the heart, as Ludwig and Thiry have demonstrated.

By chemical or mechanical action upon one, or more than one, of these different nervous or muscular centres of force, medicines may increase the frequency or the force of the contractions of the heart. In consequence, the blood will be sent more quickly through the capillaries, and greater rapidity of chemical circulation through the different textures will be produced, and from this increase of oxidation and of nutrition will arise.

Dr. Traube's experiments on the effects of digitaline, nicotine, oxide of carbon, curare, and antiarin all show the exceeding complexity of the action of these substances upon the heart; but from such experiments we shall obtain the data for rightly estimating the action of remedies on the nerves, and through them on the processes of oxidation and nutrition.

C. *Medicines that directly retard Oxidation.*

In this class are included that most important list of remedies which formerly constituted the medicinal part of the antiphlogistic treatment.

1st. Vegetable salines and dilute organic and mineral acids. These constitute the most directly acting remedies for fever and inflammation which we possess.

The oxidation of vegetable salines I have brought before you in the second lecture, *Medical Times and Gazette*, February 25, 1865.

The effect of organic and mineral acids in so checking oxidation as to cause even the accumulation of fat is mentioned in the seventh lecture, *Medical Times and Gazette*, December 2, 1865.

The first action of dilute mineral acids, when the stomach is quite empty, is on the mucous membrane and on the muscular structure; the nerves are not affected by dilute acids. When taken in the very small doses usually given, the alkalescence of the blood must quickly prevent any continued action of the acid as such on the blood-globules, the secretions, or the textures; but, by however little the alkalescence of the blood is diminished, or the blood-globules destroyed, by so much must the process of oxidation in the textures be diminished also; and if very large quantities of mineral acids could be evolved anywhere, accumulation and formation of fat, and probably a saccharine condition of that part, would be produced. The action of phosphorus, arsenic, and antimony in producing fatty degenerations of the liver, kidneys, and pepsine glands of stomach, and in stopping the liver from forming glycogen, may partly depend on the production of the acids of these substances in these different places.

Some organic acids, as, for example, oxalic acid, act quite as strongly in neutralising alkalescence as the dilute mineral acids, and multitudes of these organic acids are formed in all the textures of the body, and that mineral acids and bile acids when in excess may even produce so-called fatty degeneration is rendered certain by the experiments of M. Kühne, Traube, Leyden, and Munk. Oxalic acid and the bile acids, in combination with alkalies, have also the power of stopping the muscular action of the heart, and bile acids also rapidly dissolve the blood-globules, and thus stop oxidation.

Even the syrup which enters into so many prescriptions must be considered in its action as equivalent to so much organic acid taken into the system, and temporarily at least neutralising so much alkalescence in the blood and in the fluid with which every texture is imbued.

Vegetable acid salts have always been considered as antiphlogistic remedies, and when oxidised to carbonates they may assist in the removal of organic impurities in the blood and textures by ultimately adding to the alkalescence of the liquor sanguinis, and thus promoting oxidation everywhere; but this action is entirely different from that of organic and mineral acids, which, by lessening the alkalescence of the blood, directly retard the process of oxidation.

2ndly. Preparations of lead. As acids are the antitheses of alkalies, so lead is the antithesis of iron. In the Proceedings of the Royal Society, June 15, 1865, you will see some experiments on the rapidity with which, in guineapigs, salts of thallium pass into every texture, and can be shown to be present after six hours even in the crystalline lens. Whether lead passes at the same rate or to the same distance may be doubted, but at least it can be seen in the gums and be detected in the muscles of the forearm, and from this there is every reason to believe that it diffuses widely into each texture, and acts there according to the chemical properties of the different textures and substances with which the lead-salts come in contact.

The multitude of organic substances from albumen to sugar that are precipitated by lead-salts shows the innumerable chemical actions that they must occasion in the body. Probably they precipitate both the hæmoglobin of the blood-globules and muscles, and the protagon of the nerves and blood-globules. Certainly the most marked visible effects take place on muscles, nerves, and blood-globules. Combinations are formed which prevent further change, so that an arrest of action in the formation of muscles, nerves, and blood-globules, takes place. From the affections of the muscles and nerves paralysis and pain are produced, and from the affection of the blood-globules anæmia results, and this causes diminished oxidation in the tissues, and hence accumulation of urates in the textures is apt to occur, and though acute or chronic gout may follow, yet the increased chemical action is usually insufficient to remove the deposit which the arrest of oxidation continues to produce.

3rdly. Oxide of carbon displaces the oxygen in the blood-globules and forms a stable combination with the substance of the red corpuscles which is not destroyed by oxygen. Thus, carbonic oxide stops the passage of oxygen into the blood and causes the same symptoms of poisoning as are produced by the hindrance of oxygen from passing into the blood.

Sulphuretted hydrogen, H_2S, is decomposed by the ozone of the blood, the sulphur being precipitated whilst the hydrogen reduces the blood to a lower state of oxygenation. An excess of sulphuretted hydrogen destroys the hæmoglobin of the blood, and thus gives rise to a deficiency of oxygen in the circulation.

Arseniated and antimoniated hydrogen, H_3As, H_3Sb, have nearly the same action as sulphuretted hydrogen.

Phosphoretted hydrogen, H_3P, reduces the blood, becoming phosphorous acid, PH_3O_3, and producing asphyxia from want of oxygen.

Oxide of nitrogen, NO, acts in the same way as oxide of carbon, forming at first NO_2.

4thly. Sulphurous acid and hydriodic acid are direct deoxidising agents, and though the chemical actions they produce in the body may be able to produce heat and force in the body, yet the deoxidising action tends to stop the changes of oxidation which are going on in the body. The well-known action of sulphurous acid on nitrous acid, as in the manufacture of sulphuric acid, need not here be dwelt on. As the sulphurous acid takes oxygen from the peroxide of nitrogen or hydrogen, so hydriodic acid, when near a substance that easily parts with its oxygen, reduces it, and by this action these substances can retard the changes which may be taking place in the body; moreover, by neutralising alkali and by attacking the blood-globules, these and other mineral acids retard oxidation, and, like phosphoric acid, they are capable of producing fatty degeneration.

5thly. Gallic acid and tannic acid are strongly deoxidising agents. When in contact with alkalies, as in the blood, they are capable of taking oxygen even from the blood-globules. They probably have no action on the nerves or muscles, exciting no contraction of the muscular structure. The action of tannin in precipitating albumen and in forming indefinite compounds with the skin, gives no explanation of its action in astringing the small blood-vessels. The property of gallic acid as an astringent requires also fresh experiments for the explanation of its action.

6thly. Rest general and local for muscles and nerves, and cold, must be considered as means directly hindering oxidation. The appearance of the arcus senilis first where the eyelid prevents the action of light, and the fatty accumulation in unused parts, are examples of the chemical effect of rest.

D. Medicines that indirectly retard Oxidation.

As in the causes that indirectly promote oxidation, so in those that retard oxidation, three different actions must be distinguished:—1st. An action on the nerves; 2ndly. An action on the muscles; and 3rdly. An action resulting from the quantitative and qualitative relationship of the blood to the vessels.

1st. On the checking or controlling action on the nerves that influence the action of the heart and the capillaries.

Of all the actions that can be produced by chemical agents acting in the body, this is the most remarkable for its rapidity and intensity.

The effect of so comparatively uncomplex a body as prussic acid (C_2NH) in bringing all action to rest is almost too rapid to be investigated experimentally; but the effect of more slowly acting substances—as, for example, morphia—shows quite as distinctly the mode of action of some of the most important agents that can be employed as medicines.

If any extremely delicate test for morphia existed, it would probably be found to follow the same course in rapidity and extent of action as quinine; when taken on an empty stomach, in less than fifteen minutes it would be detectable in the blood; and in every texture of the body it would reach its maximum in from two to three hours; whilst there it would act according to its chemical properties and the properties of the different textures with which it was in contact. In twenty-four hours it would greatly decrease, and in seventy-two hours, by diffusion or oxidation, it would entirely disappear.

What the chemical action of alkaloids on nervous matter may be is not yet determined. In the intensely energetic action of ammonia on the functions of the nerves, destroying immediately the electrical and all other actions which the nerve can produce, there may be strong evidence of the kind of power which the large class of alkaloids possess in acting on protagon. Chemistry has hardly entered on this vast field of inquiry, although the researches of Kuhne and Eckhard and others show that the effect of inorganic and organic acids, alkalies, neutral substances, and salts on nerve and muscle must be determined before any clear views of the action of remedies can be obtained.

As soon as the salts of morphia enter into every nervous filament a molecular motion between the protagon and salt of morphia takes place; the resultant substance must be far less sensitive, far less capable of other molecular motion, than before, and until the morphia is destroyed by oxidation or removed by diffusion the nerve cannot recover its former mobility.

All experiments lead to the supposition that different alkaloids affect different parts of the complex nervous systems in greater or lesser degrees. Strychnia will act chiefly on the medulla; curarine and conicine will act most on the motor nerves; atropine will paralyse the nerves that contract the iris, while essarine will paralyse the nerves that dilate the pupil. No experiments at present can reach the causes of these variations, and for them and for other alkaloids we must take the fact and long for the explanation which chemistry will some day give.

The dry tongue, the stoppage of the secretion of gastric juice, bile, intestinal fluid, and of urine, the paralysis of the nerves that dilate the iris, the loss of mental and nervous power after morphia, all these actions are evidence of the effect of morphia in stopping all chemical action and in lessening oxidation by acting on the nerves which lessen the circulation of the blood.

In this way opium is one of the most potent antiphlogistic remedies we possess, and to it probably the calomel and opium treatment of this century owes its great reputation.

Of all the remedies that control hæmorrhage probably opium is one of the most potent. This is effected by the same mechanism acting through the same nerves that indirectly retard oxidation.

2ndly. Medicines that lessen the action of the muscles. Rest and cold are the most potent agents that can be mentioned here. Salts of potass, ammonia, and lead, and probably salts of zinc and baryta, and perhaps salts of antimony and veratrine, digitaline, and nicotine, may have a direct action on muscular substance, especially of the heart, rendering it less sensitive to nervous influence, and thus controlling its contractions and causing less active circulation, and thus indirectly retarding or stopping oxidation; but here also we must wait for further experiments before any clear ideas can be obtained.

3rdly. The qualitative and quantitative relation of the blood to the vessels can chiefly be affected in a negative sense by local or general bleeding, by dilutions, and by evacuations.

If now, then, we discard the last lingering trace of the theory of phlogiston, according to the present state of knowledge the antiphlogistic treatment is the retardation of chemical action; and as oxidation is the chief of all the chemical motions going on in the body, antiphlogistic treatment is the arrest of an excess of oxidation and of all the mechanical, chemical, and other actions which arise from it.

ORIGINAL COMMUNICATIONS.

THE ORGANIC IMPURITIES OF WATER.

By WILLIAM PROCTER, M.D., F.C.S.

The injurious effect which the use of impure water produces on the health is a fact which is universally admitted. The evidence in proof of it is insuperable, and Dr. Snow has shown indisputably the great influence which foul water as a vehicle of the morbid poison had on the spread and mortality of cholera. The source of the evil is found in the organic impurities either visible or invisible; and whether we adopt the doctrine of Liebig, that the effects are produced by a species of fermentation set up by the introduction of decaying matter into the system, or the opinion that it acts directly as a poison, the fact remains the same. The noxious influence of this matter is increased by its solubility in water. Water at 32° dissolves scarcely any amount, but at 40° one or two grains are dissolved in ten or twelve hours. Ronalds and Eyre, in experiments with regard to the action of water on peat, found that at 67° nine grains, and at 84° fourteen and a half grains, were dissolved in forty-eight hours; the deduction from these facts being, *cæteris paribus*, that in summer water contains more organic matter than in winter. The atmosphere is a source of these impurities, so that water exposed in tanks, etc., acquires by absorption the germs of algæ and fungoid vegetation, or even of animalcules, and by the decomposition of matter obtained in this manner becomes vitiated. Light expedites the change, and it is accelerated by stagnation and retarded by motion; hence the difference in purity between stagnant waters and streams. The quantity of organic matter existing in water depends essentially upon circumstances. In streams the percentage of injurious constituents is regulated by several conditions, such as wet or dry seasons, the amount and quality of sewage discharged into them, etc. In wells, this result will be controlled partly by the nature of the strata through which the water passes, but more particularly by the situation which admits of the infiltration of decomposing or offensive matter into them.

The organic impurities of water are of two kinds; they occur either in a state of solution or in a solid form. The nature of the latter can be readily ascertained either by the naked eye or by the aid of the microscope, and consists of living or dead animal or vegetable matter. But the former being in a state of solution allows of no such investigation, and, being generally accompanied by the presence of carbonic acid and alkaline nitrates (the result of decomposition), communicates a sparkling appearance and cooling taste, rendering the water deceptively agreeable to the palate. There is a curious circumstance with regard to the production of the different kinds of organisms found in water. If the water is alkaline, infusoria chiefly show themselves; but if acid, fungoid vegetations are more extensively found. This statement admits of verification by experiment; if a small quantity of albumen is mixed with water, in a few days more or less putridity is exhibited, with the development of animal and vegetable life; but if previous to this decomposition the liquid is rendered alkaline, it rapidly putrefies, animalcula are developed, and it speedily becomes in the highest degree offensive. On the other hand, when the water is acidified the impurities will be found to be composed entirely of fungoid vegetation.

Almost all water contains some organic matter derived from the soil. Even that from granitic districts contains from 0·3 to 0·7 grains per gallon, whilst water which has permeated vegetable soil may afford 12 to 30 or even more grains per gallon.

Confining our attention only to the soluble organic matter, this will be found of two kinds—(1) non-nitrogenous, composed of carbon, hydrogen, and oxygen, the result of vegetable decomposition; (2) nitrogenous, made up of carbon, hydrogen, oxygen, and nitrogen, from the decomposition of animal matter. Occasionally sulphur and phosphorus are added to these constituents; but when this is the case, the odour produced by the resulting sulphuretted or phosphuretted hydrogen at once reveals their presence. Therefore, practically, the elements of noxious and insidious organic matter will be carbon, hydrogen, oxygen, and nitrogen. An invariable result of the decomposition of all animal matter is ammonia, and as the result of a similar change on vegetable matter Hermann has given a list of ten distinct substances. But, without entering into needless detail, we will simply consider the general results of vegetable decay.

When vegetable mould or humus is boiled with an alkali and an acid is added to the filtered solution, a brown precipitate falls, which (according to Mulder) consists of

Humic acid	$C_{40}H_{12}O_{12}$
Ulmic acid	$C_{40}H_{14}O_{12}$
Geic acid	$C_{40}H_{17}O_{17}$

These substances are all soluble in alkalies and precipitated from that solution by acids. There are two other constituents of humin, the so-called crenic and apocrenic acids, to which the term "acid" is improperly applied, as they are soluble in acids as well as alkalies. In the formation of these acids no notice has been taken of the contemporaneous formation of carbonic acid and carburets of hydrogen. The decomposition of animal matter gives rise to an extensive series of compounds, among which ammonia and the nitrates prevail largely with the fatty acids and other substances not well understood. One great character of the organic vegetable acids the result of decomposition is their disposition to unite with ammonia—in fact, unless prepared pure by artificial means, they always occur in water with 2·5 to 7 per cent. of ammonia.

The sources of nitrogenous organic matter are evident and numerous, and are derived from animal excreta or from decomposing animal matter and the refuse of manufactories. The contents of sewers or cesspools drain into springs or rivers, or the water permeates soil more or less impregnated with these things. Water may be contaminated in this manner by a nuisance at a considerable distance from it, but dependent on the porosity or tenacity of the soil. Professor Ansted states that the deepest (non-artesian) well will not drain a circle which is more than half a mile in radius.

Organic matter in water may be detected by adding to it a few drops of solution of gold and boiling; in proportion to the amount of organic matter, the gold is reduced and precipitates as a dark powder. The alkaline permanganates are extremely useful in this respect: when solutions of these salts are placed in contact with oxidisable organic matter, they speedily lose their beautiful pink colour, the solution becomes colourless, depositing at the same time a brown precipitate. The addition of a few drops of permanganate of potash to water, and undergoing this change, indicates the presence of organic matter. The rationale is simple. The permanganate of potash is a substance rich in loosely combined oxygen; with that agent it oxidises the organic matter which is destroyed, the permanganic acid itself is deoxidised, reduced to the binoxide, and precipitated. Dr. R. Thompson made a general estimate of the quantity of organic matter by a series of solutions of different strengths, noting the time required to destroy the several colours on the addition of a given quantity of the water to be examined.

The estimation of the actual amount of organic matter present in water is of vast importance, and is not a matter of difficulty. This is obtained chiefly by two methods—(1) Evaporate a known quantity of the water in a platinum dish on the water bath, having previously added a measured quantity of a solution of carbonate of soda of known strength. The evaporation being completed, the dish is exposed to a temperature of 248° to 260° in an oil bath, and continued until it ceases to lose weight. It is now weighed, and the weight of the dish and the carbonate of soda being subtracted gives the amount of solid residue in the quantity of water employed. The dish with the residue is now exposed to a dull-red heat until all the organic matter is destroyed. When cool a solution of carbonic acid is added, and the dish again dried until its weight is constant. The difference between this last weight and that before ignition represents the amount of organic and other volatile matter present. (2) The other method of estimation is by permanganate of potash, and has been carefully investigated by Dr. Woods (*Journ of the Chem. Soc.*, June, 1863). Weigh one gramme (15·43 grains) of dry permanganate of potash, and dissolve in 1 litre (35·28 fluid ounces) of pure distilled water, then graduate the solution with oxalic acid by taking 40 c.c. of centinormal oxalic acid (*i.e.*, 0.63 grammes of the acid in 1 litre of water) in 300 c.c. of pure water and 2 c.c. of sulphuric acid, heating to 140° Fahr., and dropping in the permanganate from a buvette; 13 c.c. of the pink solution should be exactly decolorised. If not, the correction must be made by a little calculation. Then take 1 litre of the water to be examined, add 2 c.c. of strong sulphuric acid, heat to 140°; remove the heat; drop in the standard solution from a buvette, stirring continually, and stop when the faintest pink tint is perceptible. If after a time this disappears, add a little more of the permanganate, and so on until a tint permanent for half an hour is obtained. Then read the number of c.c. used; deduct 0·24 cc. as the quantity of permanganate necessary to give a red tinge to 1 litre of water. We have now the quantity of permanganate decolorised by 1 litre of the water, and Dr. Woods has ascertained that 1 c.c. of solution of the above strength is decomposed by 0·005 grammes (= 5 milligrammes) of oxidisable organic matter; therefore multiply the number of c.c. of permanganate solution by 0·005, and the result gives the amount of organic matter in grammes per litre, or, to bring it to grains per gallon, multiply it by 70. This gives of course only the amount of oxidisable organic matter, and is used by Dr. Frankland and others to determine the amount of oxygen necessary for this purpose. Therefore, nitrites, &c., may exist and not be detected by this process. It is not applicable to waters containing protosalts of iron or hydrosulphuric acid.

Having in this manner proved the existence and quantity of impurity, the next point for consideration is the purification of such water. Ordinary filters simply remove suspended matters; ebullition destroys (and vast is its importance) the vitality of animal and vegetable impurities. But filtration carried on through sand and clay or animal charcoal not only deprives water of mechanical impurities, but, in the latter case especially, removes from it organic matter most effectually, and in all probability by a process of oxidation.

The tendency of the physiology of the present day is to show that the origin of zymotic diseases is due to the presence of living germs capable of remaining dormant until they are placed in a condition appropriate and necessary for their development. If this is so, and such sources of disease may exist in water, it is questionable if they are, like dead organic matter, susceptible of destruction by oxidation. It is a certain fact that these organisms are capable of destruction by a number of caustic substances, as salts of iron, carbolic acid, etc., which are impracticable when water has to be used for dietetic purposes. The temperature of boiling water likewise destroys the vitality of these germs, admits of practical application, and is in this respect a perfect purifier. Whilst it is doubtful how far the use of filtration through charcoal and permanganate of potash is effectual in the removal of insidious living germs, no doubt can exist of its efficacy in the removal of dead and noxious organic matter. Hence, by a combination of these three methods, the danger of disease from these sources is removed.

Dr. Medlock has offered a suggestion for the removal of organic matter from water. He observed that water of this description had the amount of organic matter materially lessened after passing through iron pipes—the action of the metal upon that matter being an oxidising one, converting the nitrogen into nitrous acid, and in this manner breaking up the affinities of the carbon, hydrogen, and oxygen. He states that, by allowing water to remain in contact with a coil of iron wire for twelve hours, all trace of organic matter is removed, or that it is converted from a soluble into an insoluble state, and in this condition capable of being removed by ordinary filtration.

The superiority of the permanganates for purifying water over filtration through animal charcoal may be shown by passing water containing organic matter through the latter substance; on testing this filtered liquid with Condy's fluid, it will become in many cases decolorised. The simplicity of the process is one of its great advantages, and even if, from careless application, a portion of the salt is left in solution, or of the peroxide of manganese in suspension, no harm can result. But if the adjustment is carefully made, all the metallic oxide is precipitated, as well as the carbonate of lime (if present) held in solution by excess of carbonic acid, which is neutralised by the liberated alkali of the permanganate, and the water by simple decantation is obtained pure, except probably (when used alone) in the destruction of some organic germs.

In sulphur water—*i.e.*, that containing hydrosulphuric acid, sulphurous acid, etc.—the colour will be destroyed in the test (on account of the deoxidising properties of these gases) without the presence of organic matter, and the water left free from the impurity with the precipitation of the oxide of manganese and free sulphur. If sulphide of ammonium is present, carbonate of ammonia is formed. Lead, iron, and copper can be separated from water by the same method.

In the application of these salts to the purification of water on a large scale, many questions of economy are involved, but, as Dr. Letheby remarks, "it must not be forgotten that only a very small part of the water delivered by a company is used for primary domestic purposes, the great bulk of it being employed for flushing closets, drains, and sewers, for watering streets, and for many manufacturing purposes. It would therefore manifestly be an unnecessary wasteful application of a tedious and expensive process to do that at the works which can be so easily, so surely, and so much more economically done at the point of consumption."

Water which is employed for drinking purposes should possess the following properties:—It should be clear, colourless, inodorous, and tasteless; it should be well aerated, and especially cool. It is difficult to fix the exact amount of dissolved constituents. As a general rule, subject to limitation, it should not contain more than—of organic matter, 1 grain; of carbonate of lime, 16 grains; of sulphate of lime, 3 grains; of chloride of sodium, 10 grains; of carbonate of soda, 20 grains, per gallon.

Great as may be the injury which is entailed on the health of a population by the use of water containing animal and vegetable matter, the manner in which the water supply is conducted in many towns has the effect rather of increasing than diminishing this sanitary evil. The employment of open conduits, reservoirs, and cisterns, with free exposure to both light and air, are the very conditions adapted to promote the growth of animal and vegetable life, to assist their decay, and to facilitate the absorption of contaminating matter from the atmosphere, and charge the water with soluble impurities. This state of things has moral as well as physical evils dependent upon it. The visible pollution, absence of coolness and aëration indispose the poorer population to the use of water as a beverage, and too often, it is to be feared, drive them to the habitual indulgence in intoxicating liquors. In a sanitary point of view the absence of a continuous supply of water which exists in many towns is of great importance, and is to be highly deprecated. To the poorer class it is a great evil. One or more water taps are supplied for a few hours each day, and serve to furnish probably many houses in a yard or small street. Some vessel is filled daily from this tap, and the water allowed to stand in, perhaps, their only close and badly ventilated room; it becomes speedily polluted by absorption, is deprived of its gases, and loses coolness, aëration, and purity.

York.

POPLITEAL ANEURISM—RIGHT LEG—CURE BY FLEXION—ANEURISM OF THE LEFT POPLITEAL—CURE BY FLEXION.

By P. SIDNEY JONES, M.D. Lond.,
Surgeon to the Sydney Infirmary, South Australia.

H. W., aged 31, a gentleman following pastoral pursuits, called upon me on November 17, 1865, complaining of rheumatic pains in the right knee which had troubled him for several months. During the last few days the pain had become much worse, especially at night after walking a good deal. Is accustomed to take violent horse exercise, and a few months since, in jumping from a vehicle in motion, wrenched his right leg. Upon examination of his limb I discovered a pulsating swelling about the size of a small orange occupying the popliteal space. The pulsation was expansile and tearing, synchronous with the pulse at the wrist, and completely arrested by pressure upon the femoral artery in the groin. The tumour could be nearly emptied by pressure, and felt to fill again when the pressure was removed. The skin over the tumour was quite healthy, and not adherent. The fingers could be passed down between the tumour and the muscles bounding the popliteal space so as to grasp it. No bruit was perceptible.

Mr. Nathan, one of my colleagues at the Infirmary, saw the patient with me on the 19th, and confirmed the diagnosis. As the pulsation in the aneurism was completely checked by acute flexion of the knee, I determined to employ Ernest Hart's method, and accordingly, on the 21st, carefully bandaged the limb from the toes to the groin, and bent the knee so that the heel was about eight inches from the buttock, retaining it in this position with a figure of 8 bandage. In two days the heel was brought to within three inches of the buttock; but as this degree of flexion could not be borne for many hours, notwithstanding the use of morphia, he was allowed occasionally to extend the limb, and it was always relaxed somewhat at night.

On the fifth day I suspended over the thigh, by means of a cord, a conical bag filled with 9 lbs. weight of small shot. Whenever the pain from the flexion became unbearable, the patient extended his leg and placed the conical end of the bag over the artery in Scarpa's triangle. This completely controlled the circulation as long as the bag was kept directly over the artery; but finding the patient could not manage this himself, and not having any competent assistant, it was desisted from after two days' trial. This plan appears to me, however, to have an advantage over digital compression, in that it is much less fatiguing to hold a bag steadily than to compress a vessel with the fingers, and hence fewer assistants will be needed.

On the nineteenth day (December 11) from the commencement of the flexion treatment, there was considerably less pulsation in the tumour; and over the front of the knee, which was a good deal swollen, and on each side of the patella, small vessels could be felt pulsating.

On the twenty-seventh day (December 19) the pulsation had very greatly diminished, and on the twenty-ninth day it ceased entirely. Nothing could be felt but a slight rippling over the centre of the tumour.

On the thirty-first day he was allowed to come downstairs.

On December 27 (thirth-fifth day) my notes are: "Tumour quite solid and free from pulsation; limps a good deal in walking; still has some pain in the ham."

I saw no more of this gentleman until a month later (January 22, 1866), when he called upon me, complaining of severe pain in the left ham, which had begun to trouble him about ten days before. On the evening before calling upon me, after walking about two miles, the pain was very severe and accompanied with violent throbbing. Upon examination I discovered a pulsating swelling, about the size of a walnut, situated in the course of the popliteal as it lies under the gastrocnemius muscle. It had all the characters of an aneurism, and a loud bruit could be heard over it. Circumstances prevented the patient from submitting himself to treatment until February 5, when the tumour was in much the same state. I bandaged and flexed the limb as with the other leg, and though flexion did not control the circulation in the aneurism so completely as in the first case, yet on the fourteenth day all pulsation had ceased in the tumour. A month later I saw this patient again. He was then quite well, though complaining of weakness in the right leg. Both aneurisms were quite solid, and that in the right ham had very much diminished in size.

Whilst under treatment for these aneurisms, this patient took morphia—sometimes as much as three grains in the day; and the knee, in which he at first complained of much pain, was rubbed with laudanum and oil. Towards the middle of the period of treatment he complained of severe pain down the shin-bone.

New County Magistrate. — It appears that our respected townsman, S. D. Lees, Esq., M.D., Grey House, Ashton-under-Lyne, has been appointed by the Chancellor of the Duchy a county magistrate for Lancashire. We are very proud of this appointment, for, independent of his having been Mayor of the Manor for three successive years, and the interest which he has always manifested in the affairs of the borough, the people of Ashton will never forget his zeal and arduous struggles for the working classes during the late panic, as chairman of the manorial relief fund. If all future appointments be made with the same discrimination, we shall be heartily glad.—*The Ashton Standard.*

War and Pestilence.—The scene of the battle of Königgratz is now ravaged by cholera. There are not more than a few thousands of inhabitants in the whole district, and of these 200 died in a few days.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE CHOLERA HOSPITAL, COMMERCIAL-STREET.

CASES OF CHOLERA.

(Under the care of Dr. SUTTON.)

This Hospital is under the management of Miss Sellon, the Lady Superior of the Sisters of Charity known under the name of the Plymouth Sisters. We have been given to understand that this Hospital was placed under their care because the Sisters are well known by the poor in the neighbourhood, and, we need hardly say, are most highly appreciated. These ladies have for the last fourteen years been in the habit of visiting the poor of Spitalfields and Bethnal-green, with the simple object of relieving their sufferings and giving substantial aid in the shape of food and clothing.

Knowing this, it was thought that the Hospital could not be placed under any management that would be so likely to secure the confidence of the people of the surrounding district, that by this means the sufferers from cholera might be induced to go into the Hospital, when otherwise they would refuse to do so. The authorities are to be congratulated on having secured the services of a Physician of Dr. Sutton's standing in the Profession.

There are three large wards, all of which are light and airy. The windows are so arranged as to allow of good ventilation, and by this means a good supply of air is provided.

The walls are whitewashed; a large stand of flowers is placed in the middle of each ward. Each ward is in charge of a lady sister, and under her superintendence are other sisters and several nurses. There is a nurse to each patient who is severely ill. Unless the nurses fail to keep their engagements, the following are the usual arrangements:—For instance, on Tuesday night there were fourteen patients in the female ward, and there were fourteen nurses and sisters. In the convalescent ward there were fifteen patients and three nurses. In the men's ward there were eighteen patients and eleven nurses. The sister who has charge of the ward notes down in what is called the "ward-book" all the important facts connected with the cases. For instance, how many times the patient has been purged; how many times he has vomited; the colour of the evacuations, and other symptoms; and when the Physician of the Hospital goes round he sees at a glance all that has been going on since his last visit. The notes are then entered on the patient's letter. Such notes are of the greatest assistance, and are a guide as to the progress of the case and the necessity for treatment.

Since the Hospital was opened 114 cases have been admitted, and there have been thirty-three deaths from cholera. Some of the cases admitted have been suffering from choleraic diarrhœa, but most were well-marked cases of cholera, and some quite as severe as any that have been seen during the epidemic.

Dr. Sutton mentioned to us one very important fact—that is, that almost all the patients, with very few exceptions indeed, that are admitted with cholera come from houses in which there have been already one or more deaths from cholera. A child is admitted with cholera, a few days afterwards the mother, then another child, and last of all, perhaps, the father. It is the common experience of the Hospital that one member after another of the same family is admitted, but they are seized with disease after one another.

At the present moment there is in the female ward a young woman recovering from cholera, and as she began to recover, her mother was brought in suffering from the same disease. There are in the same ward two mothers, and each of the mothers has daughters in the ward ill with cholera. In the men's ward there are two fathers, each having children in the Hospital suffering from cholera. This would clearly show how absolutely necessary it is that something should be done to get rid of these nests of cholera, and how imperative it is that the sanitary authorities should not relax their efforts.

One of the chief reasons why the Hospital was established was to have a place which the sufferers from this disease might be persuaded to go into, and that thus the centres of cholera might be broken up. We regret to find that the disease seems to have extended into Spitalfields and neighbourhood, as if the atmospheric conditions or other circumstances were favourable to the further spread of the disease. The fearful poverty and the dreadfully unhealthy state of the dwellings will, we fear, offer every facility for the progress of the malady.

LIMEHOUSE DISTRICT CHOLERA HOSPITAL.

CASE OF CHOLERA—SALINE INJECTION INTO THE VEINS—DEATH—AUTOPSY.

(Under the care of Messrs. WOODMAN and HECKFORD.)

THE following case shows well the great temporary benefit which injections of hot saline fluids into the veins give. But it shows, too, that it does not keep off a fatal result. We were informed, however, that this plan of treatment has been tried in another case, and with more hope of success.

The instrument employed was of the simplest description, being simply a Higginson's enema syringe, furnished with an extra elastic tube and nozzle.

A seaman, aged 46, was admitted on August 29 at 8 p.m., sixteen hours after first seizure. He was pulseless and perfectly insensible; respiration rapid and sighing; face livid: pupils dilated; second sound of heart absent (clot was diagnosed); temperature in axilla 98°.

Apparently all treatment was useless; but at the suggestion of Mr. Dove, of the London Hospital, that of injection of the veins with a saline solution was adopted.

The left median cephalic was opened, the patient not feeling the incision in the least.

The case being so urgent, the exact proportions cannot be stated; but the solution extemporised was about six pints of water at 100° with a tablespoonful of salt. Before a third of this had been introduced his pulse became perceptible, and consciousness returned. The patient now, suddenly jerking his arm, caused the tube to be displaced, and as its reintroduction met with some obstacle a fresh vein was opened.

At the end of the operation (the whole of the six pints having been injected) he was able to converse freely. His pulse was full, and breathing regular; complained of headache; drank a considerable quantity of beef-tea and milk, which the stomach retained. Had one copious stool containing bile. At 1 a.m., became restless and somewhat delirious, and the pulse was rather fluttering. About 1.45, while preparations were being made for a repetition of the injection, the action of the heart suddenly ceased. Artificial respiration was resorted to, and several pints of water were injected into a vein on the right side, but without avail.

Post-mortem Examination.—Lungs gorged and filled with frothy fluid, also very emphysematous. Large dark clots in both sides of heart, adhering to aortic and pulmonary valves; ver pale and fatty; gall-bladder full; kidneys slightly fatty; spleen normal; intestines contained rice-water fluid, were congested in patches, but otherwise had a "boiled tripe" appearance; bladder empty; blood of a plum-juice colour; specific gravity 1030 (probably from the clots having entangled a large number of blood-discs). The microscope proved the corpuscles to be intact; intestinal contents full of epithelium, chiefly columnar.

THE LONDON HOSPITAL.

Statement of Cases admitted into the Cholera Wards of the London Hospital for the week ending September 6, 1866.

	Cholera.		Choleraic Diarrhœa.		Cases of Diarrhœa treated as out patients,
	Males.	Females.	Males.	Females.	Aug. 31 to Sep. 6.
Aug. 31, 53rd day .	4	1	3	2	86
Sept. 1, 54th ,, .	2	2	1	2	94
,, 2, 55th ,, .	3	—	2	3	94
,, 3, 56th ,, .					112
,, 4, 57th ,, .	2	4	—	4	83
,, 5, 58th ,, .	—	—	1	3	48
,, 6, 10 a.m. .	1	1	1	3	32
	12	8	8	17	549

Ages.	Cholera. Males.	Cholera. Females.	Choleraic Diarrhœa. Males.	Choleraic Diarrhœa. Females.
1 to 10 . . .	1	—	1	—
11 ,, 20 . . .	2	3	2	6
21 ,, 30 . . .	1	2	2	6
31 ,, 40 . . .	4	2	2	1
41 ,, 50 . . .	2	—	1	4
51 ,, 60 . . .	1	1	—	—
Upwards . . .	1	—	—	—
	12	8	8	17

	Cholera.	Choleraic Diarrhœa.	Total.
Recoveries	19	24	43
Deaths	6	2	8
Remain	47	39	86

From the Outbreak.

	Cholera.	Choleraic Diarrhœa.	Total.
Admissions.	515	209	724
Recoveries	196	153	349
Deaths	272	17	289
Remain	47	39	86

Total out-patients treated since the outbreak, 10,043.

ROYAL FREE HOSPITAL.

DISLOCATION OF THE HIP, BACKWARDS AND UPWARDS ON THE DORSUM ILII—DURATION, TWENTY-FOUR HOURS—REDUCTION, UNDER CHLOROFORM, BY MANUAL EXTENSION.

(Under the care of Mr. GANT.)

FOR the notes of this case we are indebted to Mr. Hackney, House-Surgeon to the Hospital.

The following is a good example of a case of dislocation on to the dorsum ilii reduced by manual extension when reduction by the pullies was unsuccessful. Doubtless there are many cases which might be easily reduced at first, or, at least, when dislocation has only existed for a short time, if this method were more universally adopted. Sometimes, of course, this is physically impossible. The means by which this is effected are simply those of making the dislocated limb itself a lever whereby the head of the femur may be replaced in the acetabulum—the object being, after the leg has been flexed on the thigh and the thigh on the pelvis, to disengage the head of the bone, and then, by a sudden movement of circular rotation either outwards or inwards, to slip it into position.

Ponteau, quoted by Vidal de Cassis, gives the following:—"We observe, then—first, that the thigh ought to be flexed to a right angle with the body during extension and counter extension; secondly, that we ought to rotate the thigh from within outwards when the extension appears to be sufficient; thirdly, that this position puts into relaxation, as much as possible, the triceps and gluteal muscles which oppose the chief resistance to extension, thus saving the patient from excessive pain; fourthly, that the flexion of the thigh places the head of the bone in the best position for a return to the cotyloid cavity during extension; fifthly, that a feeble extension suffices for the reduction because all the muscles of the thigh are relaxed."

Reduction by manipulation has been laconically summed up by Mr. Cock thus—"Lift up, bend out, roll in."

J. G., aged 41, a porter, below the average height, well-made, and rather muscular. He was returning home on the previous evening, February 5, about eleven o'clock, in a somewhat intoxicated state, when he suddenly slipped down off the kerb and fell sideways on his left hip. On attempting to raise himself, he felt great pain in the hip, and found the leg useless, so that he could not stand. He was then lifted up and conveyed home in a cab.

The next day, in the afternoon, he was brought to this Hospital. On examination, as he lay on his back, the following characteristic signs were observed:—The limb is shortened an inch and a half. This was found to be the extent in two measurements taken by Mr. Gant. It is distinctly inverted, and the ball of the great toe rests on the instep of the other foot. The thigh is slightly raised towards the abdomen, and being also adducted, it overlies the opposite thigh; the axis of the one pointing towards, and almost corresponding with, the knee of the other limb. The knee on the dislocated side is also slightly flexed. The buttock is conspicuously larger than on the other side, and the globular head of the femur can be felt, through the gluteal muscles, lying on the dorsum of the ilium, its presence there being more distinctly palpable when the thigh is rotated. The trochanter is absent from its usual situation, thus giving a flattened appearance and softness to a part which is otherwise prominent and hard. The movements of the limb, both passive and voluntary, can be effected, to some extent, in those directions which correspond with the attitude of the limb. Thus, adduction across the opposite thigh, rotation inwards, and flexion of the thigh and leg, are practicable, but abduction and rotation outwards are nearly impracticable, and extension can be effected only by somewhat forcible traction, the limb resuming its former position afterwards. Some degree of pain is expressed when these adverse movements are attempted, but the pain does not seem to be intense.

Reduction of the dislocation was undertaken, in the way generally practised, by the pulley apparatus, but the thigh-strap slipped and partly gave way two or three times, although a wet bandage had been applied to the thigh to secure the hold and to protect the skin. Manual extension was then resorted to, but it required the co-operation of the three House-Surgeons, with three other assistants, to make sufficient extension, Mr. Gant guiding the thigh at the hip. Reduction was effected under chloroform.

The legs were kept together by means of a bandage around the knees, and the patient confined to bed for ten days.

16th.—He got up to-day for the first time, and he can stand without pain.

21st.—He left the Hospital to-day; he can walk well, without any pain.

CASES OF

RUPTURE OF ABDOMINAL VISCERA FROM EXTERNAL VIOLENCE.

The two cases here reported are illustrative of the means by which rupture of the abdominal viscera may be produced, and of the kind of injury which such means may cause. In both instances no external wound was to be discovered on the surface of the body—at least, not in the immediate neighbourhood of the lacerated viscus. It could easily be imagined that, in the case in which the patient was run over the abdomen, laceration of the internal organs would be the consequence; but in the latter instance, in which the bladder was ruptured by means of a fall on the back, such a result would not be so probable. Doubtless the bladder was fully distended at the time, and its walls burst by the sudden muscular action of the abdominal parietes. This was a well-marked case, the great pain referred to the region of the bladder, the ineffectual attempts to pass water, and the sudden collapse all tending to direct attention to the state of the bladder.

It will be noticed that at first but little urine followed the introduction of the catheter; very little, of course, under the conditions of collapse and commencing peritonitis was voided, but a great deal followed a subsequent introduction of the instrument, this being owing to the point of the instrument having gone into the peritoneal cavity, and drawn off the extravasated urine. In such cases it is of the greatest importance that the instrument should be introduced carefully and frequently, so that no urine may remain in the bladder and thus retard the union of its walls. The catheter should be a gum-elastic one, having an opening at its point and not in the sides, as such a one must necessarily be introduced for a greater length than the former. In the former case, from the nature of the injury, it seems extraordinary that the bladder was not ruptured; but it was doubtless empty and contracted at the time of the accident. Cases of rupture of the viscera are interesting in a Medico-legal point of view, when they occur, as these did, without any external signs of violence.

GUY'S HOSPITAL.

Rupture of Kidney and Spleen—Fractured Pelvis—Death—Autopsy.

(Under the care of Mr. POLAND.)

[From notes by Mr. WRIGHT and Mr. SAVAGE.]

J. H., apparently 30 years of age, a powerfully built man, admitted under Mr. Poland at 3.30 p.m. December 26, 1865. Shortly before admission he was driving an empty wagon, when he fell from the box, and the wheel passed over his abdomen.

On admission he was extremely collapsed, and remained in that state, but was sensible, until death. The lower part of his shirt in front was found saturated with blood, but no external wound could be detected. A gum-elastic catheter was passed without much difficulty, and about twelve ounces of urine were drawn off. This was at first clear, but the last two or three ounces were mixed with blood. He complained of great pain in the back, and made every endeavour to lie on the left side. It being feared he would die of the collapse, a few teaspoonsful of brandy were every now and then administered. He never rallied from the collapse, and died at 6.50 p.m., three hours and a half after the accident.

At the autopsy, twenty hours after death, the following appearances (abridged from Dr. Moxon's report) presented themselves. One large and a few smaller bruises over the right gluteus medius, just below the crista ilii; otherwise no signs of external injury. The lungs, heart, and large arteries, superficially examined, were adjudged healthy. The eleventh and twelfth left ribs broken midway in their length, the fractured ends not protruding through the soft parts. The portion of the diaphragm arising from the left arcuate ligament was crushed, and its substance charged with blood to some depth; the sub-peritoneal phrenic cellular tissue was full of blood and half an inch thick; the sub-pleural was ecchymosed, but not much thickened. Liver healthy; a very small recent rent in the right edge of the larger lobe. The hinder edge of the spleen crushed and mangled, the spleen pulp protruding. Much blood in the left abdominal cavity at the left hypochondrium Left kidney broken into two pieces across the long diameter; the organ in the neighbourhood of the rent was crushed, and had given way in all cases in lines corresponding to its radiating structure, the fissures running perpendicularly to the surface. A very great deal of blood distended the fatty tissue outside the kidney; this tissue appeared to be broken up by the blood. The lower half of the kidney was yet *in situ*, but the upper was partly forced up through a rent in the peritoneum, and lay partly free in the cavity of the abdomen, so that at first it seemed to be part of the spleen. The psoas muscle was not damaged, and the parts on the front of the spine were uncrushed. The pelvis was badly fractured in three situations, the horizontal ramus of the right pubis and the ascending ramus of the same ischium being broken through into the obturator foramen; whilst a third fracture of the same pubis ran directly downwards from its upper to its lower border through the portion of bone which intervenes between the symphysis and the obturator foramen. The descending ramus of the pubis rode inwards and backwards over the ascending ramus of the ischium in such a manner that the inward point of the latter bone was thrust away from the urethra; hence the bladder was not ruptured. The point did not appear to penetrate the soft parts far. The horizontal ramus of the right pubis was much crushed, and torn awa from the symphysis.

KING'S COLLEGE HOSPITAL.

Rupture of Bladder—Peritonitis—Death.

(Under the care of Sir WILLIAM FERGUSSON, Bart.)

A woman 35 years of age was brought into the Hospital on the night of April 24, having been knocked down whilst drunk by a blow on the head, inflicting a small scalp wound; it appears that she fell upon her back. She was in a state of semi-collapse at first, but recovered sufficiently to give some account of the accident. She complained of great pain in the abdomen, and of inability to micturate. At first a very small quantity of bloody urine was drawn off, but shortly after about 102 ounces. A catheter was passed every four hours, and after a while the water became clearer. Symptoms of peritonitis came on, and she died somewhat suddenly on the 26th.

At a post-mortem examination the bladder was found to be ruptured at its upper and back part, there being a clean longitudinal rent of about two inches in length. There was a considerable amount of urine in the cavity of the abdomen, and a great deposit of lymph (a great deal of it unorganised) glueing the intestines together. No external wound could be detected, and the other viscera were apparently healthy.

The Lords of the Admiralty have, says the *Army and Navy Gazette*, under the authority of an Order in Council, dated August 9, directed that the time served by chaplains and Medical officers in dockyards and naval Hospitals shall count for increase of half-pay and widows' pensions, provided that the appointments have not been held long enough to entitle officers to civil pensions.

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Medical Times and Gazette.

SATURDAY, SEPTEMBER 8.

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THE EAST LONDON WATER COMPANY.

Step by step the circumstantial evidence has accumulated in favour of the theory so fearlessly promulgated by the Registrar-General at the outset of the cholera epidemic in the eastern districts of London, that the water supply of those districts was in some way or other connected with the outbreak.

It will be remembered that attention was first directed to this subject by a reference in the official return to the "dangerous proximity" of the East London water reservoirs to the tidal Lea and its contributory cuts and canals; and the subsequent display of virtuous indignation on the part of the engineers of the East London Company, which found vent in a letter inserted in the daily papers, was intended no doubt effectually to silence troublesome officials, and at the same time to make it appear that everything was as it should be. Taking hold of a slight inaccuracy of description, Mr. Greaves made a strong point of the "obsolete map" which, he says, he found by personal observation the Registrar-General was using, and thus the confidence of the public in the information possessed by their officer was, by implication, sought to be shown as misplaced. The truth about this map question is that in the best recently published maps the two reservoirs and the canal, which Mr. Greaves says are no longer used, are distinctly laid down and described as belonging to the Company; and as their existence in actuality is not denied, it seems to us puerile to quibble about their delineation on a map.

However, Mr. Greaves's letter has had one important, and probably, to him, unwelcome result; it has led to a thorough inspection of the several works and a careful analysis of the waters of the Company in the various reservoirs, undertaken by Dr. Frankland at the Registrar-General's request.

Beginning at the works at Lea-bridge, Dr. Frankland examined the thirteen large filtering reservoirs which receive the waters from the canal, tapping the Lea at the Company's intake at Tottenham-mills. As to the statements which have been put forward about the diversion of sewage from the Lea, we know now that the whole thing is a sham; Hertford and Ware and other places turn their sewage into the river above the intake of the Company, so that Mr. Greaves's picture of "a river running in a purely agricultural district" may be looked upon as a pure idyll, the creation of his pastoral imagination. The contiguity of the Lea to the Company's works from beginning to end is the weak joint in Mr. Greaves's armour: at Lea-bridge the filtering-beds are "bisected" by the river; the open canal runs alongside the navigation branch of the river; and the reservoirs at Old Ford, covered and uncovered, are inextricably mixed up with the river at its very worst. In short, the Lea clings to the Company like a veritable Old Man of the Sea, the shirt of Nessus, the folds of the anaconda round its victim, the corpse of Mezentius, or any other simile expressive of close company and deadly association.

Of the filtering apparatus, and of the arrangements generally at Lea-bridge, Dr. Frankland speaks very highly, and of the filtered water as delivered "into the so-called Essex and Middlesex wells, situated on the right and left banks of the River Lea, in a condition of transparency leaving nothing to be desired in this respect. In fact, so far as the removal of mechanically suspended matters from the water is concerned, the result could not possibly be better." This is exceedingly satisfactory so far. According to Mr. Maine (the Lea-bridge manager) the rapidity of filtration is very variable, and every year in July "a slimy matter very rapidly deposits upon the sand, blocking up its pores, and stopping the filtration altogether. In August this slimy matter begins to grow, producing green confervoid fibres. . . . As soon as the confervoid growth begins, the filtering power of the reservoirs is entirely restored; but during July, whilst the slimy matter continues to be deposited, the work of filtration is always . . . . attended with great difficulties." And now we are enlightened as to the use of the open canal, which Mr. Greaves, in his letter, says "is only maintained as a drain from the filter beds to a lower part of the river."

"There are two provisions at the Lea-bridge works by which water from the special canal can be transmitted without filtration to the storage reservoirs at Old Ford. One of these is an iron main at the canal head communicating with the main used for transmitting filtered water, and the other an open conduit or canal, formerly used to convey the whole of the water from Lea-bridge to Old Ford. From the condition of the sluice closing the iron main, I am convinced that no unfiltered water has been transmitted through that main for some months past. On the other hand, unfiltered water is frequently transmitted to Old Ford through the open conduit, for into this conduit the water from the filtering reservoirs is discharged whenever the latter require cleansing. It is scarcely necessary to remark that the water so discharged from the blocked-up filters is far more impure than the unfiltered water from the special canal, because the lighter portions of the suspended matter, from large volumes of water which have passed through the filter, are here concentrated in a comparatively small bulk, and as the open conduit down to Old Ford has much organic mud and slime in its bed, the water so transmitted down to Old Ford must be exceedingly impure when it arrives there. At Old Ford lock there is an overflow-pipe which conveys this water into the River Lea, but there is also at the same place a sluice through which this water can be admitted into the uncovered reservoirs. From the nature of the mud deposited in these uncovered reservoirs I am inclined to believe that this water is sometimes admitted into them. Both Mr. Greaves and Mr. Maine assured me that no unfiltered water is ever now transmitted from Lea-bridge to Old Ford for the supply of the public." *Nous verrons.*

Of these two open reservoirs Dr. Frankland says that they have a considerable deposit of mud, which is not, however, putrescent; one was full and the other was being emptied by pumping into the Lea; both are excavated in gravel, "and are consequently doubtless subject to considerable soakage, both from the Lea, the surface drainage, and the sewage which here saturates the soil." That communication can be established between these reservoirs and the service pumping wells is admitted by Mr. Greaves, but with the reservation that this is never done "*except in case of emergency*"—a qualification which at once damages the claim of the Company on public confidence. Mr. Greaves innocently states that the reservoirs are not used in the event of a fire—that is, we may say, once or more every week—but "he wished to retain the power of having recourse to these reservoirs in case of defective supply from the filtering apparatus at Lea-bridge." It is idle to discuss probabilities, in the face of such a confession as this, which is not easily to be reconciled with the antecedent letter, with its confident assertion that after the water left Lea-bridge it "never sees the light or risks pollution between the filter-bed and the consumer," and that "not a drop of unfiltered water has for several years past been supplied by the Company for any purpose." Remembering the remark of Mr. Maine, about the time of year when the filter-beds get choked up, it is, to say the least, another of the many curious coincidences which have been observed since cholera appeared in East London, that the month of July should have been the time of its appearance. The Registrar-General puts the case hypothetically, thus: During certain days of June or July there was a hitch in the supply, and the waters of the two open reservoirs, into which soakage from the Lea palpably takes place, were mixed with the purer water derived from the covered reservoir. The rapid rise of the deaths and their subsequent decline would square with the theory of a specific contamination, whose effects would be gradually obliterated by the repeated substitution of water of a purer sort, and the consequently increasing dilution of the noxious element.

The take of eels, which the Registrar-General corroborates, is another circumstance altogether irreconcilable with an uninterrupted supply of filtered water, but is in accordance with the hypothesis of a dose of the contents of the "disused" reservoirs. Whichever way the matter is looked at, the conclusion seems equally clear against the Company, and Dr. Frankland's description of the covered reservoir which is the acknowledged daily source of supply for the East London district will not tend to make the public in the least bit more comfortable.

"I was astonished to find that the water after being carefully brought down from Tottenham-mills in a special canal, purified by a most elaborate and efficient system of filtration at Lea-bridge, and then, to secure it from atmospheric impurities, conveyed in an iron main down to Old Ford, is stored in a reservoir sunk to the depth of some 16 feet beneath the low ground, which is here only just above the level of spring tides, and that, when the reservoir is full, the level of the surface of the water in it only reaches that of Trinity high-water mark. This reservoir, as I was informed, is excavated in clay, *but the side next to the navigation branch of the foul River Lea is of gravel.* No doubt this is well puddled, and the brickwork sides executed in the best possible manner; nevertheless, the position of this reservoir, with its 2½ acres of floor 16 feet below the surface of a badly drained district, is fraught with much peril during the prevalence of epidemic disease. Whatever precautions may have been taken, soakage, to some extent, must take place into such an excavation, *and it was stated to me that when the reservoir is emptied such soakage water, though not in large quantity, has to be removed by pumping.*"

Well enough may the Registrar-General remark on these circumstances as constituting a public danger, not only to the inhabitants of the district, but to the entire population of London, whose safety is jeopardised by an insensate provision for the storage of a commodity so essential to human life, and one so largely consumed as water. The great difficulty is how to improve a thing which is radically wrong in its conception without sweeping it away altogether; and the latter alternative will very soon, we believe, come to be generally accepted as the only kind of improvement likely to yield satisfactory results. As Dr. Frankland observes, so long as we are content to obtain from rivers the water which we use for domestic purposes, so long shall we be subject to danger from sewage contamination; and, if we mistake not, the disclosures relative to the East London supply will hasten the definite settlement of the general water provision for the entire metropolis on a safe and advantageous basis.

The following result of Dr. Frankland's analyses of the various samples of East London water, collected on the 9th of August, closes the case against the Company for the present:—

Place of Collection.	Solid Matter in 100,000 Parts.	Organic and other Volatile Matter (included in previous col.)	Amount of Oxygen required for Oxidation of Organic Matter.	Appearance of Water.
Uncovered North Reservoir.	24·64	1·07	·0452	Slightly turbid and of a milky appearance.
Uncovered South Reservoir.	25·56	1·53	·0564	Slightly turbid and milky.
River Lea at Old Ford .	30·03	3·73	·2792	Very turbid. Suspended matter ·36 in 100,000 parts of the water.
Main leading from pumping engine at Old Ford Water supplied to consumers.	25·91	1·14	·0204	Transparent.
Essex Well, Lea-bridge .	24·85	1·19	·0220	Transparent.
Unfiltered water from special canal at Lea-bridge.	27·39	1·71	·0404	Greenish; slightly turbid.
Main in Stewart's-buildings, High-st., Bromley, where cholera had caused great mortality.	24·94	1·54	·0268	Dirty, depositing more sediment than the sample of unfiltered water from the canal at Lea bridge.
Cistern at the Police Station, Poplar.	26·34	1·20	·0256	Transparent.

"A comparison of the results yielded by the water from the canal at Lea-bridge with those obtained with the same water taken from the Essex well, after filtration, shows the important extent to which the water is purified by passage through the filtering reservoirs. The substitution of unfiltered for filtered water would at once increase the organic matter supplied to consumers to the extent of 43 per cent. With the exception of the dirty sample drawn from the Company's main at Stewart's-buildings, and which contained the same amount of organic impurity as the water of the uncovered south reservoir at Old Ford, none of the samples of water upon the Company's premises exhibit, in comparison with the Thames water supplied to the metropolis, any excessive amount of impurity; but, as I have already pointed out in a previous report, chemical analysis, like every other mode of investigation, is powerless to detect the presence of matter like the choleraic poison amongst the organic impurities of water, for this poison may be present in quantity fatal to the consumer though far too minute to be detected by the most delicate chemical research. Further, when water has once become polluted by such matters, we possess no *certain* means, of a practical character, for destroying or rendering innocuous the poisonous matter. I have conclusive evidence that even boiling, which is generally regarded as the most efficacious means, will not prevent water which is so contaminated from producing violent cramp and diarrhœa.(a) The use of permanganate of potash or of animal charcoal, in the manner I have already recommended, is the only practical means in which I should have much confidence for the removal of such noxious matters from water."

The following statements from the local papers and from trustworthy witnesses are not unimportant, as they show that eels have passed through the pipes of the East London Water Company:—

(From the *East-end News*, August 11.)

"CAN AN EEL PASS THROUGH A FILTER BED?

"*To the Editor of the East-end News.*

"Sir,—Seeing the paragraph in your last week's impression respecting the purity of the water supplied us through the East London Waterworks, that it is thoroughly filtered, I beg to contradict that statement, more particularly at this crisis, when cholera and diarrhœa are making such fearful ravages through these districts, in order that some steps may be adopted to guarantee a pure supply.

"Now, the *second week in June last* our water-pipe was stopped up, and, as I am a plumber, I cut the pipe, and to my astonishment found a DEAD EEL *nine inches* in length, which must have come through the above works, and which is quite demonstrative that the water is not filtered; so if you think this hint will be the means of the Company improving the filtering, you will greatly oblige me by giving this publicity, as it is acknowledged by all scientific gentlemen as well as the faculty, that it is essential to have pure water supplied.

(a) This fact is not incompatible with the theory that choleraic and similar poisons are the germs of organisms, for it is well known that certain organic germs can develope into life after being boiled in water for a short time.

"I am, &c.

"R. Furgusson, Plumber.

"Bow-lane, E. I. Road, Aug. 7, 1866."

Mrs. Furgusson showed the cut pipe to a gentleman from the General Register Office, and stated that the eel was putrid.

"*To the Editor of the East-end News.*

"Sir,—As small beginnings sometimes lead to great ends, so a little information may, perhaps, lead to the most beneficial improvements in the sanitary condition of some portions at least of this great metropolis; and I consider it to be the duty of every individual to furnish the authorities and the public generally with such information as he may be possessed of, as it appears to me to be the only means likely to bring about those changes so essentially necessary at any time, but more particularly so at present, when disease is carrying off so many of our fellow-creatures.

"In your last impression a Mr. Furgusson speaks of an eel having got into the water-pipe that supplied his dwelling. Now, strange as this may appear, I can bear testimony to a similar fact. A short time since the water supply to my residence was stopped, from what cause I could not imagine, and was without a supply five days. At length I took off the tap, and to my astonishment found an *eel fourteen inches in length*. It was in a *putrid state*, and the *stench* arising from it was most *fearful*. Since that time I have lost two of my children, who died of cholera, and my wife and other members of my family have also been suffering from that disease.

"I am, &c. "Alexander Russell.

"3, Paradise-cottages, Gray-street,
St. Leonard's-road."

The eel was found at the end of the supply pipe of these cottages; the date could not be fixed, but it was probably some months back. It was seen by Mrs. Russell, who has just recovered from cholera.

Extract from a Letter of Dr. Bain, M.D.

"I found to-day a house, No. 2, Wright's-place, Cotton-street, Poplar, where *five* in the family have had cholera, one of whom has died. I saw the mother of the family to-day, now recovered, who told me she had taken an eel from her water-butt in June last about 3 inches long, which must have come through the tap.

"I *send you a live eel* which was taken *to-day* from a tap by a Mrs. Ames, Leicester-street, opposite to where you saw a woman dying. This Mrs. Ames had cholera about three weeks ago, and her brother is now ill with it."

A plumber recollects purchasing, some years ago, an eel taken out in his presence from the main of the East London Water Company. It weighed about 2 lbs., and was alive.

The Registrar-General, after quoting from this journal of September 1 the fact that on August 15 two fire-plugs opposite Regent's-place, Commercial-road, were drawn, and a very considerable quantity of small "mussel" shells, about the size of a shilling, were discharged, at least a bushel, according to an eye-witness, writes:—"This is one of the things that the East London Water Company will be called upon to explain. Where did the shells come from? for it is wholly impossible that they could have been placed from without about the plugs. No doubt they had travelled along the supply pipe some distance."

SIR H. HOLLAND'S ANTICIPATION OF THE MODERN DOCTRINE OF CONTAGION.

It seems to be the present opinion of scientific men that the active material of contagions or infections—the morbid poisons—the matters which when engrafted from one living being into another, bring with them the epidemic, contagious, or so-called zymotic diseases, are living. Not that they are of necessity living individuals or beings, but matter endued with life—with power of multiplication and generation; what Dr. Beale characterises as germinal matter. Now, if we except the idea of living germinal matter apart from organic individuality, and substitute that of minute living beings, we have precisely the doctrine which Sir Henry Holland enunciated in the article on "Animalcule Life as a Cause of Disease," in his well-known "Medical Notes and Reflections." In recalling this essay to our readers' attention, we are not so much doing an act of justice to Sir Henry, as illustrating the inherent probability of the modern doctrine. Truths seldom spring up complete like Minerva from the brain of Jove, and there are few new truths which have not been heralded and prefigured by the suggestions of bygone philosophers.

It adds, therefore, great probability to the doctrines of Beale and Crookes, to find that they were in essential points put forward as probable hypotheses by Kircher and Linnæus,(a) and elaborated by Sir Henry Holland in a manner which a very slight alteration of terminology makes identical with the latest views. Justice, moreover, requires us to add that Henle, of Berlin, is cited by Sir Henry as holding identical doctrines in 1840.

Sir Henry refers in short terms to the presence of minute fungi or organised beings in the air, constituting poisonous mists or blights. He speaks of the analogies between the habits of insect swarms and of epidemic diseases—"their frequent sudden generation at irregular and often distant periods, under certain circumstances of season or locality," and their disappearance and prolonged absence; and says that "the element of life affords a more intelligible view of the generation of fresh virus, and its communication from one individual to another, than any other view with which science or common reasoning have hitherto furnished us." The cholera, continues Sir Henry, is caused by a material poison; capable of migrating or of being conveyed; possessing a power of reproduction and increase; and these properties force us to believe that it is neither a state of the elements nor an inorganic virus, but a living matter, capable of being conveyed by air or water, or both, and more probably animal than vegetable.

INSANITY IN FRANCE.

(Continued from page 12.)

Resuming our synoptical examination of M. Béhic's elaborate report, we propose to deal in this article with some of the more important results deducible from the French statistics in their bearing upon moot-points which our own Lunacy Commissioners do not take the trouble to investigate; at least, if they inquire into them, they do not make public the conclusions at which they have arrived thereon.

It may be convenient to bring our conspectus into some sort of classification, according to the nature of the several branches of the subject.

Age.—At what age does insanity most frequently develope itself? M. Béhic's figures lead him to the conclusion that *la folie ne se manifeste guère qu'après la vingtième année, et qu'elle devient ensuite de plus en plus fréquente avec l'âge jusqu'à 40 ans, marchant pour ainsi dire parallèlement avec le développement de la raison.*

From the age of 40 the proportional number of cases of insanity, and likewise the hope of cure, diminish gradually to the limits of life. The deaths follow very nearly the same law. In both sexes the maximum of insanity is found between 30 and 40 years of age, and the proportion of cure is greatest between the ages of 20 and 30.

Sex.—In what degree does insanity depend upon sex, and whether is the male more prone thereto than the female? We are here on ground which has been most stoutly contested by the advocates of two opposing doctrines, and truth compels us to say that much reliance seems to have been placed on very imperfect data. M. Esquirol, whose high authority on the general subject of mental disorders is unquestionable, inclined to the view that women were more liable than men to attacks of insanity, and his theory has found many supporters since his time. But, as was well demonstrated by Dr. Thurnam,(a) M. Esquirol's opinion is founded on an erroneous method of statistical analysis, for he omitted to take into account the general preponderance of females in ordinary populations; and, moreover, his conclusions are drawn from a comparison of *existing* cases, instead of the cases *occurring* in the two sexes, thus arriving at a proportion of thirty-seven males to thirty-eight females as an average of different countries. This is certainly a very slender thread on which to hang so grave a drawback to the general excellence of the feminine nature as is involved in the stigma of peculiar susceptibility to physiological or psychological influences tending to madness. Dr. Thurnam showed that out of 48,143 admissions to asylums the males exceeded the females by 13 per cent. The development and ultimate issue of the malady after admission have been found to lead to the accumulation of female patients much faster than of males, for the probability of female recovery is much greater, and of death very much less, than in the other sex; and, therefore, if we may infer anything at all, it is that on the whole men are actually more liable to the disorder than women. Dr. Thurnam found that the mortality of insane men in the public Asylums of England exceeded on an average that of insane women by 50 per cent. These deductions admit of general application, but they are not without exception. In certain institutions where a particular class of patients is received, the admissions of women have exceeded by 20, 30, and even 45 per cent. those of men; and it is quite conceivable that in large towns the sexes may be very oppositely affected to what is generally observable.

(a) Sir H. Holland refers to a paper by Nyander in the "Amœnitates Academicæ," in which small-pox, measles, etc. etc. are attributed to the work of insects. We do not happen to possess the volume in which Nyander's thesis is inserted, but in an oration by Linnæus himself (Caroli Linnæi Amœn. Acad. vol. ii. Holmiæ, 1751. Oratio de Memorabilibus in Insectis) he thus speaks:—"Hi sunt exercitus, quos emittit Deus puniendum inobedientem gentem; sua habet mandata quivis ordo, quæ exsequatur in præmia vel pœnas. Si castigare velit humanum genus, unicam speciem horum animalium multiplicari jubet arenæ instar in maris fundo, confestimque jussa exsequuntur Domini. Si gramina pratorum succidere placeat, et præsto sunt multæ legiones *Phalænarum.* (After enumerating almost every destructive insect, he adds) "Ut non loquar *morborum et mortis ministros, qui pestem, variolas, purpuram et hujusmodi grassantes immittunt morbos.*"

Without pretending for a moment that M. Behic's report has decided the point of relative liability, it is certain that his very elaborately detailed facts are a valuable contribution—perhaps the most valuable of its kind that we have—to the data necessary for determining the problem. Judging, then, from the French returns, it would appear that, taking the aggregate of the *aliénés* in asylums, there would be found at any given time more women than men insane. But it would be fallacious therefrom to assume that necessarily insanity is more common to women than to men, inasmuch as the proportion of admissions, of discharges, and of deaths is very much higher amongst males. It is true that, according to the French census of 1861, the enumerated proportions of the sexes are changed according as the *malades* are in asylums or *à domicile*: of the first category the males were 48 and the females 52 per cent.; of the second the males were 54 and the females 46 per cent.; and of both classes combined the males were 4 per cent. in excess of the females. This excess of males is accounted for by the great difference in the relative proportions of the sexes amongst the *fous* as distinguished from the *idiots-crétins*: with the former the females, whether *à domicile* or in asylums, are 4 per cent. in excess of the males; but of the *idiots-crétins*, *à domicile*, the males outnumber the females by 14 per cent., whilst in the asylums the females are 2 per cent. in excess. The preponderance of female *fous*, *à domicile*, may be reasonably ascribed to the fact that it is the privilege of their sex to be protected, as it is the duty of males to protect; if the malady strike down the protector, he has no one to look to but the State: the difference in the position of the two sexes in this respect is sufficiently obvious. We know nothing, however, of the relative duration of the disease or of the rates of mortality and recovery amongst those unfortunates who are deprived, too often by mistaken kindness, of the advantages of proper treatment obtainable in institutions specially adapted for them, and therefore we are not warranted in rejecting the conclusions which we derive from the facts relating to asylums.

Let us then summarise the results of the seven years 1854-60 to which M. Béhic's report relates. We have seen that of 100 inmates on a given day 48 were males; to an annual average of 100 of both sexes the male ratio was for admissions 52, discharges 53, cured 51, deaths 55. Thus we see that while the admissions and discharges of both sexes almost balance each other, the excess of males dying is 4 per cent. over those cured; and this exactly corresponds with the difference in the rate of mortality of the two sexes, which is 16 per cent. for males and 12 per cent. for females as calculated from the average annual deaths and the mean population of the asylums. This mean population is represented by the mean number of patients constantly *entretenus* during the seven years, and precisely agrees in its proportion of the sexes with the proportion ruling amongst the inmates on a given day—a very clear indication that the excess of females may be set down as a pretty constant ratio. The foregoing facts enable us to see how it is that the sojourn of male inmates is shorter than that of females: they are admitted in greater numbers, but they pass through the asylums very much quicker, and their places are filled by new patients much more rapidly than are those of the female inmates. The inevitable corollary follows that in so far as the movement of insanity as observed in asylums may be taken for a guide, men are more susceptible to mental derangement than women; and unless the issue of the malady is different amongst the lunatics at large, we must consider it an established axiom that insanity more often attacks men than women, albeit the census returns would always give *moins de fous que de folles.*

The mean term of residence of the *aliénés* of both classes was 265 days for males and 279 days for females. The males are slightly more liable to relapse after apparent cure than females; and there is a remarkable difference in the proportions of the two sexes in regard to the combination of insanity with paralysis, inasmuch as 12 per cent. of the male admissions were thus complicated, but only 3 per cent. of the females. Hereditary tendencies are discovered in equal proportions of the sexes; but of the causes of insanity the males, whose derangement was brought about by physical causes, were 11 per cent. in excess of the females, whilst under moral causes the females were 5 per cent. in excess of the males. The mean age on admission was 40 years for males and 42 years for females; the mean age at death was 46 years for males and 50 years for females. Of relapses, the two sexes differ little in their proportions: 102 males to 100 females is the exact ratio.

Mortality.—The mortality in asylums, which was at the rate of 14·34 per cent. in 1855, as calculated on the mean number of inmates during the year, declined to an average rate of 13·5 per cent. in the following five years 1856-60; yet M. Béhic speaks of the mortality as having *légèrement augmenté.* He arrives at this by taking an average of the seven years 1854-60, which he compares with the average of the twelve years 1842-53—a comparison which is vitiated by his including in the more recent period the very exceptional mortality of nearly 17 per cent. (in 1854), which was caused by the cholera epidemic. It is something so very unusual for a Frenchman to depreciate his own country that we deem it only right to point out the unfairness of M. Béhic's conclusion.

Curable and Incurable.—Since 1856 the patients under treatment in asylums have been classed under the chances of cure which their state appeared to offer, and the results show that less than 20 per cent. of both sexes are classed as "presumed curable." More than four-fifths of the unfortunates offer no chance of cure, which sad result is due in great part to the negligence or mistaken affection of the friends of the patient, who will not part from him until his malady has become inveterate and hopeless.

(a) *Stat. Jour.* vol. vii. p. 310.

It appears that more than one-fourth of the inmates of asylums are not placed there until more than a year has elapsed since the commencement of the attack, and one cannot, therefore, be surprised at the number of incurables which encumber the asylums.

The returns do not discriminate in the discharges those *before* and *after* cure prior to 1854, but in that year the proportion of discharges in 100 cases treated was 9 per cent. cured, and 5·4 *avant guérison.* In 1860 the relative proportions were 7·0 and 7·1, so that the ratio of cures has regularly diminished, whilst that of uncured has gradually increased. The same results are observable if we take 100 discharges as the basis. In 1854 there were 62 cured, and in 1860 only 50; the numbers uncured were, therefore, 38 in 1854, and 50 in 1860. It is worthy of remark that the cures are more numerous among men than women; the average proportion was 8·7 per cent. of men treated, and 7·8 per cent. of women. This difference, M. Béhic believes, obtains in other countries, and is partly due to the desire on the part of the asylum authorities to abridge the period of convalescence amongst men, so that they may the sooner return to their families who are dependent upon them; whilst the females are detained as long as possible from a humane dislike to expose them to the forlorn, isolated, and dependent position which awaits so many of them on their return to society.

Another reason for the greater proportion of cures amongst males is that the causes which most frequently produce insanity in them are those most easily amenable to proper treatment and cure. Thus intemperance, which is the most frequent cause of insanity in men, produces a less intense form of the malady, and one more easily curable, than the prevailing causes of insanity in the other sex.

Nothing is more clearly established in the records of insanity than that the chance of cure diminishes gradually with the duration of the treatment. Thus, on an average of 100 cures, 80 per cent. (four-fifths) were in the first year of treatment, of which 38 per cent. took place in the first three months after admission. The mean duration of treatment of the *guérisons* was nine months for males, and about ten months for females.

The statistics of asylums reveal very sad facts respecting the number of *aliénés* who die directly after their admission. In 17,167 deaths 12 per cent. died in the first month of their entry, 7 per cent. in the second month, 6 per cent. in the third—that is, a fourth part of the total deaths occur in the first three months of their restraint. This may be accounted for by the shock and conflict of feelings consequent on sudden removal from friends, and to some extent also by the great state of debility in which many of the patients are found at the moment of their admission. The first hypothesis would perhaps explain the reason why the *idiots-crétins* do not suffer half so high a death-rate; their insensibility to emotional feelings would account for the change making little impression on them.

Idiots and Crétins.—Of the 84,214 *aliénés* enumerated in France in 1861, 42,689 were returned as *fous*, and 41,525 as *idiots-crétins ;* but of these almost equal numbers there was a remarkable divergence in their disposition, for while of the lunatics 64 per cent. were subject to proper restraint and treatment, 91 per cent. of the idiots were at large, or, at any rate, dependent only upon the care of friends and relatives. The census of 1856 showed precisely similar results as to the location of both classes of *aliénés*, but the ratio of increase on the gross population of the two periods was 18 per cent. for the *fous* and 59 per cent. for the idiots in the five years. M. Béhic, however, attributes this large increase rather to errors in the prior enumeration than to any such actual increase of the malady itself as those results would imply. M. Béhic concludes that the male sex furnishes the largest proportion of idiots, and further states that his conclusion is borne out by the observations of nearly all other countries where the distinction between the two kinds of mental disorder is recorded. We believe that this is true of some countries—Denmark, for instance—but we apprehend that statistical science is hardly advanced enough in the majority of states to yield the necessary facts for verification. But so far as England is concerned a Poor-law Return for January 1, 1865, rather upsets M. Béhic's doctrine, for of 10,021 idiot paupers 54 per cent. were females. The Lunacy Commissioners for both divisions of Great Britain make no classification of the insane in their reports, and the Census Commissioners fail also in this particular. Nevertheless it is discreditable that so important a distinction should be thus ignored, and it is to be hoped that the deficiency will be supplied at no distant date. Of the *idiots-crétins* in asylums the absolute increase was 32 per cent. in 1856-61, which is attributed to the admission in recent years of a great number of idiots who were before that time living with their friends. The hopeless nature of *idiocy* is shown by the fact that there were only four cases out of every 1000 inmates wherein the malady at the time of admission was held to be susceptible of amelioration; nevertheless, we find subsequently that 5 per cent. of the idiots discharged were *après guérison*, the proportion of cured amongst the *fous* being 53 per cent. The rate of mortality amongst idiots was 9·5 per cent., or 47 per cent. less than amongst the *fous ;* in other words, there die in the asylums, out of an equal population, 147 *fous* against 100 *idiots-crétins.* The mean age at death of *idiots-crétins* was $32\frac{1}{2}$ years for males, and $34\frac{1}{2}$ years for females; their chance of life is fifteen years short of that of the *fous.*

The mean term of their residence was 302 days; and as this is not much longer than that of the *fous*, taking into account the comparative incurability of the disease, it would seem that virtually the French system turns these unfortunates out when just as little fitted to be left to the tender mercies of the world as when they were admitted in the first instance.

Only 15 per cent. of the idiots were voluntarily placed in the asylums; the remaining 85 per cent. were *placements d'office.*

THE WEEK.

PUT OUT THE SPARKS !

EVERY day's occurrences speak to the risk which every inhabitant, not of London only, but of the whole Empire, is subject to, so long as the cholera remains in its activity amongst us. On Tuesday (the 29th ult.) a gentleman arrived at an hotel in Piccadilly from Ghent; next afternoon (after some neglected diarrhœa) he was seized with collapse and died on the 31st, in nine hours—thirty hours after his arrival at the hotel. Next day a nurse, who had been fetched from an institution at Chelsea to nurse him, and who was at the time suffering from diarrhœa, died of cholera in St. George's Hospital. On September 3, a drunken fellow, who had been unloading a barge in the Grosvenor Canal, where he drank freely of the filthy water to quench the thirst of his debauch, was found in the street by the police collapsed and taken to the Hospital, where he soon died. It thus seems that the water around us is poisoned; that the disease has powers of spreading, though it be kept at bay; but that our only safety lies in extinguishing the last ember of it. So long as a spark lasts, it may set going a general conflagration.

METROPOLITAN SANITARY ASSOCIATION.

A CONFERENCE meeting will be held at 1, Adam-street, Adelphi, W.C., on Wednesday, the 12th inst., to consider the subject of the present epidemic of cholera, in its Medical, sanitary, and social aspects. The chair will be taken at half-past four o'clock, by the Bishop of London, who has kindly expressed his willingness to preside. A full attendance is expected of gentlemen who desire to discuss the question whether everything has been done that ought to have been done to check the present epidemic.

THE MEDICAL CLUB.

The provisional committee of the new Medical Club held a sitting at Mr. Propert's on Tuesday night. There was a good attendance, and the proceedings were all in the way of active progress. The club already numbers over one hundred members, and the plan for its establishment has been so far advanced that acting committees have been formed to draw up the rules and to organise a club establishment. The objects of the founders of the club are sufficiently modest to be safe, and sufficiently extended to be practical. The committee proposes to begin by affording club conveniences on an estimate of five hundred members, and in the working arrangements comfort rather than extreme luxury will be considered. In October there will be a large general meeting of the Profession, when the club will be formally organised. Meantime, Mr. Propert has been elected Treasurer, Dr. Lory Marsh continues as Secretary, and a good working committee—including, with others, Mr. Grigg, R.N., Mr. Deputy-Inspector Fraser, Dr. Foster, Dr. Richardson, Dr. Stillwell, Mr. Slaughter, Mr. Clement, M.P., Dr. Bennett, and Dr. Tilt—is in full operation. The result cannot be doubted; but patience, as well as hope, must lie at the basis of the effort.

CHOLERA LITERATURE.

Dr. Macgowan, of Caversham-road, London, favours us with a capital pamphlet, entitled "Malaria, the Common Cause of Cholera, Intermittent Fever, and its Allies" (*Churchills*). The author served in Bengal from 1857 to 1862, and had abundant opportunities of studying the resemblance between the collapsed stage of cholera and the collapsed stage of intermittent fever. The history of cholera and of intermittent fever shows them to have one birthplace, one *habitat*, and one highway. Dr. Macgowan connects together cholera, intermittent fever, and sunstroke as effects of malaria, and in his pamphlet, which abounds in interesting details, gives many instances of these diseases in which the symptoms were almost identical. He repudiates purgatives in cholera, speaks approvingly of stimulating emetics in the proper cases, and lays great stress on the hypodermic injection of quinine.

Dr. Billing has republished a pamphlet on the "Treatment of Asiatic Cholera" (*Churchills*). *Cholera is a species of fever.* Consequently, people ought to use "the proper remedies—namely, fever medicines, and to avoid what is hurtful—*i.e.*, stimulants." The collapse of cholera is the cold stage of the fever, the reaction is the hot stage. Nothing cuts short the shivering and other miserable sensations of the cold stage so well as an emetic does, and Dr. Billing's prescription is—

Water, half a pint.
Tartar emetic, two grains.
Sulphate of magnesia, half an ounce;

of which one tablespoonful may be given to adults every half-hour. External heat is useless; but after three doses of this medicine the patient generally finds a sensation of warmth creeping over him, whilst the first or second dose begins to allay the nausea and diarrhœa. The small dose of sulphate of magnesia acts not as a purgative, but as a diuretic, and the saline and antimony coincide "in counteracting the disease." A dose of calomel and a course of quinine, dry friction, cold water, and cold farinaceous slops are ordered by Dr. Billing after the fever medicine. If the "fever medicine" cannot be had, any other emetic will serve; but be it observed that they do not do good because they produce vomiting, but because they "have an effect on the nerves of the primæ viæ, which counteracts the effects of the epidemic poison." Dr. Billing adds many illustrations of the identity of cholera with the cold stage of fever.

"An overworked general Practitioner," who conceals his name under the modest signature "Yod, M.D.," gives us a pamphlet entitled "A Simple Explanation of Cholera" (*Renshaw*), the gist of which is the necessity of water, and the expediency of giving it freely by the mouth and in the form of emollient enemata.

Dr. Andrew Fergus, in an article on the Prevention of Cholera in the September number of the *Glasgow Medical Journal*, insists on the universality of premonitory painless diarrhœa, and on the almost specific efficacy of opium or morphia in large and repeated doses for checking that diarrhœa, and not allowing the disease to pass into the stage of collapse. In collapse he looks on stimulants and opiates as useless or harmful, and uses ice, friction, etc. His paper is a powerful counterblast to Dr. G. Johnson's eliminative theory.

A Physician writes a pamphlet "On the Mechanical Treatment of Cholera" (*Churchills*). His notion is that if the blood be not hopelessly poisoned and dead (in which case, of course, all remedies are useless) it may be kept circulating by putting the patient on his back on a board, and keeping up a rocking, see-saw, to-and-fro movement, from eighty to one hundred times per minute. As the body is composed of fluids, whose movement in vessels is regulated by the valves, so this mechanical movement *must* make the blood circulate and absorb more oxygen, &c. The patient should be put into a room at from 120° to 150° Fahr., should be well dosed with strong tea, be well rocked, and rubbed with brine; he should have a mustard-and-water bath, and plenty of hot brandy-and water, and besides may take castor oil or the ammonio-citrate of iron. If any patient so treated recovered, he could not say that the doctor had done nothing for him.

Sir Dominic Corrigan publishes the "Cholera Map of Ireland, with Observations" (*Dublin: Browne and Nolan*). His object is to diminish the dread of contagion by showing that "epidemic" or "telluric" influence is much more potent as a means of spreading the disease than human intercourse is. Singularly enough, he says not a word about water.

Dr. C. Dudley Kingsford, of Upper Clapton, has found leisure to publish "A New Theory of Cholera" (*Churchills*), in which he expresses his belief that the cholera poison is phosphorus, and that cholera may have been imported into Whitechapel in the shape of a cargo of mackerel. Fish, when decomposed, shines in the dark. Our readers' imagination will suggest to them the other links in the chain of arguments by which Dr. Kingsford establishes his new theory. His remedy is calomel, the chlorine of which unites with hydrogen and the metal with phosphorus; whilst the liver secretes bile, and all ends happily.

Dr. William Sedgwick has re-issued his book, "On the Nature of Cholera, as a Guide to Treatment" (*Walton and Maberly*), which has been long known as one of the ablest and best reasoned *à priori* books on the subject. The author considers cholera a nerve disorder, not a blood disorder; he compares its symptoms with those of perforation and traumatic peritonitis, in which all the symptoms of collapse exist, without blood disorder. Paralysis of the sympathetic nerve and want of the performance of the organic functions, with deficient vitality of the mucous membranes, are Dr. Sedgwick's ideas of the pathology. Doubtless he has truth on his side, so far as mere collapse is concerned. Of course, he is opposed to the doctrine that collapse is caused by the bowel flux, quite as much as he is to the notion of elimination. Bleeding, turpentine, and cool drinks, without heat and stimulants, are his remedies. The book is worth reading, side by side with Dr. G. Johnson's, as a monument of boldness, research, and ingenuity in endeavouring to construct a perfect theory of a disease out of our imperfect physiological and pathological data.

Dr. William Sedgwick Saunders has issued a "Report to the

Board of Guardians of the City of London Union, on the Results of the House-to-House Visitation performed by Medical Visitors in conformity with the Regulations of the Privy Council" (*Truscott and Co.*). A curious state of things exists in the City. During the prevalence of cholera, the ordinary sanitary authorities and their eminent Health Officer, Dr. Letheby, are deprived of any share in the measures for treating the disease, or for providing house-to-house visitation, medicines, Dispensaries, etc., and are confined to their everyday duty of combating nuisances. The staff of Medical visitors and assistants, whose duty it is (under the Order in Council authorised by the Diseases Prevention Act) to find out and treat cases of diarrhœa and cholera, are under the command of the Board of Guardians of the Union, who in the City, and in no other part of the metropolis, are the "local authority" for carrying out the Diseases Prevention Act. It seems that the Medical visitors in the present case have found out that the ordinary inspectors of nuisances employed by Dr. Letheby are less efficient in their duties than Dr. Letheby seems to have believed, and they have brought together a somewhat alarming list of nuisances which have been left untouched by their "superficial and useless" inspections. We could have wished for a more friendly tone in this report of Dr. Saunders, and will venture to prophesy that if Dr. Letheby were to make a similar investigation three months hence he might report that a good many of the places that are now purified by the zeal of Dr. Saunders's Medical visitors are as bad as ever.

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

REPORT OF MEDICAL PROCEEDINGS AT THIRTY-SIXTH MEETING HELD AT NOTTINGHAM, 1866.

We have already given a short account of the current topics of Medical discussion at the Nottingham meeting. It remains for us to place on record, and with as much fulness as our space will permit, those communications which were contributed to this year's parliament of science by members of our own Profession.

The Physiological Department was presided over by Dr. Humphrey, of Cambridge, who opened the proceedings with a very able address.

ADDRESS IN PHYSIOLOGY.

By Professor Humphrey, M.D., F.R.S.

Dr. Humphrey began by claiming for physiology its rank as the very highest branch of physical science because it has to deal with the highest and broadest of physical problems. The animal frame, which it is our work to investigate, stands at the summit of the great physical cone, with man at the apex, by whom it is, as it were, slung from heaven, in whom the material is worked up to the point of contrast with, and made subservient to the purposes of, the spiritual. Indeed, so complex is the animal organism, so intricate and varied are the questions in physiology, that it is apt to pass out of the range of science, and become too much a matter of speculation and an object of mystery; so that there is some danger of its being degraded by the very difficulties and features which should really place it in the highest position among sciences.

Dr. Humphrey illustrated the uses of physiology for calling forth the higher reasoning faculties, and after explaining what the microscope had done for the science, and stating that the discovery of development by cells is second only to the discovery of the general law of gravitation, he added :—Even epithelium, which we were wont to regard as a distinct external and easily separable sheath, is found to send its filamentary prolongations into the subjacent organs, which become blended with the areola and nervous and perhaps with the lymphatic systems. The epithelium of the glandular tubes is in some organs undistinguishable from the cells which occupy the stroma. The blood-vessels in many animals are continuous with the areolæ of the tissues; and in all the ultimate circulation takes place through the tissues, the nutritious fluid passing freely to and fro between their interstices and the interior of the capillaries, where capillaries are present. We are thus reminded of the fact that in their embryonic period the several structures, or the potential rudiments of them, were all blended in a homogeneous germinal mass, and we learn that though they have become differentiated they have not become separated, but retain in their mode of connexion the traces of their common parentage and of their early continuity. Such a blending of ultimate tissue, as a remnant of embryonic condition, assists us to explain many things, such as the transfer of impressions and what we call sympathy, that are at present difficult to understand, and is an additional illustration of the simple method by which, in nature's works, great ends are attained.

On the question of muscular force he urged :

"It is impossible to avoid the application here of the doctrine of contractile force, which is being so clearly worked out in the inorganic world, and which seems to be the greatest advance that has for some time been made in our knowledge of the laws of matter. We can scarcely doubt that the chemical force which is set free during the decomposition attendant upon muscular action is the equivalent of the contractile force that is evinced and of the heat that is evolved. In other words, a muscle may be regarded as the medium by which force is accumulated, rendered latent, or condensed in a condition of high chemical tension, and is, from time to time, as occasion may require, set free and converted into muscular or contractile force and heat."

In treating on vital theories, he asked the question, Does any combination of the ordinary forces of matter ever lead to the phenomena of life? and in answer to the question he observed :

"If these forces were shown to be correlative with the vital force, it might seem that some show of probability would be given to such a view. But we must remember that for the manifestation of vital force a living being is, so far as our observation at present goes, absolutely necessary; that is, life has never been known without a living being, without a form, without a medium for the exercise of the vital force, just as there is no manifestation of attraction, or heat, without the medium—matter—through which they act. Thus we are impaled upon the horns of the dilemma—life is not manifested without a living being or medium, and the medium cannot exist without life—a dilemma from which our knowledge of the properties of matter is, so far as I can see, unequal to rescue us; and our only refuge is in the admission of a creative power to which the medium and properties of life, in the same way as the medium and ordinary properties of matter, owe their simultaneous existence.

"A subject for investigation, nearly akin to that last mentioned, and which may, perhaps, some day tend to throw some light upon it, is the transition from life to death—a change which, under ordinary circumstances, takes place in the most delicate, insensible manner; so that it is impossible to say when, and how, life ends and death begins. I speak not of that wide and sudden termination of the body's life from disease or decay—that somatic death—which we usually associate with the word 'death,' but which is in nature comparatively so rare that it may probably rather be regarded as exceptional and abnormal than natural. I refer to the mode in which the parts of the ultimate tissue of the body become changed and cease to exist—a process so fine as to elude observation and to prove that the boundary line between life and death is hard to define. Even in the instance of the cuticle, a structure comparatively under the eye, as we watch the transition of the spherical deeper components to the flattened forms of the superficial strata, and the disintegration of the latter, partly by external influences, we are at a loss to decide where living force ends. Indeed, there seems to be no point at which that can be said to take place. And if with regard to the components of it and the other tissues we assent to the view that their external or 'formed' parts are lifeless, and their internal or 'germinal' parts are alone endued with living properties, we still have to ask where is the division between the two? Where does the 'germinal' or living end, and the 'formed' or lifeless begin, and how is the latter done away with? Clearly it is not by an abrupt disintegration or solution, but by some slow insensible process which partakes rather of atomic change than of destruction. Then, one is inclined to ask, if the passage from the living to the unliving condition be of this insidious inappreciable nature, may there not be a converse of a like kind, an insensible origination of, or conversion into, life and life's forms, going on somewhere in the far recesses of Nature's womb. I do not think we are bound to shut out the thought of such a possibility. It seems a fair question to entertain; but admitting it as a question, we must refrain from the tendency to give a hasty answer in the affirmative."

After dwelling upon the theory of natural selection based upon the struggle for existence in animal life, Dr. Humphrey observed that various considerations, which he stated in full, inclined him to the opinion that modifications of animal type, occurring in nature, are more likely to be the result of external influences operating upon successive generations, influencing their development, their growth, and their maturity, than of "natural selection" and "struggle for existence." But greater effects of these and other similar agencies must be shown before we ought to admit even the reasonable probability of their power to work out the great changes that have been attributed to them.

In pondering over the definiteness of animal types, so marvellously elaborated from a simple form, their slight variability through long periods, the clear manner in which they, many of them at least, are worked out from one another, and which increasing investigation seems to render more and more apparent, the prospect of proving that they are educed from one another by any of the hitherto supposed processes seems to grow more and more distant, and the feeling arises that there must be some other law at work which has escaped our detection.

We are familiarised with the fact that in the inorganic world combinations take place only in certain definite proportions—for instance, that oxygen unites with nitrogen in one proportion, to make nitrous oxide in a second proportion, a multiple of the first to make nitric oxide, and so on to the fifth proportion or multiple, which gives nitric acid, and that between them five several fixed proportions as combinations take place. So that the resultants of these and other similar combinations—the inorganic species, as we may call them—are remarkably constant and fixed in their characters. Each has its one form, as in the case of crystal, of chloride of sodium, or sulphate of magnesia, which may be broken down or dissolved, but which cannot be modified or made to approach, still less to pass into, any other form.

May there not be something analogous—some corresponding law of combining proportion — presiding over living matter, educing the various forms, fixing their characters, giving them constancy—in fact, evolving and fixing the species and preventing their transmutation?

Dr. Humphrey concluded as follows :—

"At any rate, whatever be the law and forces which effect and regulate the evolution of species, they are probably of the same kind as those which are operating in the inorganic world. The orderly and definite manner in which forms and features and specific characters are given and preserved in the one instance may be assumed to be of the same nature as in the other; and we must probably refer the fixed animal and vegetable types to influences identical with or similar to those by which the forms are assigned to crystals, and the stratification is given to rocks, by which the geological epochs have been determined, and the boundaries of our planetary and solar systems have been set. One cannot but think that it may be within the power of man to work out and to comprehend, in some degree at least, the principles by which these breaks in the organic and inorganic worlds, constituting as they clearly do an important feature in the plan of creation, are brought about and regulated.

ADDRESS IN CHEMISTRY.

By Dr. Bence Jones, F.R.S.

Dr. Bence Jones, as President of the Chemical Section, opened the session with an address bearing specially on the relations of Chemical and Medical science. He said :—

"It is daily becoming more and more certain that not only must every Medical man become a chemist if he wishes to have any clear idea of the action of air, food, and medicine, but that the chemist who has most knowledge of the different forces that act in the body will require to learn the forms of matter in which those forces reside, and then, with tentative skill, he will quickly be able to regulate the qualitative and quantitative errors which constitute disease. In other words, when the union of chemistry and Medicine is perfect, then science will show us how to keep or to regain the greatest of blessings, health."

After surveying the progress of chemistry for the past year, and recording the researches of Frankland, Duppa, Persoz, Maxwell, Simpson, Roscoe, Graham, Huggins, Berthelot, Schunk, and Dupré, the President considered the subject of animal chemical physics.

"It seems but a few years ago when we were taught that the animal and vegetable kingdoms were composed of entirely different kinds of substances. Nitrogenous compounds were said to belong to the animal kingdom, and the vegetable kingdom was said to be formed of carbonaceous matters only. The ammoniacal products of the gas-works were considered curious; and only from the time of Professor Liebig's investigations do we date our knowledge of the all-pervading presence of albuminous substances in vegetables. We can now see plainly that this was the death-blow to all chemical distinction in the composition of vegetables and animals. But no wrong knowledge is easily set right. First starch, then woody fibre, then colouring matters like indigo, then alkaloids like quinine were one after the other thought to distinguish the vegetable from the animal creation, and each of these substances or their representatives have at last been found in animals. So that really at the present time no chemical distinction whatever between vegetables and animals can be made. And except in the mode in which these different substances are produced in the two kingdoms of nature, no chemical difference exists.

"Various processes of oxidation, hydration, dishydration, and splitting, taking place at a temperature below 100° F., produce in animals a multitude of compounds which lie between albumen and carbonate of ammonia. The analytical chemistry of the future will some day be able to form from albumen all these descending compounds as surely as we are now progressing by synthetical discovery to the formation of all the compounds that are put together by the synthetical chemistry of vegetables; and as the synthetical chemist is already surpassing nature by forming combinations which vegetable life has never yet produced, so the analytical chemist of the future will probably from albumen educe innumerable compounds, which in the tissues and secretions of animals have never been known to occur."

Commenting at length on Medical education, he said :—

"The present higher education for the Medical Profession consists, shortly, in learning reading, writing, and arithmetic in the first ten years of life. In the second ten years, Latin, Greek, some mathematics or divinity, and perhaps some modern language. In the third ten years, physics, chemistry, botany, anatomy, physiology, and Medicine, and perhaps Surgery.

"Looking at the final result that is wanted—namely, the attainment of the power of employing the mechanical, chemical, electrical, and other forces of all things around us for increasing or diminishing the mechanical, chemical, and other actions taking place in the different textures of which our bodies are composed—it is quite clear that the second decennial period is passed without our advancing one step towards the object required; and that in the third decennial period the amount to be learned is very far beyond what is possible to be attained in the time allowed.

"If we turn to the lower education. In the first eighteen years of life, reading, writing, and arithmetic, and enough Latin to read and write a prescription constitutes the minimum to be acquired. During the next three years, physics, chemistry, botany, anatomy, physiology, and the practice of Medicine, Surgery, and Midwifery, have all to be learned, and from this crowding it follows that the study of physiology is begun at the same time as the study of physics and chemistry. In other words, the structure and the foundation are commenced at the same time. The top of the house may be almost finished when part of the foundation has not been begun.

"What chance is there of any one understanding the action of the chemical, mechanical, and electrical forces in the body until a fundamental knowledge of chemistry, mechanics, and electricity has been first obtained? What chance has a Medical man of regulating the forces in the body by giving or withholding motion, food, or medicine with any reasonable prospect of success, when a preliminary education in these sciences is thought to be of no importance?

"It seems to me that the only possible way to make the present preliminary education for Medical men less suited to the present state of our knowledge, would be to require them to know Hebrew or Arabic instead of Latin, in order that the origin of some of our words might be better understood, or that prescriptions might be written in one or other of these languages.

"Let me now, for contrast sake, draw you a picture of a Medical education, based upon the smallest amount of classical knowledge, and the greatest amount of natural knowledge which can be obtained.

"In the first ten or twelve years of life a first-rate education in the most widely used modern language in the world—English—with writing and arithmetic, might be acquired, and in the next five or ten years a sound basis of knowledge of physics, chemistry, and botany, with German or French, might be obtained; and in the following five years anatomy, physiology, and Medicine, Surgery, and Midwifery.

"If every Medical man were thoroughly well educated in the English language, and could explain the nature of the disease and the course to be followed in the most idiomatic and unmistakable English, and if he could use all the forces in nature for the cure or relief of his patient, and if he could, from his knowledge of chemistry and physics, and their application to disease and Medicine, become the best authority within reach on every question connected with the health and welfare of his neighbours; and if he possessed the power of supervising and directing the druggist in all the analyses and investigations which could be required as to the nature and actions of food, drink, and medicines, and as to the products of disease, surely the position and power and agreement of Medical men would be very different from that which they now obtain by learning some Latin and less Greek.

"At present, so far from Physicians possessing more knowledge of food and of medicine than any other class of persons in the community, the analytical and pharmaceutical chemists are rapidly increasing in knowledge, which will enable them not only to understand fully the nature and uses of food and medicines, but even to detect the first appearances of a multitude of chemical diseases. Their habits of investigation and their knowledge of the nature of the forces acting in the body will gradually lead them to become advisers in all questions regarding the health of the community, and from this they will, like M. Bouchardat, in Paris, become almost, if not altogether, Practitioners of Medicine.

"No doubt chemists are very far from being Medical Practitioners at present, but remember that there is no limit to natural knowledge, and that each moment the chemical knowledge of things around us is progressing, and that chemists are becoming able better to answer every question that can arise regarding the air, water, food, drink, and medicine which, by means of the forces that exist in them, act upon the forces within us, and give rise to the phenomena of health and of disease; whilst, as if to lessen the time that might be devoted to acquiring natural knowledge, the authorities who regulate Medical education only this last spring have determined that, in addition to Latin, every Medical man shall possess a competent knowledge of Greek, in order that the derivation of hard words may be obtained from the brain instead of a dictionary."

Intending to demonstrate this part of his argument by reference to a recent event, Dr. Jones next made a remark, which we quote in full:—

"In confirmation of my opinion of the direction in which the treatment of disease is progressing, I may just refer to the cattle plague, which in 1745 was treated by Dr. Mortimer, at that time Secretary of the Royal Society, and therefore one of the most scientific Physicians in the country, with antimony and bleeding. In 1866, two chemists, Dr. Angus Smith, Ph.D., F.R.S., and Mr. Crookes, F.R.S., gave the only useful suggestion for combating the disease, namely, by the arrest or the destruction of the poison by chemical agents."

The President concluded his address in the subjoined sentences:—

"There is yet another point of view in which chemists will see the harm that results from our present Medical education.

"The use of Latin in our prescriptions requires that the pharmaceutists should learn at least sufficient Latin to read what we have written. Many errors have arisen and will arise from the dispenser being unable to give the directions rightly. To avoid such mistakes, a portion of the time that ought to be given to the attainment of the highest possible amount of chemical acquirement, and a perfect knowledge of the English language, or some foreign language wherein he might learn the discoveries in chemistry and the improvements in pharmacy of other countries, must be devoted to the learning of Latin in which the Physician writes his directions.

"All our druggists in England ought to be what they are in Germany and in France, chemists capable of any analysis that might be required of them, and able to satisfy themselves and the Medical men that the substances they sell are what they profess to be—pure, unadulterated chemical compounds.

"No one of my hearers in this Section will consider five years a long time for the acquirement of such knowledge, and until the pharmaceutists all obtain this education, Medicine will be subject to a great cause of uncertainty in the variations in the quality and quantity of the different substances which, under the same name, are obtained from different druggists.

"Before I conclude, I must apologise to some in this Section who may think that this subject is of no interest to them, by reminding them that none but chemists can judge what the worth of chemical education really is; and I am sure that no body of scientific men exist who are so fitted to judge of the necessity of an education in natural knowledge for those who employ the forces around us to regulate the forces within us as the Chemical Section of the British Association.

"Last year Professor Miller said—'It behoves all who are themselves engaged in the pursuit of science to consider in what way they can themselves aid in forwarding the cultivation of natural knowledge.'

"I ask you, for the good of science and for your own good, to exert your influence in the first place, and more especially to effect a change in the preliminary education of all those who intend to practise Medicine; so that, leaving Greek and Latin to be the ornaments and exceptions in their education, they may have time to obtain the best possible knowledge of the chemical and physical forces with which they have to deal. I urge this because of my conviction that whenever the most perfect knowledge of chemistry and physics becomes the basis of rational Medicine, then, and not till then, Medicine will obtain the highest place among all the arts that minister to the welfare and happiness of man."

(To be continued.)

REVIEWS.

A Practical Treatise on the Diseases of the Testis and the Spermatic Cord and Scrotum. By T. B. Curling, F.R.S., Surgeon to the London Hospital, etc. With numerous wood engravings. Third edition, revised and enlarged. London: Churchill and Sons. 1866. Pp. 609.

This well-known monograph contains all that is known at present upon the subject, the large experience of its author during the last ten years having been added to it. Some new subjects are treated of, viz., inguinal hydrocele, sterility, congenital vascular tumours of the scrotum. It is valuable not only to the Medical Practitioner, but also to the student.

A Manual of the Principles of Surgery, based on Pathology. For Students. By William Canniff, Licentiate of the Medical Board of Upper Canada, etc., etc. Pp. 402, illustrated. Philadelphia: Lindsay and Blakiston. 1866.

This work commences with a very modest Preface, stating that "the author has not had the advantages of an early literary education," but referring to his forefathers' labours in pioneering the way for scientific agriculture, and hoping that this book may do as much for scientific Surgery. The art of gleaning seems to have descended in the family, as we here find a rich harvest from the broad and laboriously cultivated fields of Rokitansky, Simon, Cooper's Dictionary, Virchow, and Holmes' "Surgery." "The illustrations, it will be seen, are taken from Paget's 'Surgical Pathology'" (page iv.). The tone of the work is orthodox and generally sensible, with touches of originality here and there. The writer seems to be descended from one of those ancient and honourable Tory families who preferred, at the close of the American War, to migrate to the colder and more barren North than to remain with the victorious majority who had cast off their allegiance to Great Britain. It is clear from the work before us that they are as energetic and high-spirited as of old.

Clinical Surgery in India. By J. Fayrer, M.D., F.R.C.S., and F.R.S. Edin., Surgeon Bengal Army, Professor of Surgery in the Medical College, and First Surgeon in the Calcutta Hospital. London: Churchill and Sons. 1866. Pp. 774.

Few men living have seen so much of actual practical Surgery as the author of these excellent treatises. He may well say, "Quod vidi, scripsi." When almost a boy he was engaged in the Italian war, then at Rangoon, and the survivors of the siege of Lucknow (where for his services in Rangoon he had been made Resident Surgeon) must know him well. After a lucid lecture upon the state of Surgery in Bengal, he gives papers upon Osteomyelitis, Popliteal Aneurism, the Cæsarian Section, Perineal Section, the Radical Cure for Hernia, the Reproduction of Bone, Interstitial Absorption, Elephantiasis Scroti (with an illustration at p. 342 of a case in which the tumour hangs beneath the patient's knees). There is also a form of tumour described which he names nævoid elephantiasis. Some papers on Fractures, Tetanus, and Amputation at the Hip-Joint, with an Address to Students, end this valuable book.

Handbook of Natural Philosophy. By Dionysius Lardner, D.C.L., formerly Professor of Natural Philosophy and Astronomy in University College, London. Electricity, Magnetism, and Acoustics. 7th Thousand. Revised and edited by George Carey Foster, B.A., F.C.S., Professor of Experimental Physics in University College, London. 400 Illustrations. Pp. 442. London: Walton and Maberly. 1866.

The title of this work explains the contents sufficiently, and it is only necessary to add that the present editor has inserted a considerable amount of new matter, especially on Ohm's "Law of the Intensity of Currents;" "the tangent galvanometer;" "the reostat" for ascertaining the resistance to a current of electricity; ozone; polarisation of electrodes; the retardation of telegraphic signals of inductive action in submarine cables; and the laws of the development of heat in the voltaic circuit. The work is carefully indexed, and its contents brought quite up to the present day.

Elements of Qualitative Chemical Analysis. By W. H. Spencer. B.A., Fellow of the Cambridge Philosophical Society. London and Cambridge: Macmillan and Co. 1866 4to. Pp. 94.

This book, says the author, "is designed to serve as a manual for the beginner, and as a text-book for examination; its original character consists in the *arrangement* of information which may be found in existing manuals of chemical analysis." The arrangement is in the form of tables, in which the distinctive reactions are set forth with the greatest clearness and minuteness, and which are illustrated by copious notes.

The Biographical Treasury: a Dictionary of Universal Biography. By Samuel Maunder. Thirteenth Edition; reconstructed, thoroughly revised, and in great part rewritten, with about One Thousand additional Memoirs and Notices. By W. L. R. Cates, Author of "The Pocket Date Book." With a new Frontispiece designed by J. E. Doyle, comprising Forty distinct Full-length Portrait Figures chronologically placed in contemporary double groups. Fcp. 8vo, pp. 1160, price 10s. 6d. cloth, or 14s. bound in calf.

This universal biography gives a full share of space to physicians, anatomists, botanists, naturalists, and chemists. Amongst these we have looked for the names of J. H. Green, G. T. Burnett, J. F. Daniell, Prout, and find short and accurate notices. We do not find Todd, Guthrie, Mayo, Mayow. It is, nevertheless, a book marvellous for the quantity and compactness of its information.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, July 4, 1866.

Dr. Barnes, President.

The following gentlemen were elected Fellows:—Drs. Yeaman and Tannahill; Messrs. Chattaway, Peacock, and Low.

Dr. Meadows showed an Écraseur made for him by Messrs. Mayer and Metzler. It consisted of a single wire, tempered in a peculiar way, rendering it stronger than any wire-rope or chain he knew of. He also exhibited a good specimen of the so-called Cauliflower Excrescence, which he had removed by means of the single-wire écraseur.

Dr. Meadows related a case of

HYPERTROPHY OF THE LABIUM.

The patient, 27 years of age, about six weeks after her second confinement three years since, experienced sudden pain and enlargement of the labia. Treatment was adopted, and in 1864 she was admitted into St. Bartholomew's Hospital, where drainage-tubes were passed through the mons veneris and left labium; but she left the Hospital unrelieved. When seen by Dr. Meadows, the left labium was the size of the fist, and the whole mons was much thickened, indurated, and brawny-looking. On July 20 the entire labium was removed, together with an elliptical portion of the mons. The operation was successful, and left the parts on that side of their normal size.

Dr. Neal exhibited two specimens of singular malformation, showing the influence of maternal impressions on the fœtus in utero in the lower animals—the cow and the mare.

Mr. Sheraton showed a steel fillet designed by him to supersede the forceps. It is constructed by combining a rotatory action with the fillet principle. The rotatory action is obtained by pressing upon transverse bars, by which the blades are formed into a loop of elliptical form, having a short transverse diameter of four inches and a quarter, and a long diameter of five and a half or six inches. Mr. Sheraton explained its application, and considered the flexibility and thinness of the blades as important, in allowing ready adaptation to the axis of the pelvis and to the form of the head.

Dr. Graily Hewitt thought the instrument highly ingenious, and likely to be serviceable in some cases, particularly when the head was quite low down; but he believed it could not take the place of the forceps in those cases where the forceps is so particularly valuable—viz., when the head is not so low down, and where there is some degree of impaction.

A paper by Dr. Tilt was read

ON EXTREME SURGICAL TENDENCIES OF UTERINE PATHOLOGISTS; AND ON THE DIVISION OF THE CERVIX UTERI.

Dr. Tilt deprecated the extreme Surgical tendency that seemed to characterise the present epoch. He gave as a proof of this tendency the frequency with which operations have been discussed at Medical Societies, the unnecessary multiplication of Surgical instruments, and the warmth with which their invention or modification was supported. He likewise noticed two books which have lately appeared: one, a very important work by Dr. Marion Sims, in which constitutional means of curing diseases of women were almost completely ignored; and another, by Mr. I. B. Brown, in which it was recommended to cure hysteria, epilepsy, and insanity by amputation of the clitoris. Dr. Tilt stated that he had known the division of the cervix uteri to have been frequently performed or recommended in cases where he was able to pass the uterine sound, and he submitted that no Practitioner was warranted in dividing the cervix, either for sterility or dysmenorrhœa, when the cervical canal had that width; as microscopic animalcula could find no difficulty in ascending where the uterine sound could pass. He alluded to the difficulty of passing a sound into the virgin womb, which did not interfere with the frequency of conception, in young women, soon after marriage. The author's experience led him to believe that the utility of dividing the cervix uteri had been unintentionally exaggerated. There were no statistics to show that conception was frequent after the operation; and he had frequently been consulted by those who had been operated upon during the last ten years, and who had remained barren. Dr. Tilt argued that there was so great a tendency on the part of the divided surfaces of the cervix to reunite, that the operation was generally useless, unless followed up by dilatation; and he thought that in the majority of cases of uterine stricture dilatation was the safest and best way to relieve dysmenorrhœa and to facilitate conception. He wished the division of the cervix to be restricted to cases where the cervical canal was extremely narrow or the cervical walls very hard, and to cases wherein dilatation had proved a failure, or where there was flooding from uterine fibroids. He reserved his opinion respecting the value of the operation in cases of uterine displacement or of malformation; and deprecated the operation being resorted to as a kind of *pis aller* in those intractable forms of uterine disease in which relapses depend either on a congenital unhealthy tendency of the organs of generation, or on some deeply rooted constitutional taint. Dr. Tilt mentioned that in three of his patients the operation had been performed without the knowledge of the patients or their friends, and he took occasion to remark that this did not accord with the usually received notions of Medical ethics.

Dr. Henry Bennet thought that Dr. Tilt deserved the thanks of the Society and of the Profession for the paper read that evening. Although for the last seven years ill health had kept him out of active practice, he had continued to take the liveliest interest in uterine pathology, and had made himself acquainted with all that had been written and said on the subject. As a result he was deeply impressed with the idea that the therapeutics of uterine disease had taken of late too Surgical a direction, and he thought, like Dr. Tilt, that this tendency required restraining, limiting, directing. After a seven years' absence from the debates of the Society, he could not but feel that it was passing strange that he should have to rise as a conservative, and that in the very arena where he had many a time, in former days, defended progress, and where he had been opposed and stigmatised as a rash innovator. When he commenced practice in London twenty-three years ago, uterine therapeutics comprised little else but the treatment of cancer, tumours, prolapsus, and constitutional conditions. The most continued and irrational opposition met his efforts to establish more correct views—to demonstrate that physical means of investigation were as imperatively demanded in the study and treatment of diseases of the uterus as in those of diseases of the heart, lung, bladder, rectum, etc. By degrees, however, more reasonable ideas gained ground, and this senseless opposition to the progress of science was vanquished. Now it had entirely ceased, and had become a mere remembrance of the past. Indeed, as stated by Dr. Tilt, the danger rather appeared to be in going too far the other way, and interfering too much. This seemed probable when a recent Surgical work on female diseases, written by a clever, experienced, laborious American Surgeon, his friend, Dr. Marion Sims, proposed division of the cervix uteri on both sides, down to its vaginal attachments, as a remedy for all kinds of morbid conditions, for various deviations, and for sterility. Indeed the Doctor, in one page, stated that he and his colleague in the Female Hospital at New York performed this operation 500 times in two years! Again, many recent writers and operators seemed imbued with the idea that the passage through the cervical canal to the cavity of the uterus ought to be, what might be termed metaphorically, as open "as a carriage door," constantly finding stricture therein, for which they operate by ruthless divisions if it is not so. He (Dr. Bennet) believed that this view was founded in error, and that the greater part of these cutting operations were not in any respect called for or necessary. He believed also that this error would not be so constantly made were his discovery of a sphincter at the os internum recollected or recognised. This sphincter was a vital contraction of the circular fibres of the cervix at the os internum, similar in function to the sphincters which closed other cavities—the stomach, rectum, bladder. When the cold uterine found reached it, it contracted, and impeded its entrance into the uterine cavity, and a stricture was declared to exist. A wax bougie, No. 4 or 5, on the contrary, its extremity warmed by the hand, and slightly curved to the shape he had described as that of the uterine passages, generally entered with ease. The patent condition of the cervical passages which these authors appeared to consider necessary for conception was not natural, and certainly not necessary for the entrance of microscopic spermatozoa. It must not be forgotten either, in treating of sterility, that in England one married woman in six is sterile; in America, according to Dr. Marion Sims, one in eight. The causes of sterility were very numerous, and were not to be removed merely by cutting a royal road for the spermatozoa. Moreover, these divisions of the cervix healed up, and in a few months the narrowed condition was as bad or worse than ever in most cases. Twenty years ago, at Sir James Simpson's instigation, he operated in many cases, and all but abandoned the operation on account of these relapses. Since then he had generally used very small sponges if he wished to dilate, and had never once had an accident. The attacks of inflammation that had occurred in the hands of others had no doubt been caused by the attempted dilatation of inflamed tissues. The cervical canal ought to be perfectly sound when it was interfered with. In conclusion he repeated that he quite agreed with Dr. Tilt that the uterus is now-a-days too frequently interfered with surgically, and that the indications for operations required better defining.

Mr. Baker Brown said he thought the paper was brought forward at a most appropriate time, for he perfectly agreed with the author and with the observations of Dr. Henry Bennet that operations upon the cervix uteri were performed too frequently, and without proper regard to preparatory and subsequent treatment. He was glad to have the opportunity of stating before the Society, in the strongest language, his reprehension of the rashness with which this operation was performed in both the out-patients' department of hospitals and the consulting rooms of the operator. He had always taught that the operation of dividing the os and cervix uteri was one of great danger; and although he had performed it a vast number of times, he had never done so without careful preparatory treatment, and the most absolute rest for two or three weeks after the operation. He thought the danger was also increased by the frequent division of the internal os. For his own part, in all cases of flexions, he simply divided the cervix up to, but not through, the internal os; but in all cases of uterine hæmorrhage or intra-uterine fibroid tumours, he then carried his incision through the internal os. In all cases, immediately after operation, he plugged with oiled lint, and took every precaution to prevent the admission of atmospheric air. He believed the neglect of these precautions would generally account for the untoward results which so frequently followed the operation. He could confirm all that Dr. Bennet had said as to the opposition and persecution he had met with in reference to his treatment of uterine diseases; and when he reflected how triumphantly Dr. Bennet had overcome all his opponents by the truth of his practice, he (Mr. Brown) felt consoled for the opposition he received for publishing the results of his experience on a subject of which he as yet confessed himself to be but a learner. But as he had always, through a long Professional career, immediately published any innovation which he had believed to be practically useful, so he would continue unto the end, feeling sure that the majority of the Profession would always honestly investigate anything which he might place before them.

Dr. Head was of opinion that the expression "stricture of the os uteri" demanded a clearer pathological definition. He never had had the opportunity of seeing after death a stricture of any portion of the cervical canal, and thought the specimens must be extremely rare. He believed that cases of coarctation of the os uteri internum, not dependent upon organic disease or deviations of the uterus from its normal axis, may be attributable very frequently to spasm of the muscular wall of the uterus, especially at the orificial zone. Irritation acting upon the lining membrane of the uterus or cervix reflects itself to the muscular apparatus of the uterus much as occurs in cystitis. He concurred with Dr. Tilt in the belief that in numerous cases operative interference had been premature, and that we should hesitate before we appeal to the knife; indeed that it should be the last resource, and only employed after all constitutional and local measures had been found utterly inefficacious. He (Dr. Head) had lately contrived an apparatus, by means of which the vapour of chloroform unmixed with air can be passed into the cervical and uterine cavities, and had found chloroform vapour thus injected a remedy which was likely to afford considerable relief in cases of neuralgic dysmenorrhœa.

Dr. Graily Hewitt believed with Dr. Tilt that the operation of incision of the cervix uteri was too frequently, and therefore unnecessarily, practised. He differed from Dr. Tilt as to the indications for the operation. The uterine sound could frequently be introduced with a little patience in cases where the cervix was for menstruation purposes virtually strictured. He alluded particularly to cases, such as were by no means infrequent, where the canal was distorted and sinuous—a condition arising from thickening of the tissues of the cervix. The mucous membrane might be thickened also; but the chief condition was the irregular hypertrophy of the cervix itself. Then, again, he thought Dr. Tilt attributed too little importance to the effect of the presence of small fibroid tumours in determining flexions and consequent virtual stricture of the cervical canal. He believed many cases of cervical distortion and narrowing could only be dealt with effectually by means of a cutting operation; but the indiscriminate application of the operation was to be strongly deprecated.

Dr. Routh said the discussion proved how little the Profession was agreed as to either the anatomy or pathology of stricture of the uterine canal. Anatomically, Dr. Savage did not admit a special sphincter at the internal os. Besides, did not circular fibres abound everywhere in the cervix? Then, as to the seat of stricture, it was strange to find eminent men—accoucheurs—fixing stricture almost invariably at the external os; whilst others, quite as eminent, place it at the internal os. Then, again, was it to be said the uterine cervical cavity was never to be cut except in cases of stricture?—and could not the depth of the uterine incision be regulated according to the case? In chemosis of the eye, who would deny the advantage of relieving the congestion by incision? So in uterine disease a mucous lining might be so congested as to require scarification. The hysterotome effected this most satisfactorily. In parenchymatous uterine congestion itself it also was most beneficial. In conclusion, he could not allow Physician-accoucheurs to remain under the stigma put upon them. Obstetric Medicine was essentially *Surgical;* and an accoucheur only proved his skill in acting *surgically* when prompt relief would follow, instead of acting *medically*, when cure would be thereby made very tardy, or not occur at all.

Dr. Barnes expressed his gratification at seeing again amongst them one who had rendered such eminent services to obstetric science as Dr. Bennet. Referring to his memoirs on Dysmenorrhœa and allied affections depending upon a peculiar conoid form of the cervix uteri with minute os externum, the President reminded Dr. Bennet that he had there quoted and adopted Dr. Bennet's views as to the os uteri internum. He believed it was very rarely the seat of stricture, or the source of difficulties requiring division. All his experiences still pointed to the opinion expressed in that memoir, that the os externum was the seat of trouble. And when the peculiar formation which he had described existed, the consequences were very often severe, and even dangerous. He had seen retro-uterine hæmatocele caused by it, and had known examples of young girls dying in consequence. It was absurd to rely upon Medicines, or indeed upon anything short of division of the os externum, in such cases. As performed by him, the operation had always been safe. Speedy relief followed, and that in many cases which had undergone every other kind of treatment for years before. These were cases for Surgical treatment.

Dr. Tilt having replied, the meeting adjourned to October 3.

MEDICAL NEWS.

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University Intelligence.—University of London.—1866.—First M.B. Examination.—The following are lists of Candidates who passed the respective Examinations indicated :—

Pass Examination.

Entire.

First Division.—Tempest Anderson, University College ; James Stanton Cluff, B.A. Dub., University College ; Thomas Richardson Loy, University College ; Bennett May, Sydenham College, Birmingham ; John James Ridge, St. Thomas's Hospital ; Frederick Taylor, Guy's Hospital ; William Warwick Wagstaffe, B.A., St. Thomas's Hospital.

Second Division.—Edward Homfray Addenbrooke, St. Bartholomew's Hospital ; Charles Dorrington Batt, St. Bartholomew's Hospital ; John Galley Blackley, Royal Manchester School of Medicine ; Edward Bowles Crowfoot, St. Bartholomew's Hospital ; Alexander Paull Fiddian, King's College ; Henry Flamank Marshall, Sydenham College, Birmingham ; Edward Nettleship, King's College ; Richard Careless Sanders, London Hospital ; Edward Francis Willoughby, University College ; John Sanderson Wyman, Sydenham College and St. Bartholomew's Hospital.

Excluding Physiology.

Second Division.—Rowland Heathcote, Royal Manchester School of Medicine ; Adam Payton Hurlstone, University College ; Joseph Lees, St. Thomas's Hospital ; Edward Hepburne Seccombe, King's College ; Isaac Burney Yeo, King's College.

Physiology only.

First Division.—Edward William Berridge, St. Bartholomew's Hospital ; John Durham Bird, Royal Manchester School of Medicine ; George Rolph Raine, Guy's Hospital.

Second Division.—Cyril William Bowdler Bell, B.Sc., Hull Medical School ; John Reuben Bathurst Dove, London Hospital ; Reginald Eager, Guy's Hospital.

Examination for Honours.

Anatomy.

First Class.—Jas. Stanton Cluff, B.A. Dub. (Exhibition and Gold Medal), University College ; Frederick Taylor (Gold Medal), Guy's Hospital.

Physiology, Histology, and Comparative Anatomy.

First Class.—Jas. Stanton Cluff, B.A. Dub. (Exhibition and Gold Medal), University College.

Second Class.—John James Ridge, St. Thomas's Hospital.

Third Class.—Tempest Anderson, University College.

Organic Chemistry and Materia Medica and Pharmaceutical Chemistry.

First Class.—Jas. Stanton Cluff, B.A. Dub. (Exhibition and Gold Medal), University College ; Frederick Taylor (Gold Medal), Guy's Hospital

Second Class.—Tempest Anderson, University College.

Third Class.—John James Ridge, St. Thomas's Hospital ; Wm. Warwick Wagstaffe, B.A., St. Thomas's Hospital.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to practise on Thursday, August 30, 1866 :—

Charles Read, Falmouth.

The following gentlemen also on the same day passed their First Examination :—

Charles Henry Furnivall, Westminster Hospital ; Alfred Kelly, King's College Hospital ; Frank Henry Laking, St. George's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Laurence, J. Z., M.R.C.S.E., has been appointed Ophthalmic Surgeon to St. Bartholomew's Hospital, Chatham.

BIRTHS.

Lawson.—On September 4, at 5, Harley-street, the wife of G. Lawson, F.R.C.S.E., of a son.

Littlejohn.—On September 2, at 24, Royal-circus, Edinburgh, the wife of Dr. Littlejohn, of a daughter.

Moreton.—On August 30, at Tarvin, near Chester, the wife of J. E. Moreton, F.R.C.S., of a daughter.

Sturt.—On September 1, at 57, Margaret-street, Cavendish-square, the wife of T. J. Sturt, M.D., of a daughter.

MARRIAGES.

Chapman—Lazares.—On September 1, at St. Paul's, Regent's-park, J. Chapman, M.R.C.S.E., of Woodville-terrace, Hounslow, to Sarah, daughter of the late J. Lazares, Esq., of Jeffonovitschi, Russia, and of Finchley, Middlesex.

Stanley—Phillips.—On August 29, at St. Peter's, Pimlico, W. E. S. Stanley, Surgeon, of Leicester, to Mary Emily, eldest daughter of Mr. G. Phillips, Bessborough-street.

DEATHS.

Blount, John Hillier, M.D. Lond., at Bihallee, Assam, late of Bagshot, Surrey, on June 28, aged 44.

Burbury, S. W., M.D. Aberdeen, at Newhall-street, Birmingham, on August 31.

Diamond, Francis Henry, M.D., at Faubourg de Bourgogne, Orleans, France, August 25, aged 49.

Gibbs, John, M.D. Edin., at 35, Gloucester-crescent, Regent's-park, on September 1, in his 86th year.

Land, W., M.D. Erlangen, at Exeter, on August 22, aged 77.

Lovell, Francis, M.R.C.S.E., at Chelmsford, on September 2, aged 53.

Tanner, John, M.D. Giessen, at Gloucester House, Ledbury, on August 26, aged 60.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Bolton Union.—Dr. Carruthers has resigned the Eastern Bolton District; area 412; population 24,996; salary £62 10s. per annum.

Thirsk Union.—Mr. J. C. Robinson has resigned the Kilburn District; area 2662; population 434; salary £8 per annum.

Woodbridge Union.—Mr. Jones has resigned the Third District, area 8115; population 2602; salary £48 per annum.

Yeovil Union.—Mr. William Harvey, for the Fifth District, deceased; area 4617; population 3309; salary £54 per annum.

APPOINTMENTS.

Hackney Union.—Eustace C. Summers, L.R.C.S.E., L.S.A., to the Homerton District.

Reading Union.—Charles Vines, F.R.C.S.E., L.S.A., to the St. Laurence District.

St. Thomas Union.—George Pigott Barton, M.R.C.S.E., L.S.A., to the Lympstone District.

Weardale Union.—William M. Renton, M.D. Edin., M.R.C.S.E., L.S.A., to the Derwent District.

Dr. Farr has accepted the Presidency of the Health Section of the Social Science Congress, to be held at Manchester in October next.

Birmingham Medical Benevolent Society.—Appointments made at annual meeting holden on Friday, August 31, 1866—*President:* Dr. Fletcher. *Vice-Presidents:* Mr. Woody, of Tamworth ; Mr. John Overton, of Coventry ; Dr. Alfred Hill, Winsor-green ; Mr. Swain, Newhall-street, Birmingham.

Presentation of a Testimonial to an Asylum Medical Officer.—On Saturday evening last an elegant silver inkstand was presented to J. D. Moore, Esq., M.D., F.L.S., on his retiring from the appointment of Deputy-Superintendent of the County Lunatic Asylum at Lancaster, as a mark of esteem and regard from the officers and servants of the institution.

Hospital for Women, Soho-square.—The following gentlemen have been appointed by the Committee Vice-Presidents of this Hospital :—Sir William Fergusson, Bart., F.R.S. ; Dr. Arthur Farre, F.R.S. ; and Dr. Jenner, F.R.S. Sir Charles Locock, Bart., F.R.S., has many years occupied a similar position.

A New Bone Cave.—We hear that a cave containing large quantities of human remains, with those of hyæna and other extinct mammals, has been discovered in Switzerland.

The London University.—Lord John Manners has decided upon the plans for the new buildings of the London University at the back of Burlington House. Mr. Pennethorne, architect to the Board of Works, having furnished two designs, one in a classic style, the other in Italian Gothic, Lord John Manners has chosen the latter, and Messrs. Jackson and Shaw, the contractors, have commenced the excavations. The design chosen, says the *Herald*, although somewhat highly decorated, has substantial features, and is on the whole creditable, while Lord John Manners has shown good taste in rejecting the rather squat design which represented the classic side of the attempt.

Cholera.—There were twelve cases of cholera in Dublin on Saturday, about double the number of the rest of the week.

Cholera and Foul Water.—A bargeman was brought into the Great Northern Hospital on Wednesday in the collapsed stage of cholera. A point of interest in the case is that the man had fallen from his barge into foul canal water at Poplar on Monday, and whilst submerged he says he swallowed two or three mouthfuls of the water. Soon after he was seized with vomiting and purging. He is still under treatment. We shall give the particulars of the case in a future number.

The Strand Board of Guardians and Sisterhoods.—The Sisters of All-Saints Home, Margaret-street, have offered to undertake the nursing of the Strand Union Workhouse gratuitously. At the weekly meeting of the Guardians, after a discussion it was determined that the consideration of the subject be deferred for six months.

Sanitary Cases.—At Marlborough-street on Friday, a costermonger was summoned for selling fish unfit for food, the case being brought forward by the assistant to the Medical Officer of Health for St. Giles's. The magistrate inflicted a small fine, 5s. and costs. A baker at Islington, named Gregory, was prosecuted the same day at the Clerkenwell Court for not keeping his bakehouse clean, and fined 5s. and costs. At the Thames Court the same day, the Officer of Health for Whitechapel found it necessary to take proceedings against Mr. Barrett, a vestryman and guardian of the parish of St. George-in-the-East, for the wretched state of some small houses owned by him. An order was made for their repair and deodorisation. Similar orders were made against two other owners the same day. On Monday there was a conviction at the Clerkenwell Court under the new Sanitary Act of last Session: one William Rheinlander, landlord of a house in Caledonia-street, Islington, being fined £2 18s. for overcrowding to such an extent as to allow 155 cubic feet only to each person, or about half the minimum prescribed by the Act. At the Guildhall Court, a butcher at Walton, near Ipswich, has been fined £10 for sending bad pork to Leadenhall-market.

Composition and Quality of the Metropolitan Waters in August, 1866.—The following are the returns of the Metropolitan Association of Medical Officers of Health :—

	Total Solid Matter per Gallon.	Loss by Ignition.(a)	Oxidisable Organic Matter.(b)	Hardness.	
				Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction . .	18·13	0·81	0·60	13·5	4·0
West Middlesex . .	16·80	0·59	0·48	13·0	3·5
Southwark and Vauxhall.	18·67	1·00	0·64	14·0	3·5
Chelsea	18·43	0·65	0·56	13·0	3·5
Lambeth (not received)					
Other Companies.					
Kent	27·36	0·70	0·03	17·5	8·5
New River . . .	17·09	0·54	0·22	13·0	3·5
East London . . .	18·19	0·88	0·56	13·0	4·0

All the samples of the Metropolitan waters received during the month have been remarkably bright and free from colour; and the proportion of organic matter has not in any case exceeded 0·7 of a grain per imperial gallon of water, while in the East London water it was very little more than half a grain per gallon, and in the Kent water it was only 0·03 of a grain per gallon. The total amount of saline matter in the water derived from the Thames is a little more than it was last month, but that of the other Companies is a little less.

(a) The loss by ignition represents a variety of volatile matters as well as organic matter, as ammoniacal salts, moisture, and the volatile constituents of nitrates and nitrites.

(b) The oxidisable organic matter is determined by a standard solution of permanganate of potash, the available oxygen of which is to the organic matter as 1 is to 8; and the results are controlled by the examination of the colour of the water when seen through a glass tube two feet in length and two inches in diameter.

We believe that the Lords of the Admiralty are contemplating carrying out very shortly one of the provisions of the Circular which had its origin in Vice-Admiral Sir Alexander Milne's Committee, by promoting to the rank of Staff-Surgeon certain officers who, although they have not served the full term of twenty years on full pay, have by their zeal and professional attainments attracted the attention of the authorities. This intended act of their Lordships is anxiously looked for by the Profession.—*Sunday Gazette.*

Sanitary State of Auckland, New Zealand.—Wherever the English go, they seem to take certain bad habits with them. One would think that pure air and pure water would be the first desideratum with those who fly our crowded cities, but there is scarcely a town or city at home of which a worse tale could be told than Dr. Philson does of Auckland. It is the old old story—fever and dysentery, cesspools and surface wells, stinking fæcal gases, and filthy water. The *Daily Southern Cross*, which quotes Dr. Philson's Report, wisely advocates the use of earth closets. The people at Melbourne are moving in the same direction.

The New Sydenham Society.—The eighth annual meeting of the New Sydenham Society was held on August 10 in the rooms appropriated to the British Medical Association at Chester. Mr. Turner, Vice-President, in the chair. Amongst others present were Dr. Sibson, Dr. Morell Mackenzie, Dr. Paget (Cambridge), Dr. Falconer (Bath), Dr. Miller, Mr. Ch. Heath, Mr. Spender (Bath), Dr. Slyman (New Town). The minutes of the former meeting having been read, the Hon. Secretary, Mr. Hutchinson, presented the balance-sheet and the draft of the Report as prepared by the Council. The balance-sheet showed that the Society had upwards of £1200 in its Treasurer's hands. In reference to the works to be issued for the current year, the Report stated that one volume was already out, and that three others would follow. These are as follows:—I. Bernutz and Goupil's Treatise on Diseases of Women. Translated and abridged by Dr. Meadows. Vol. I. (Already out.)—II. Hebra on Diseases of the Skin. Vol. I. Translated by Dr. Hilton Fagge.—III. The Society's Atlas of Skin Diseases. A Sixth Fasciculus, to comprise (in three plates) illustrations of eczema impetiginoides on face of adult; eczema on the face, etc., of infant; eczema rubrum on leg of adult; psoriasis of hands and finger-nails; syphilitic psoriasis of finger-nails; congenito-syphilitic psoriasis of finger and toe-nails; onychia maligna; chronic general onychitis.—IV. Griesinger's Manual of Mental Diseases. Translated by Dr. Lockhart Robertson and Dr. Rutherford. In reference to the production of condensed translations, the Report had the following sentences –In volume 28 (Bernutz and Goupil) the experiment has been tried of abbreviating the text of the original, and a volume of 590 pages has been condensed into one of 276. It is hoped that this has been done without any material loss to the usefulness of the work, whilst it has of course permitted a very great reduction in its cost. The Council is of opinion that from time to time other valuable foreign works of such large size as to render their translation *in extenso* inexpedient, if not wholly impracticable, may with great advantage be thus introduced to the English Profession. It is not, of course, intended to contrast the value of a condensed translation with that of a complete one, but it is to be remembered that instead of the full translation of one large work, it may be easily practicable to produce abbreviated editions of two or three. Not only is the Council able to secure for the responsible work of condensed translation the services of highly accomplished editors, but it trusts also, as usual heretofore, to obtain the co-operation of the authors themselves. For 1867 four works are in preparation:—I. Bernutz and Goupil's Treatise on Diseases of Women. Second and concluding volume. Translated by Dr. Meadows. (With this volume, to be ready in January, a list of the Honorary Local Secretaries and members is to be given).—II. A Biennial Retrospect of Medicine and Surgery. Vol. I. Physiology, Mr. H. Power; Medicine, Dr. Markham; Surgery (General), Mr. T. Holmes; Ophthalmic Medicine and Surgery, Mr. T. Windsor; Midwifery, Dr. Barnes; Forensic Medicine, Toxicology, and Hygiene, Dr. Hilton Fagge.—III. Hebra on Exanthems and Diseases of the Skin. Vol. II. Translated by Dr. Hilton Fagge.—IV. A Seventh Fasciculus of the Society's Atlas of Portraits of Skin Diseases. The Report concluded by stating that the Society had obtained a considerable number of new members during the current year, and urged upon all interested in its welfare the importance of endeavouring to extend its sphere. Dr. Morell Mackenzie moved, and Dr. Paget seconded, the adoption of the Report and balance-sheet, which was carried unanimously. Some discussion ensued as to the part of the Report referring to condensed translations, and all who took part in it coincided in the opinion expressed by the Council in their favour. The ballot for officers next took place, and the following were declared duly elected:—*President:* James Paget, Esq., F.R.S. *Vice-Presidents:* William W. Gull, M.D.; Thomas Laycock, M.D., F.R.S. Edin. (Edinburgh); W. Bowman, Esq., F.R.S.; Richard Partridge, Esq.; Sir D. J. Corrigan, M.D. (Dublin); J. E. Erichsen, Esq.; W. T. Gairdner, M.D. (Glasgow); Francis Sibson, M.D., F.R.S.; John W. Ogle, M.D.; Edward Waters, M.D. (Chester); Thomas B. Peacock, M.D.; E. R. Bickersteth, Esq. (Liverpool); Thomas Turner, Esq., F.L.S. (Manchester); Sir Thomas Watson, M.D., F.R.S.; C. J. B. Williams, M.D., F.R.S. *Council:* John T. Banks, M.D. (Dublin); John Barclay, M.D. (Leicester); Robert Greenhalgh, M.D.; W. Martin de Bartolomé (Sheffield); Lionel Beale, M.D., F.R.S.; Charles Brooke, Esq., F.R.S.; Thomas Bryant, Esq.; John Couper, Esq.; Thomas M. Daldy, M.D.; Thomas Hillier, M.D.; Robert Druitt, M.D.; A. E. Durham, Esq.; Edward L. Fox, M.D. (Bristol); T. H. Bartleet, M.B. (Birmingham); J. Bell Fletcher, M.D. (Birmingham); Christopher Heath, Esq.; William McEwen, M.D. (Chester); F. E. Anstie, M.D.; Robert Martin, M.D.; W. J. Clement, M.P. (Shrewsbury); H. Gueneau de Mussy, M.D.; W. M. Graily Hewitt, M.D.; Edward Ray, M.D. (Dulwich); C. Handfield Jones, M.B., F.R.S.; Robert W. Smith, M.D. (Dublin); J. K. Spender, Esq. (Bath); A. P. Stewart, M.D.; W. S. Savory, Esq., F.R.S.; W. E. Swaine, M.D. (York); Erasmus Wilson, Esq., F.R.S.; Hermann Weber, M.D.; J. G. Wilson, Esq. (Glasgow). *Treasurer:* W. Sedgwick Saunders, M.D., 12, Queen-street, Cheapside, E.C. *Auditors:* J. S. Bristowe, M.D.; Herbert Davies, M.D.; Peter Gowland, Esq. *Hon. Secretary:* Jonathan Hutchinson, Esq., 4, Finsbury Circus, E.C.

THE following are the last week's Cattle Plague Returns.

Census Divisions.	1. Attacked. Week ended Aug. 11.	Week ended Aug. 18.	Week ended Aug. 25.	Back cases reported in the week ended Aug. 25, 1866.	2. Result of reported Cases from the Commencement of the disease. Attacked.	Killed.	Died.	Recovered.	Unaccounted for.
Metropolitan Dist.	..	..	..	..	7911	3429	3714	318	450
South Eastern Co. .	..	..	..	8	4888	1708	2544	465	171
South Midland Co.	35	24	10	..	20907	8907	10072	1541	387
Eastern Counties .	9	1	32	..	11531	5481	4860	789	401
South Western Co.	6	..	..	..	1845	739	828	207	71
West Midland Co. .	28	30	32	..	15061	6521	6096	1539	905
North Midland Co.	9	7	7	4	19034	10998	6271	1226	539
North Western Co.	50	43	38	..	73479	26452	35043	8493	3491
Yorkshire . .	13	21	29	..	34670	8011	18360	5938	2361
Northern Counties.	..	..	..	..	8636	4931	2613	974	118
Monmouthshire & Wales . . .	6	1	..	..	8388	1180	5794	1117	297
Scotland . .	*	..	..	..	46861	6263	28088	10707	1803
Totals .	156	127	148	12	253211	84620	124283	33314	10994

This Return shows that 148 attacks were reported to have occurred during the week ended August 25, being an increase of 21 on the previous week.

Fresh outbreaks took place in 17 farms or places where cattle are kept; the number of such outbreaks in the previous week being 20.

* The "5 attacks" reported during the week ended August 11, from Thirdpart, West Kilbride, Ayrshire, have since been ascertained, with certainty, not to have been cases of cattle plague.

BOOKS RECEIVED.

The York Star. Gazette Office, York.

*** We have received the third number of the sixth volume of this very interesting periodical. It is a small literary journal, written by the inmates of the Asylum at Bootham, York, and edited by Dr. Needham, the Medical Superintendent. We are much gratified by observing how well its spirit is kept up, and we are especially struck by the punctuality with which it appears every quarter. There is being held at York a "Yorkshire Fine Art and Industrial Exhibition," and the building is in the grounds of the Asylum. Very naturally, then, the "York Star" opens with an article—and a remarkably clever one—entitled "The York Floral Fête and Gala of 1866." Then come other articles of great merit—"Hindoo Life" and "Florence," and finally two pieces of poetry, which are far above mediocrity. This and other numbers show that, whatever reason there may be for some of Dr. Needham's patients to be under his care, those of them who write for this journal are good scholars and cultivated men. Dr. Needham deserves great praise for the good work he is doing at his responsible post.

The Australian Medical Journal. April, 1866. Melbourne: Wilson and Mackinnon, 78, Collins-street East.

*** Mr. MacGillivray contributes a case of pyæmia after the sting of a scorpion on the inner ankle; death on fifteenth day; abscess of ankle, knee, and shoulder-joints; diffuse suppuration around tibia; abscess in pericardium and in substance of wall of left ventricle, and in one kidney.

A Dictionary of Chemistry and the Allied Branches of other Sciences. By Henry Watts, B.A., F.R.S., F.C.S., assisted by eminent Contributors. Part XXXV. Quadrantoxyds—Saccharometer. London: Longmans. 1866.

A Dictionary of Science, Literature, and Art. Edited by the late W. T. Brande, D.C.L., etc., and the Rev. G. W. Cox, M.A. To be completed in Twelve Parts. Part X., Radiant Heat—Rules. Longmans.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

The very interesting obituary notice of the late Mr. Fuller is unavoidably postponed.

The Metropolitan Poor-law Medical Officers' Association are thanked for their report on Dr. E. Smith's report.

Dr. Beale's Microscopical Researches into the Pathology of Cholera have been unavoidably delayed. But a large number of woodcuts are completed, and the series of papers will be resumed immediately after the Students' Number.

A Provincial Fellow.—Mr. Luke still remains an examiner, although unseated for the Council.

"*October the 1st.*"—Unfortunately you cannot enter on your Hospital studies until you have passed a "*preliminary.*" There will be an examination at the Hall during the present month; not at the College until December.

A Naval Surgeon, Portsmouth.—1. No award for the Gilbert Blane medal has been made lately. 2. Write to Dr. Bryson, Admiralty. 3. The United States Government awarded a medal to Dr. Page Burke for his noble conduct, *but* he has not yet received it. 4 Royal Naval Hospital, Malta.

Dr. L., Pentonville.—There was a time when the Hampstead mineral water was in great repute. There was a long room and tavern attached to the spring, so that the attendants might qualify the water with a little wine. There flourished at the same time Chad's Wells, Bagnigge Wells, Islington Spa, White Conduit House, and the notorious Dog and Duck—

> "Where oft the City spark, from dirty business free,
> Sipp'd the froth'd syllabub, or fragrant tea;
> While with slic'd ham, scrap'd beef, and burnt champagne
> The 'prentice lover sooth'd his amorous pain."

Obstetrician, Stockwell.—Sir Anthony Carlisle was bitterly opposed to man-midwifery. The following doggrel verses were attributed to Okey Belfour, the father of the late Secretary of the College of Surgeons, and have never been published. Old members of the Profession will remember some of the celebrities herein mentioned:—

The Humble Remonstrance of —— to the Attorney and Solicitor-General.

I.
Will your honours but please
To reflect at your ease
Of what passed in your presence of late,
When a low opposition
To the Surgeons' petition
Occasioned a mighty debate?

II.
When this Council thought fit
To you Sirs to submit
That no midwife should practise at all,
Whether female or male,
Whether novel or stale,
Unless pass'd and approved at the Hall.

III.
And when Mr. Warren,(a)
Such doctrines abhorring,
Said it followed, if that were the case,
That each, great and small,
Men and women and all,
In the Court must succeed to a place.

IV.
It was plain as they spoke
That those relished the joke
Who this vile usurpation approved;
While those who, more wise,
Innovations despise
With contempt and displeasure were moved.

V.
But when to the Court
The Clerk(b) made his report,
And came to this part of the tale,
All the members astound
Look indignantly round,
And with rage and vexation grew pale.

(a) Mr. Warren, K.C., Recorder of North Wales.

(b) Okey Belfour.

VI.
Mr. Hawkins(c) spoke first,
And he look'd fit to burst,
If the face a man's feelings reveals,
And he vowed that no power
Should consort him one hour
With old women in Lincoln's-inn-fields.

VII.
Then up got Mr. Long,(d)
And he at them ding dong,
For his meaning he never conceals;
And he swore he'd be shot
'Ere a dowdy should squat
Beside him in Lincoln's-inn-fields.

VIII.
Mr. Chandler(e) spoke next,
And he said he was vex'd,
For in mild language he always deals,
That a plan so absurd
As that he had heard
Should be thought of for Lincoln's-inn-fields.

IX.
Then good old Mr. Warner,(f)
Who sat snug in a corner,
Said no tongue could tell what he feels,
Lest at forty years' end
This new charter should send
Such husseys to Lincoln's-inn-fields.

X.
Next to him Mr. Howard,(g)
Neither peevish nor froward,
Who his sentiments never conceals,
Said such nasty old sluts,
With their prominent guts,
Should ne'er rump him in Lincoln's-inn-fields.

XI.
Mr. Lucas inferred(h)
That from what he had heard,
After all Mr. Plummer's appeals,
Not a man would be found,
Take all the Court then around,
To sit with them in Lincoln's-inn-fields.

XII.
Then up got Mr. Cooper,(i)
And he swore like a trooper
That he'd rather abridge half his meals
Than let an old witch
Taken out of a ditch
Sit next him in Lincoln's-inn-fields.

XIII.
Mr. Earle then declared(k)
That he was prepared,
In spite of all parchments and seals,
To resign his own seat
Before ever he'd meet
The old women in Lincoln's-inn-fields.

XIV.
This roused Mr. Keate,(l)
Who protested he'd eat
For his dinner brown bread and cow-heels,
Before he'd disgrace
An examiner's place
Or mix with them in Lincoln's-inn-fields.

XV.
This called up Sir Charles Blicke,(m)
Who explained the whole trick,
And declared he saw wheels within wheels,
But he vowed he'd resign
His seat rather than join
The fat beldames in Lincoln's-inn-fields.

XVI.
Then the Clerk, as was meet,
Gravely rose from his seat,
And said if so he'd take to his heels,
For no flatulent drabs,
Full of ulcers and scabs,
Should rule him in Lincoln's-inn-fields.

XVII.
Please your honours, then see
What a rumpus there'll be
Should you sanction this odious reign;
It would tend to produce
A most crying abuse,
And the Court with one voice would resign.

XVIII.
Let the matter go on
As it always has done,
And all will remain smooth and fair,
And for those who oppose
What their betters propose,
Why let them all stick as they are.

(c) Cæsar Hawkins.
(d) Mr. Long, of Lincoln's-inn-fields, Surgeon to St. Bartholomew's.
(e) Mr. Chandler, of St. Thomas's.
(f) Mr. Warner.
(g) Mr. Howard.
(h) Mr. Lucas.
(i) Mr. (afterwards Sir) A. Cooper.
(k) Mr. Earle (afterwards Sir J. Earle), of St. Bartholomew's.
(l) Mr. Keate, of St. George's.
(m) Sir C. Blicke bequeathed £300 to the College Library.

PACKING IN WET SHEET IN CHOLERA COLLAPSE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Will you kindly allow the following a space in your journal. As yet no mode of treatment of cholera has proved successful in cases of collapse. I have, however, witnessed very good results in military Hospitals from wet packing, but not in the way it is generally performed. The difference consisted in this, that the water was cold, or ice-cold, whereas ordinarily it is used warm. The cold has at once a beneficial reviving effect on the skin of the whole body, and the wet sheet gets heated by the warmth of the body, which at least exists to some extent at the trunk. The warm sheet then performs all the functions of an extensive poultice. Besides, I believe some of the vapour or water gets absorbed by the skin. The patient being wrapped up in a blanket to his nose, begins to perspire in less than two hours, and then he is saved. The process can be repeated if necessary. In the meantime, ice broken in pieces is given, and nothing else. I need scarcely mention that the mattress is protected from the wet by oilcloth.

In Hospitals where a number of attendants are available the treatment can be easily instituted, and on an average will be found successful.

I am, &c.
F. OPPERT, M.D., L.R.C.P.
Physician to the City Dispensary.

MEDICAL PROVIDENT SOCIETY.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—If all would speak their mind, Mr. Clay might find the less occasion to write himself sole advocate of our Medical Provident Society. Had the detractors of this scheme been present at those sittings where Mr. Clay's notes proved with what care and acumen he had studied every rule, and could the financial ability, business-like conduct, and entire devotedness to this unselfish purpose have been duly appreciated by those who can more readily demolish than construct, a general expression of gratitude for disinterested labour, and of confidence in the management of this Society, would have been readily accorded.

It is a trite saying that "every good work is a gradual work;" and when I see one, not yet thirty, firm and full of healthy vigour, willing thus to provide against contingency of ill, and regretting the possible discontinuance of such incentive to frugality and forethought, it seems to cry shame on all beyond this need who might readily give to the auxilary fund, or start their juniors on this laudable course. Our report virtually says, "Sat cito, si sat tute." May we not further suggest, "Manete paulisper, ut celerius expediamur?" Requesting your indulgence, I am, &c.

H. VEASEY.

Woburn, September 3.

THE TOOMER TRIAL.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Let me refresh the memory of your readers in the case of Neville Toomer, sentenced by Mr. Justice Shee to fifteen years' penal servitude for an alleged rape at Reading on a Miss Partridge. The jury evidently saw faults on both sides, and so gave in the verdict "guilty," but "recommended to mercy," because, as they added, the "prosecutrix had acted indiscreetly." The judge, however, ignored this their recommendation, and, without giving the prisoner the benefit even of a doubt, passed the severest sentence, and this in face of the verdict—the Medical testimony, which stated that there were no signs of rape or injury whatever—the evidence also of witnesses called for the prosecution being far more in favour of the prisoner, and the fact of the prosecutrix remaining on as usual in Toomer's service after the first alleged assault.

The public and the press feel and say that here is a great injustice. Petitions signed by mayors, magistrates, the clergy, and many others, have been presented to the Home Secretary on behalf of the prisoner, but Mr. Walpole refers to the notes of the judge—that is, to the very opinion the whole public are opposed to—and replies that the prisoner's friends can indict Miss Partridge for perjury, which, on account of their means, is simply an impossibility. A great slur has been cast on the Medical Profession.

The evidence of the Doctor, a skilled witness, which generally clears or convicts in these cases, has been totally set at nought.

The pretty prosecutrix was too much for Toomer (perhaps fascinated also judge and jury), and, by advertising herself for the post as housekeeper to wait on a widower, naturally threw herself into danger and temptation.

But all this is passed over, and Neville Toomer committed two or three acts of rape only because the fascinating Miss Partridge told the judge and jury so, and her ideas of such acts are considered more trustworthy than those of the Medical man who examined her.

I am, &c. NEMO.

ON THE TREATMENT OF CHOLERA AND DIARRHŒA WITH OPIATE ENEMATA.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I perceive from the Medical journals that opium, morphia, etc., have been administered hypodermically in the treatment of cholera with some success, but I am not aware that laudanum has received a fair trial in the form of enemata. According to Dr. Marshall Hall, M. Louis gave opiate enemata for cholera with good effect. On the Continent it is generally stated that opium acts much more energetically when administered in the form of enema than when given by the mouth, but the contrary opinion is held by British Practitioners. In innumerable instances of obstinate and apparently irremediable diarrhœa, and in cholera, I have witnessed the utility of laudanum administered in enemata with starch; hence I have been induced to give publicity to the following cases. I am aware that some very eminent Physicians consider opium to be absolutely dangerous in certain conditions of cholera, and therefore may consider the recoveries in the subjoined cases to have arisen more from good luck than management; however, it is not my intention to advance any theory or to comment upon the well-known therapeutical properties of opium, but briefly state a few plain facts.

On the morning of Tuesday, August 7, I was requested to attend a Mrs. H., aged 29, a person in tolerable circumstances, who stated she was in the seventh month of pregnancy, and suspected labour had begun. She had been suffering from diarrhœa since Saturday night, August 4, and was now purged and vomited about every twenty minutes, and complained of severe pain in the stomach and lower bowels and cramps in the legs, with insatiable thirst and heartburn; the pulse 100 and very feeble; skin of a dirty brown colour; the expression of the countenance very anxious and pinched, and the eyes glassy. A mixture consisting of chalk, catechu, and laudanum, had been given, but had apparently been voided in the same state as it had been taken. I ordered three pills, each consisting of a grain of calomel and opium, one to be taken every two hours; brandy with milk or arrowroot, and ice to suck *ad libitum;* hot bottles to the feet, sinapisms to epigastrium. I visited the patient again at 2 p.m., and found the same symptoms existing but more aggravated, but no positive symptoms or signs of labour. The fluid that passed per rectum was of a yellowish appearance, containing a substance like curdled milk in small fragments. Ordered half an ounce of castor oil, with twenty minims of laudanum, which the stomach rejected immediately; the pills, etc., to be continued. On my third visit at 5 p.m., I found the patient's voice reduced to a whisper. She complained of dyspnœa and oppression at the præcordia, intense thirst, abdominal uneasiness, and slight cramps in the calves of the legs; the vomiting was less severe, but the bowels were relaxed every half-hour; pulse 106; skin more dusky, and black beneath the eyes; the latter appeared sunken, and the cheeks hollow. There was great depression of spirits, the patient believing she should soon die I gave an injection per rectum consisting of one drachm of laudanum with about four ounces of starch water, and applied pressure to the rectum by the aid of a folded towel for half an hour, at the expiration of which all desire to have a motion had passed away. I prescribed the following pills, one to be given every three hours:—℞ Argenti nitrat. gr. iv., pulv. opii gr. ij., creosoti gtt. j., conf. q. s, ut fiant pil. viij. The brandy, milk, arrowroot, and ice to be continued.

On my fourth visit about 9 p.m., I found the patient had remained quiet after the enema for about two hours, after which the bowels were relaxed twice or three times, and there was a diminution of all the symptoms. I repeated the injection, and ordered the brandy, milk, etc., to be continued.

On the following morning, August 8, I was gratified to find my patient had remained quiet, and free from vomiting and purging, till 4 a.m., having slept at intervals, after which she was purged and vomited twice. The pulse was fuller and firmer, the skin warm and perspiring, and the countenance wore a more natural expression. Ordered the pills, brandy, milk, arrowroot, and beef-tea to be continued. On the evening of the same day the symptoms were all greatly ameliorated, and the patient had taken her food as prescribed, the bowels having acted twice. The pills were continued.

August 9.—The patient has passed a good night, having slept well, neither vomiting nor purging having occurred since last visit. Prescribed a mixture consisting of quinine and infusion of roses to be given three times a day, and a more liberal diet allowed. From this time the patient gradually improved, and was convalescent in a few days.

On August 27 she was prematurely delivered of a still-born male child. The patient states that the last time she felt the motions of the child was on Thursday, August 9. From the appearance the fœtus presented at birth, taken in connexion with the symptoms and signs enumerated by the patient, it is highly probable that the death of the fœtus occurred at the above time.

On August 7, 1865, at 4 a.m., I was called to visit a gentleman about 36 years of age, residing in the suburbs of the town, in an apparently very healthy locality. Prior to the present attack he had always enjoyed uniform good health. On my arrival I found him vomiting and purging, the motions passed involuntarily, with cramps in the extremities and abdomen, which were so intense as to compel him literally to shriek; at the same time the body assumed a posture analogous to emprosthotonos; the face and extremities were of a leaden aspect; the nails blue; the eyes sunken, and surrounded by a dark circle; in short, facies cholerica and almost complete aphonia existed, the case exhibiting unmistakable symptoms of malignant cholera. The usual astringent remedies, etc., were administered, all of which proved miserably unsuccessful. Death seemed inevitable, when enema opii was resorted to, which proved quite as effectual as in the first case; in the latter case consecutive fever supervened, which harassed the patient for about a week, but from which he made a complete and satisfactory recovery. I am, &c.

Bradford, Yorkshire, August 28. W. Whalley, M.R.C.S., etc.

COMMUNICATIONS have been received from—

Dr. Oppert; Dr. Greenway; Dr. James Rogers; Dr. Braidwood; Dr. J. D. Moore; W. L. Scott, Esq.; H. Veasey, Esq; J. Jones, Esq.; Dr. Vinen; Mr. T. Watkin Williams; Nemo; Mr. Gabb; Mr. Crauford; Non-Medicus; Dr. A. E. Sansom; Dr. Bence Jones; Mr. John Wood; Dr. Hughlings Jackson; Mr. W. Cappe; Dr. Procter.

BOOKS RECEIVED—

Taylor on Medical Missions—New Orleans Medical Journal—The Human Blight and Cattle Blight; or, an Explanation of the Cholera and Cattle Plague.

NEWSPAPERS RECEIVED—

The Ashton Standard—The Sunday Gazette.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 1, 1866.

BIRTHS.

Births of Boys, 881; Girls, 899; Total, 1780.
Average of 10 corresponding weeks, 1856-65, 1761·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	704	709	1413
Average of the ten years 1856-65	578·8	566·1	1144·9
Average corrected to increased population..	..	..	1259
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	1	5	7	3	2	2	12	6
North ..	618,210	10	6	8	1	6	17	24	15
Central	378,058	3	3	2	1	4	2	18	9
East ..	571,158	10	22	4	—	7	14	43	122
South ..	773,175	7	8	6	2	8	6	31	46
otal ..	2,803,989	31	44	27	7	27	41	128	198

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·586 in.
Mean temperature	60·2
Highest point of thermometer	78·5
Lowest point of thermometer	46·9
Mean dew-point temperature	52·8
General direction of wind	S.W.
Whole amount of rain in the week	0·73

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, September 1, 1866, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending Sept. 1.	Deaths.		Temperature of Air (Fahr.)			Rain Fall.	
				Corrected Average Weekly Number.*	Registered during the week ending Sept. 1.	Highest during the Week.	Lowest during the Week.	Weekly Mean of the Mean Daily Values.	In Inches.	In Tons per Acre.
London (Metropolis)	3067536	39·3	1780	1400	1413	78·5	46·9	60·2	0·73	74
Bristol (City) . .	163680	34·9	93	73	‡157	69·2	44·6	58·0	1·33	134
Birmingham (Boro')	335798	42·9	199	163	113	72·0	42·0	58·3	2·39	241
Liverpool (Borough)	484337	94·8	306	281	592	70·6	52·3	59·7	0·81	82
Manchester (City) .	358855	80·0	248	203	‡200	74·8	45·2	58·5	2·19	221
Salford (Borough) .	112904	21·8	77	57	43	71·5	43·9	57·7	1·95	197
Sheffield (Borough) .	218257	9·6	142	115	113	68·6	45·6	56·6	1·40	141
Leeds (Borough) .	228187	10·6	205	116	133	75·2	44·5	58·3	1·17	119
Hull (Borough) .	105233	29·5	67	49	44	..	..	..	..	..
Nwcastl-on-Tyne, do.	122277	22·9	96	65	66	69·0	47·0	56·7	1·53	155
Edinburgh (City) .	175128	39·6	103	84	73	71·7	45·0	57·5	0·80	81
Glasgow (City) . .	432265	85·4	334	252	212	69·6	42·9	57·1	0·91	92
Dublin (City and some suburbs) .	318437	32·7	177	†156	147	71·4	43·5	57·5	0·20	20
Total of 13 large Towns . . .	6122894	34·4	3827	3014	3206	78·5	42·0	58·0	1·28	129
Vienna (City) . .	(1863) 560000	..	..	..	Week ending Aug. 18. 366	Week ending Aug. 18. ..	..	§ 59·5	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·586 in. The barometrical reading decreased from 29·91 in. at the beginning of the week to 29·16 in. on Wednesday.

The general direction of the wind was S.W.

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* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 58·0°.

APPOINTMENTS FOR THE WEEK.

September 8. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p.m.

10. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

11. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

12. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

13. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

14. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

WHY NOT USE THE BEST?

"MAIZENA"

Is the ONLY "PRIZE MEDAL" CORN FLOUR. It was also reported by Jury of 1862, London,

"EXCEEDINGLY EXCELLENT FOOD."

It is superior to the best Arrowroot; makes in short time, and at trifling cost, delicious Blanc-mange, Puddings, Cakes, Omelets, Creams, and scores of other dishes, and is always an invaluable Food for INVALIDS and CHILDREN. Sold in Packets, with directions, by Chemists, Grocers, &c. N.B.—The price is *no more* than for inferior articles.

TRY IT ONCE.

Natural Mineral Waters of Vichy, Carlsbad, Seltzer, Kissengen, Homburg, PULLNA, FRIEDRICHSHALL, &c., direct from the Springs; also the Artificial Mineral Waters prepared by Dr. Struve and Co. at the Royal German Spa, Brighton.—Agents, W. BEST and SONS, 22, Henrietta-street, Cavendish-square, London, W.

NATURAL MINERAL WATERS OF VICHY,

Efficacious in Stomach, Liver, and Renal Diseases; Gout, Rheumatism, Diabetes, &c.

Also, the celebrated OREZZA MINERAL WATER, containing Iron, and which is extensively prescribed as an invaluable Tonic.
VICHY PASTILLES, the best Digestive Lozenges; and VICHY SALTS for Baths. Also, other French and German Natural Mineral Waters.
VICHY WATERS COMPANY (only Depôt in Great Britain), 27, MARGARET-STREET, REGENT-STREET, LONDON, W.

The Mineral Water of Geilnau (Nassau), an Acidulous and slightly Alkaline and Chalybeate Water, of very agreeable and refreshing taste, owing to its large proportion of carbonic acid; a valuable Dietetic Beverage in many morbid tendencies through its antacid, diuretic, and tonic qualities.

Specimen and analysis of the Water may be obtained from Messrs. BECKER and JUNG (Ems), the appointed Agents, 9, Rood-lane, Fenchurch-street, E.C., London, who supply also the other German Mineral Waters.

BARTH'S OXYGEN WATER holds free Oxygen in solution. It gently stimulates the functional action of the stomach and secretory organs, and is a very useful beverage. Wentworth Scott's Analysis gives as contents of a bottle—"Nearly half an imperial pint of pure distilled water, and about 13·5 cubic inches, or 4·6 grains of gaseous oxygen; equivalent to that contained in 21·4 grains of chlorate of potash." 4s. per dozen.

OXYGENATED WATER COMPANY (LIMITED), 36, LONG-ACRE.

Pulvis Jacobi ver, Newbery,

FRAS. NEWBERY & SONS, 45, *ST. PAUL'S CHURCHYARD.*

Prices for Diſpenſing, 1 oz., 9s.; $\frac{1}{4}$ oz., 3s. 4d.

THE PANCREATIC EMULSION,

A NEW REMEDIAL AGENT.

Originated by **Dr. DOBELL,** Physician to the Royal Infirmary for Diseases of the Chest.

Vide The Lancet, *Nov.* 11*th* and 18*th*.—"A third report of cases of consumption treated with Pancreatic Emulsion at the Royal Infirmary for Diseases of the Chest."

THE IMPORTANCE OF PANCREATIC EMULSIONS of Solid Fat over Cod-liver Oil, in the treatment of Tuberculosis, must be as great as that of supplying a plant with good soil instead of putting it into water."—Page 50. "On Tuberculosis," by Horace Dobell, M.D.

This Preparation is now made on an extensive scale, and the Price is therefore considerably Reduced.

N.B.—The TRUE PANCREATIC EMULSION has an acid reaction, and is readily miscible with water or milk.
Preparations in IMITATION of it have an alkaline reaction, and are not miscible with water or milk.

PREPARED ONLY BY

SAVORY & MOORE, New Bond-street,

CHEMISTS TO HER MAJESTY THE QUEEN, HIS ROYAL HIGHNESS THE PRINCE OF WALES, HIS IMPERIAL MAJESTY NAPOLEON THE THIRD, AND HIS MAJESTY THE KING OF THE BELGIANS.

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IODIZED SYRUP of HORSERADISH contains a considerable proportion of Iodine in a state of *organic combination*, which renders it, in many instances, the best *substitute* for Cod-liver Oil in cases where children and young females suffer from debility.

FERRUGINOUS SYRUP of QUINA, tonic, reparatory, and antichlorotic.

Dr. LERA'S PYROPHOSPHATE of IRON and SODA, the most agreeable and easily assimilable of Ferruginous Preparations, combining the principal elements of the Bones and Blood, Iron and Phosphorus.

SYRUP of HYPOPHOSPHITE of LIME, and

SYRUP of HYPOPHOSPHITE of SODA, against all affections of the Lungs and Chest.

SYRUP of HYPOPHOSPHITE of IRON, against Chlorosis.

MATICO INJECTION and CAPSULES, New Preparations, of more certain effect than most of the Medicines recommended for the same class of diseases.

BURIN DU BUISSON'S (Laureate of the Imperial Academy of Paris) DIGESTIVE LOZENGES of LACTATE of SODA and MAGNESIA.

The services they daily render have secured for them the foremost rank among the medicines employed against Functional Derangements of the Digestive Organs. (See Dr. Petrequin's Pamphlet on this subject.)

RULES AND REGULATIONS
OF THE
EXAMINING MEDICAL BODIES IN ENGLAND.
SESSION 1866—67.

REGISTRATION OF MEDICAL STUDENTS.

The following Regulations have been adopted by the General Medical Council, in reference to the registration of students of Medicine:—

1. Every Medical student shall be registered in the manner prescribed by the General Medical Council.

2. No Medical student shall be registered until he has passed a Preliminary Examination, as required by the General Medical Council.

3. The commencement of the course of Professional study recognised by any of the Qualifying Bodies shall not be reckoned as dating earlier than fifteen days before the date of registration.

4. The registration of Medical students shall be placed under the charge of the Branch Registrars.

5. Each of the Branch Registrars shall keep a register of Medical students according to the subjoined form.

Form for the Registration of Medical Students.

Date of Registration.	Name.	Preliminary Examination and Date.	Place of Medical Study.

6. Every person desirous of being registered as a Medical student shall apply to the Branch Registrar of the division of the United Kingdom in which he is residing, according to the annexed form, which may be had on application to the several Qualifying Bodies, Medical Schools, and Hospitals; and shall produce or forward to the Branch Registrar a Certificate of his having passed a Preliminary Examination, as required by the General Medical Council, and a statement of his place of Medical study.

7. The Branch Registrar shall enter the applicant's name and other particulars in the Students' Register, and shall give him a Certificate of such registration.

8. Each of the Branch Registrars shall supply to the several Qualifying Bodies, Medical Schools, and Hospitals, in that part of the United Kingdom of which he is Registrar, a sufficient number of blank forms of application for the registration of Medical students.

9. The several Branch Councils shall have power to admit special exceptions to the foregoing regulations as to registration, for reasons which shall appear to them satisfactory.

10. A copy of the register of Medical students, prepared by each of the Branch Registrars, shall be transmitted, on or before the 31st December in each year, to the Registrar of the General Council, who shall, as soon as possible thereafter, prepare and print, under the direction of the Executive Committee, an alphabetical list of all students registered in the preceding year, and supply copies of such authorised list to each of the Bodies enumerated in Schedule (A) to the Medical Acts, and through the Branch Registrars to the several Medical Schools and Hospitals.

11. The several Qualifying Bodies are recommended not to admit, after October, 1870, to the final Examination for a Qualification under the Medical Acts, any Candidate (not exempted from registration) whose name has not been entered in the Medical Students' Register at least four years previously.

In the case of Candidates from other than schools of the United Kingdom, the Branch Councils shall have power to admit exceptions to this recommendation.

PRELIMINARY EXAMINATIONS IN ARTS RECOGNISED BY THE GENERAL MEDICAL COUNCIL.

1. A Degree in Arts of any University of the United Kingdom or of the Colonies, or of such other Universities as may be specially recognised from time to time by the Medical Council.
2. Oxford Responsions or Moderations.
3. Cambridge Previous Examinations.
4. Matriculation Examination of the University of London.
5. Oxford Middle Class Examinations (Senior).
6. Cambridge Middle Class Examinations (Senior).
7. Durham Middle Class Examinations (Senior).
8. Durham Examinations for Students in Arts in their second and first years.
9. Durham Registration Examination for Medical students.
10. Dublin University Entrance Examination.
11. Queen's University, Ireland, two years' Arts Course for the Diploma of Licentiate in Arts.
12. Preliminary Examinations at the end of A.B. Course.
13. Middle Class Examinations.
14. Matriculation Examinations.
15. First Class Certificate of the College of Preceptors.
16. "Testamur" granted by Codrington College, Barbadoes.
17. Degree of Associate of Arts granted by the Tasmanian Council of Education, with a Certificate that the student has been examined in Latin and Mathematics.
18. Resolved,—"That students who cannot produce any of the testimonials referred to in the first recommendation [as above] be required to pass an Examination in Arts, established by any of the Bodies named in Schedule (A) to the Medical Act, and approved by the General Medical Council."

FORM OF APPLICATION FOR REGISTRATION AS A MEDICAL STUDENT.

I hereby apply to be registered as a student in Medicine, in conformity with the regulations of the General Council of Medical Education and Registration of the United Kingdom, for which purpose I submit the following particulars:—

Name of Applicant. (To be written in words at length.)		Preliminary Examination.	Date of Preliminary Examination.	Place of Medical Study.
Surname.	Christian Name.			

Applicant's Signature ....
Address ....
Date of Application ....
To the Registrar of the
Branch Council for ....

N.B.—The above form of application, duly and legibly filled up, must be forwarded to the Registrar, post-free, and be accompanied by a Certificate of the applicant's having passed a preliminary Examination as required by the General Medical Council, and a statement of his place of Medical study.

Students who shall have commenced their Professional studies more than fifteen days before the 2nd October, 1865, are not required to be registered by any Branch Registrar.

UNIVERSITY OF OXFORD.

DEGREES IN MEDICINE.

No one may be admitted a Student in Medicine until he has passed all the Examinations required for the degree of B.A.

1. Candidates for the degree of B.M. are required to pass two Examinations, each of which is held yearly in full Michaelmas Term, usually in November, the first by the Regius Professor of Medicine and three persons who have been admitted to Regency either as Masters of Arts or as Doctors, and who are nominated yearly by the Vice-Chancellor subject to the approval of Convocation, the second by the Regius Professor and two Doctors of Medicine nominated in like manner. Each Examination is conducted partly in writing, partly *vivâ voce*, and part of each is practical. The subjects of the first Examination are Human Anatomy and Physiology, Comparative Anatomy and Physiology to a certain extent, and those parts of Mechanical Philosophy, Botany, and Chemistry which illustrate Medicine. The subjects of the second Examination are the Theory and Practice of Medicine (including diseases of women and children), the Materia Medica, Therapeutics, Pathology, the Principles of Surgery and Midwifery, Medical Jurisprudence, and

General Hygiene. Every Candidate at this second Examination is to be examined in two of the ancient authors, Hippocrates, Aretæus, Galen, and Celsus, or in one of those four and in some modern author approved by the Regius Professor.(a)

Before a Candidate is admitted to the first of these two Examinations, he must have completed eight Terms from the date of his *Testamur* in the Classical School at the Second Public Examination for the degree of B.A , unless he was placed in the First or Second Class in the School of Natural Science, in which case, if he received from the Public Examiners a special Certificate of his attainments in Mechanical Philosophy, Chemistry, or Botany, he may be admitted to this Examination at once, and need not then be examined again in any Science specified in such Certificate. Before a Candidate is admitted to the second Examination, he must have completed sixteen Terms from the date of the same *Testamur* and two years from the date of his *Testamur* in the first Medical Examination, and must deliver to the Regius Professor satisfactory Certificates of his attendance at some Hospital of good repute. Every one intending to be a Candidate at either Examination is required to give the Professor notice of his intention a fortnight at least before the week in which the Examination is to be held.

No one from another University can be incorporated as a Graduate in Medicine without passing these two Examinations.

2. A Bachelor of Medicine wishing to proceed to the degree of Doctor is required to read publicly within the precinct of the Schools, in the presence of the Regius Professor, a Dissertation composed by himself on some Medical subject approved by the Professor, and to deliver to him a copy of it.

UNIVERSITY OF CAMBRIDGE.

REGULATIONS FOR DEGREES IN MEDICINE AND SURGERY.

Degree of Bachelor of Medicine.— Before a Student can become a Bachelor of Medicine he must have resided nine terms (three academical years).

Five years of Medical Study are required, of which time six terms (two academical years) shall be spent in the University after the Student has passed the Previous Examination. In the case of those who have graduated with Honours as Bachelors of Arts, four years of Medical Study are deemed sufficient, four terms only being spent in Medical Study in the University after passing the Previous Examination.

The Previous Examination may be passed in the Lent term (at the latter end of March) by those who declare themselves as Medical Students, and are at least in their second term of residence—*i.e.*, have commenced residence in the University in the previous October.

There are three Examinations.(b)

The First Examination is in—1. Mechanics and Hydrostatics; 2. Chemistry, with Heat and Electricity; 3. Botany; and before presenting himself for it the Student must have passed the Previous Examination, and have attended Lectures on Chemistry, including manipulations, and Botany.

The Second Examination is in—1. Elements of Comparative Anatomy; 2. Human Anatomy and Physiology; 3. Pharmacology; and previously to it the Student must have passed the First Examination and have completed two years of Medical study, the time of Medical Study required to be spent in the University being included in these two years. He must also produce Certificates of attendance on Lectures on the Elements of Comparative Anatomy, Human Anatomy and Physiology, Materia Medica and Pharmacy, and Pathology; one year's Hospital Practice and one season's Dissections.

Exemptions.—Students who have obtained honours in the Natural Sciences Tripos, and have passed with credit the Examination in Chemistry, Botany, or Comparative Anatomy, are not required to be again examined in them. Students who have obtained honours in any Tripos or have passed the general B.A. Examination, shall not be examined in Mechanics and Hydrostatics, and students who have passed the special Examination in Botany for the B.A. degree shall not be again examined in that subject.

The Third Examination is in—1. Pathology and Practice of Physic (two papers); 2. Clinical Medicine in the wards of the Hospital; 3. Medical Jurisprudence. Previous to this the Candidate must have passed the Second Examination, and have completed the Course of Medical Study. He must produce Certificates of attendance on one Course of Lectures on each of the following subjects:—Principles and Practice of Physic, Clinical Medicine, Clinical Surgery, Medical Jurisprudence, and Midwifery; and of having attended Hospital Practice during three years.

The Examinations are partly in writing, partly *viva voce*, and take place twice annually—in the Michaelmas term and in the Easter term—an interval of two days being allowed to intervene between the First and Second Examinations.

After the Third Examination an Act has to be kept, which consists in reading an original thesis, followed by a *viva voce* Examination on the subject of the thesis, as well as on other subjects of the Faculty.

The *Degree of Doctor of Medicine* may be taken three years after M.B. An Act has to be kept with *viva voce* Examination. A Master of Arts of four years' standing can proceed to M.D., but is required to produce the same Certificates and pass the same Examinations as for M.B.

Degree of Master in Surgery.—Previous to the Examination for this Degree, the Candidate must have passed all the Examinations for the Degree of M.B., and must produce Certificates of having attended a second course of lectures on Human Anatomy, one course of lectures on the Principles and Practice of Surgery, one year's Clinical Surgical Lectures, ten cases of Midwifery, a second season of Dissections, three years the Surgical Practice of a recognised Hospital, and of having been House-Surgeon or Dresser at such Hospital for six months. The subjects of the Examination are—1. Surgical Anatomy; 2. Pathology and the Principles and Practice of Surgery; 3. Clinical Surgery; and 4. Midwifery.

Attendance at the Hospital and Lectures in Cambridge is recognised by the Universities of Cambridge and London, and (for one year) by the College of Surgeons and the Society of Apothecaries.

UNIVERSITY OF LONDON.

BURLINGTON HOUSE, W.

BACHELOR OF MEDICINE.

Candidates for the Degree of Bachelor of Medicine are required—

1. To have passed the Matriculation Examination of their University, or to have taken a Degree in Arts in one of the Universities of the United Kingdom.

2. To have been engaged in their Professional studies during four years subsequently to Matriculation or Graduation in Arts, at one or more of the Medical Institutions or Schools recognised by this University; one year, at least, of the four to have been spent in one or more of the recognised Institutions or Schools in the United Kingdom.

3. To pass the Preliminary Scientific Examination,(a) and two Examinations in Medicine.

PRELIMINARY SCIENTIFIC EXAMINATION.

The Preliminary Scientific Examination takes place once in each year, and commences on the third Monday in July.

No Candidate is admitted to this Examination until he has completed his seventeenth year, and has either passed the Matriculation Examination or taken a Degree in Arts in one of the Universities of the United Kingdom; nor unless he have given notice of his intention to the Registrar at least *fourteen days* before the commencement of the Examination.

The fee for this Examination is Five Pounds.

Candidates are examined in the following subjects:(b)—Mechanical and Natural Philosophy; Inorganic Chemistry; Botany and Vegetable Physiology; Zoology and Comparative Anatomy.

EXAMINATION FOR HONOURS.

Any Candidate who has passed the Preliminary Scientific Examination may be examined for Honours in (1) Chemistry and Natural Philosophy, (2) Biology. If in the opinion of the Examiners any Candidate of not more than twenty-two years of age who has passed either the Preliminary Scientific

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(a) Such modern authors are Morgagni, Sydenham, Boerhaave.

(b) The Regulations for the First and Second Examinations come into force in Michaelmas Term, 1866. The Regulations for the last Examination, in Michaelmas Term, 1867. For the Regulations in force for the last Examination during the present year see *Medical Times and Gazette* of September 16, 1865.

(a) Candidates who matriculated previously to January, 1861, will not be required to pass the Preliminary scientific Examination in any other subjects than Chemistry and Botany; and they will be allowed to pass the Preliminary Scientific Examination and the First M.B. Examination in the same year, if they so prefer.

(b) Candidates who pass in all the subjects of the Preliminary Scientific Examination, and also in the Mathematics of the First B. Sc. Examination, are considered as having passed both the Preliminary Scientific Examination and also the First Bachelor of Science Examination, without the payment of any additional fee.

M.B. Examination or the First B.Sc. Examination possesses sufficient merit, the Candidate who distinguishes himself the most of all the Candidates who have passed either of the said Examinations, and who are not more than twenty-two years of age, in Chemistry and Natural Philosophy, and the Candidate who distinguishes himself the most of all the Candidates who have passed either of said examinations, and who are not more than twenty-two years of age, in Biology, shall each receive an Exhibition of Forty Pounds per annum for the next Two Years, payable in quarterly instalments (it being intended that one Exhibition only shall be given in each case among all the Candidates, although some of such Candidates may have passed the Preliminary Scientific M.B. Examination, and others the First B.Sc. Examination); provided that on receiving each instalment he declares his intention of presenting himself at the first M.B. Examination within three years from the time of his passing the Preliminary Scientific Examination, or at the second B.Sc. Examination within two years from the time of his passing the First B.Sc. Examination.

FIRST M.B. EXAMINATION.

The First M.B. Examination takes place once in each year, and commences on the last Monday in July. No Candidate is admitted to this Examination unless he have produced certificates to the following effect:—1. Of having completed his nineteenth year. 2. Of having passed the Preliminary Scientific Examination at least one year previously (c), 3 Of having, subsequently to having taken a Degree in Arts or passed the Matriculation Examination, been a Student during two years at one or more of the Medical Institutions or Schools recognised by this University, and of having attended a Course of Lectures on each of three of the subjects in the following list:—Descriptive and Surgical Anatomy, General Anatomy and Physiology, Comparative Anatomy, Pathological Anatomy, Materia Medica and Pharmacy, General Pathology, General Therapeutics, Forensic Medicine, Hygiene, Midwifery and Diseases peculiar to Women and Infants, Surgery, Medicine. 4. Of having, subsequently to having taken a Degree in Arts or passed the Matriculation Examination, dissected during two Winter Sessions. 5. Of having, subsequently to having taken a Degree in Arts or passed the Matriculation Examination, attended a Course of Practical Chemistry, comprehending Practical Exercises in conducting the more important processes of General and Pharmaceutical Chemistry; in applying tests for discovering the adulteration of articles of the Materia Medica, and the presence and nature of poisons; and in the examination of Mineral Waters, Animal Secretions, Urinary Deposits, Calculi, etc. 6. Of having attended to Practical Pharmacy, and of having acquired a practical knowledge of the Preparation of Medicines.

These Certificates must be transmitted to the Registrar at least fourteen days before the commencement of the Examination.

The fee for this Examination is Five Pounds.

Candidates are examined in the following subjects:—Anatomy, Physiology, (d) Materia Medica and Pharmaceutical Chemistry, and Organic Chemistry.

EXAMINATION FOR HONOURS.

Any Candidate who has been placed in the First Division at the First M.B. Examination may be examined for Honours in (1) Anatomy, (2) Physiology, Histology, and Comparative Anatomy, and (3) Materia Medica and Pharmaceutical Chemistry, and Organic Chemistry

The Candidates who distinguish themselves most in (1) Anatomy, (2) Physiology, Histology, and Comparative Anatomy, (3) Materia Medica, Pharmaceutical Chemistry, and Organic Chemistry, respectively, each receive an Exhibition of forty pounds per annum for the next two years; provided that on receiving each instalment he declares his intention of presenting himself at the Second M.B. Examination within three years from the time of his passing the First M.B. Examination.

Under the same circumstances, the First and Second Candidates in each of the preceding subjects shall each receive a gold medal of the value of £5.

SECOND M.B. EXAMINATION.(c)

The Second M.B. Examination takes place once in each year, and commences on the first Monday in November.

No Candidate is admitted to this Examination within two academical years of the time of his passing the First Examination, nor unless he have produced Certificates to the following effect:—

1. Of having passed the First M.B. Examination.
2. Of having, subsequently to having passed the First M.B. Examination, attended a Course of Lectures on each of two of the subjects comprehended in the foregoing list, and for which the Candidate had not presented Certificates at the First M.B. Examination.
3. Of having conducted at least twenty labours. Certificates on this subject will be received from any legally qualified Practitioner in Medicine.
4. Of having attended the Surgical Practice of a recognised Hospital or Hospitals during two years, with Clinical Instruction and Lectures on Clinical Surgery.
5. Of having attended the Medical Practice of a recognised Hospital or Hospitals during two years, with Clinical Instruction and Lectures on Clinical Medicine. N.B.—The Student's attendance on the Surgical and on the Medical Hospital Practice specified in Regulations 4 and 5 may commence at any date after his passing the Preliminary Scientific Examination, and may be comprised either within the same or within different years; provided that in every case his attendance on Hospital Practice be continued for at least eighteen months subsequently to his passing the First M.B Examination. Attendance during three months in the Wards of a Lunatic Asylum recognised by the University, with Clinical Instruction, may be substituted for a like period of attendance on Medical Hospital Practice.
6. Of having, subsequently to the completion of his attendance on Surgical and Medical Hospital Practice, attended to Practical Medicine, Surgery, or Midwifery, with special charge of patients, in a Hospital, Infirmary, Dispensary, or Parochial Union, during six months.

The Candidate must also produce a Certificate of Moral Character from a teacher in the last School or Institution at which he has studied, as far as the Teacher's opportunity of knowledge has extended.

These Certificates must be transmitted to the Registrar at least *fourteen days* before the Examination begins.

The fee for this Examination is £5.

Candidates are examined in the following subjects:—General Pathology, General Therapeutics, and Hygiene; Surgery; Medicine; Midwifery; Forensic Medicine.

Such Candidates only as are placed in the First Division are admissible to the Examination for Honours.

The Senate desire it to be understood that Bachelors of Medicine of the University of London have no right, as such, to assume the title of Doctor of Medicine.

EXAMINATION FOR HONOURS.

Any Candidate who has been placed in the First Division at the Second M.B. Examination may be examined for Honours in (1) Medicine, (2) Midwifery, and (3) Forensic Medicine. If in the opinion of the Examiners sufficient merit be evinced, the Candidate who distinguishes himself the most in Medicine shall receive £50 per annum for the next two years, with the style of University Scholar in Medicine. Under the same circumstances the Candidate who distinguishes himself the most in Midwifery shall receive £30 per annum for the next two years, with the style of University Scholar in Midwifery. Under the same circumstances, the Candidate who distinguishes himself the most in Forensic Medicine shall receive £30 per annum for the next two years, with the style of University Scholar in Forensic Medicine. Under the same circumstances, the First and Second Candidates in each of the preceding subjects shall each receive a gold medal of the value of £5.

BACHELOR OF SURGERY.

The Examination for the Degree of Bachelor of Surgery takes place once in each year, and commences on the fourth Tuesday in November.

No Candidate is admitted to this Examination unless he have produced Certificates to the following effect:—1. Of having taken the Degree of Bachelor of Medicine in this University. 2. Of having attended a Course of Instruction in Operative Surgery, and of having operated on the dead subject.

(c) See note (a).

(d) Any Candidate is allowed, if he so prefer, to postpone his Examination in Physiology from the First M.B Examination at which he presents himself for Examination in the remaining subjects until the First M.B. Examination in the next or any subsequent year; but such Candidate is not admitted to compete for Honours on either occasion; and is not admitted as a Candidate at the Second M.B. Examination until after the lapse of at least twelve months after having passed his Examination in Physiology.

(c) Any Candidate for the Second M.B. Examination who has passed the First M.B Examination under the former Regulations will be required to have also passed the Examination in Physiology at some previous First M.B. Examination carried on under the present Regulations; at which Examination he is not allowed to compete for Honours.

These Certificates must be transmitted to the Registrar at least *fourteen days* before the Examination begins.

The Fee for this Examination is £5.

The Examinations comprise—Surgical Anatomy and Surgical Operations, by printed papers; Examination and Report on Cases of Surgical Patients; Performance of Surgical Operations upon the Dead Subject; Application of Surgical Apparatus; *vivâ voce* Interrogation.

EXAMINATION FOR HONOURS.

Any Candidate who has passed the B.S. Examination may be examined for Honours in Surgery. The Examination is conducted by means of printed papers.

The Candidate who distinguishes himself the most receives £50 per annum for the next two years, with the style of University Scholar in Surgery.

Under the same circumstances, the first and second Candidates each receive a gold medal of the value of £5.

MASTER IN SURGERY.

The Examination for the Degree of Master in Surgery takes place once in each year, and commences on the fourth Monday in November.

No Candidate is admitted to this Examination unless he have produced Certificates to the following effect:—1. Of having taken the Degree of Bachelor of Surgery(f) in this University. 2. Of having attended, subsequently to having taken the Degree of Bachelor of Surgery in this University—*a.* To Clinical or Practical Surgery during two years in a Hospital or Medical Institution recognised by this University; *b.* Or to Clinical or Practical Surgery during one year in a Hospital or Medical Institution recognised by this University, and of having been engaged during three years in the practice of his Profession; *c.* Or of having been engaged during five years in the practice of his Profession, either before or after taking the Degree of Bachelor of Surgery in this University. One year of attendance on Clinical or Practical Surgery, or two years of practice, will be dispensed with in the case of those Candidates who at the B.S. Examination have been placed in the First Division. 3. Of Moral Character, signed by two persons of respectability.

These Certificates must be transmitted to the Registrar at least fourteen days before the Examination begins.

The fee for the Degree of Master in Surgery is £5.

The Examination shall be conducted by means of printed papers and *vivâ voce* interrogation.

Candidates are examined in the following subjects:—Surgery. Logic and Moral Philosophy: Names, Notions, and Propositions; Syllogisms; Induction and subsidiary operations; the Senses; the Intellect; the Will, including the Theory of Moral Obligation. (Candidates who have taken the Degree of Doctor of Medicine in this University, or a Degree in Arts or in Science either in this University or in a University the Degrees granted by which are recognised by the Senate of this University, shall be exempted from this part of the Examination.(g)

The Candidate who distinguishes himself most at the Examination for the Degree of Master in Surgery receives a gold medal of the value of £20.

DOCTOR OF MEDICINE.

The Examination for the Degree of Doctor of Medicine takes place once in each year, and commences on the fourth Monday in November. No Candidate is admitted to this Examination unless he have produced Certificates to the following effect:—1. Of having taken the Degree of Bachelor of Medicine in this University. 2. Of having attended, subsequently to having taken the Degree of Bachelor of Medicine in this University—*a.* To Clinical or Practical Medicine during two years in a Hospital or Medical Institution recognised by this University; *b.* Or, to Clinical or Practical Medicine during one year in a Hospital or Medical Institution recognised by this University, and of having been engaged during three years in the practice of his Profession; *c.* Or, of having been engaged during five years in the practice of his Profession, either before or after taking the Degree of Bachelor of Medicine in this University. One year of attendance on Clinical or Practical Medicine, or two years of Practice, will be dispensed with in the case of those Candidates who at the Second Examination have been placed in the First Division. 3. Of moral character, signed by two persons of respectability.

These Certificates must be transmitted to the Registrar at least fourteen days before the Examination begins.

The fee for the Degree of Doctor of Medicine is £5.

Candidates are examined in the following subjects:—1. Logic and Moral Philosophy. (Candidates who have taken a Degree in Arts or in Science in this University, or in a University the Degrees granted by which are recognised by the Senate of this University, are exempted from this part of the Examination.) 2. Medicine.

The Candidate who distinguishes himself the most at the Examination for the Degree of Doctor of Medicine shall receive a gold medal of the value of £20.

UNIVERSITY OF DURHAM.

REGULATIONS RELATING TO MEDICAL STUDENTS.

1. No one shall be held to be a Student in Medicine who has not been registered in a register kept for that purpose. No one shall be so registered unless he has passed the Registration Examination, or such other examination as the Warden and Senate shall deem equivalent. The Registration Examination shall be directed to the Rudiments of Religion, Literature, and Science; and shall be conducted by two or more Examiners nominated by the Warden.

2. No Grace for a Licence in Medicine shall be granted, unless the petitioner is of the age of 21 years, has spent four years in Medical study since his registration at one or more of the schools recognised by the licensing bodies named in Schedule A of the Medical Act, 1858. No Grace for a Licence in Medicine shall be granted unless the petitioner has passed two public examinations. No one shall be admissible to the first of these examinations unless he has spent two years at least in Medical study as above prescribed. No one shall be admissible to the second of these examinations unless he has spent four years at least in Medical study as above prescribed, and has passed the first examination. No one shall be admissible to either of these examinations unless he has produced satisfactory testimonials of conduct, and such certificates of attendance on Lectures and Hospital Practice as the Warden and Senate shall require. Each of these examinations shall be conducted by three or more Examiners, nominated by the Warden and approved by Convocation, and shall be directed to such subjects of Medical science and practice as shall have been fixed on by the Warden and Senate.

3. No Grace for the Degree of Bachelor in Medicine shall be granted unless the petitioner is a Licentiate in Medicine, and is of the standing of eighteen terms (six years) at least from the date of his registration or matriculation. No one who is not a Bachelor of Arts shall be admissible to the Degree of Bachelor of Medicine unless he has kept three terms by residence at Durham, and has passed both the final examination for the Degree of Bachelor of Arts, or an equivalent to it, and also the examination for the Degree of Bachelor of Medicine. The examination for the Degree of Bachelor of Medicine shall be directed chiefly to the practice of Medicine. The details shall be arranged by the Warden and Senate. The Warden and Senate shall have authority to arrange for Medical Students an examination equivalent to that for the Degree of Bachelor of Arts, by substituting for the theological part of it an examination in Hippocrates, Galen, or such other ancient Medical author or authors as they may think fit.

4. No Grace for the Degree of Doctor of Medicine shall be granted unless the petitioner is a Bachelor of Medicine of twenty-one terms at least (seven years) standing from his registration or matriculation, nor unless he has performed such exercises as the Warden and Senate require.

5. No Grace for the Degree of Master in Surgery shall be granted unless the petitioner is of the age of 21 years, has spent four years in Medical and Surgical study since his registration as a student in Medicine, in some one or more of the schools recognised by the Licensing Bodies named in Schedule A of the Medical Act, 1858. No Grace for the Degree of Master in Surgery shall be granted unless the petitioner has passed two public examinations. The first of

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(f) Candidates who have obtained the Degree of Bachelor of Medicine previously to 1866 will be admitted to the Examination for the Degree of Master in Surgery without having taken the Degree of Bachelor of Surgery; and in the case of such Candidates, the attendance on Surgical Practice required by Regulation 2 may commence from the date of the M.B. Degree.

(g) The Degrees in Arts of all Universities in the United Kingdom are recognised by the Senate for this purpose.

these examinations shall be the first examination appointed for Students in Medicine. No one shall be admissible to it who has not spent two years in Medical and Surgical study, as above prescribed. The second of these examinations shall be partly the same as that appointed for Students in Medicine, and shall be partly in Surgical subjects. No one shall be admissible to it who has not spent four years at least in Medical and Surgical study as above prescribed, and passed the first examination. No one shall be admissible to either of these examinations unless he has produced satisfactory testimonials of conduct, and such certificates of attendance on Lectures and Hospital Practice as the Warden and Senate shall require. Each of these examinations shall be conducted by three or more Examiners nominated by the Warden, and approved by Convocation, and shall be directed to such subjects as shall have been fixed on by the Warden and Senate. The second examination for the Degree of Master in Surgery may or may not be passed at the same time with the second examination for a Licence in Medicine. Any Student in Medicine who commenced his studies before the year 1861 shall be entitled to be admitted to the Degree of Master in Surgery on the same conditions as those which are required for a Licence in Medicine, provided that he passes also the special examination appointed for the Degree of Master in Surgery.

Order of Senate relating to the Registration of Students in Medicine :—

1. The name of every Student in Medicine shall be placed on a Register kept by the Registrar of the University of Durham.

2. No one shall be registered unless he has produced to the Warden the requisite Certificates of Examination and character.

The requisite Certificate of Examination shall be a Certificate of his having passed either the Registration Examination appointed by the University of Durham, or any one of the examinations named in the Minutes of the Medical Council for England.

The Registration Examination in Sacred and English History, English Grammar, Arithmetic, Geography, Latin, Euclid, French, Greek (the last three at the option of the candidate), will commence on Sept. 18, 1866, and on April 23, 1867, at 9 a.m.

The Examination Fee, £1, with a testimonial of character and statement of age, is to be sent to A. Beanlands, Esq., Durham, fourteen days before the Examination.

One of the University Medical Scholarships, value £25 per annum, tenable for four years, will be filled up after an Examination commencing on Tuesday, October 9.

ROYAL COLLEGE OF PHYSICIANS, LONDON,

PALL-MALL EAST.

EXTRACTS FROM BYE-LAWS AND REGULATIONS.

MEMBERS.

Members of the College are alone eligible to the Fellowship.

All Candidates for the Membership of the College who have commenced their Professional studies after September, 1861, must satisfy the Censors' Board that previously to the commencement of their Professional studies they have obtained a degree in Arts from some University of the United Kingdom or of the colonies, or from some other University specially recognised by the Medical Council, or that they have passed examinations equivalent to those required for a degree in Arts. All other Candidates for Membership are, before admission to the Professional Examination, examined on the subjects of general education by the President and Censors of the College.

Any person who does not dispense or supply medicine, and who shall have satisfied the College touching his knowledge of Medical and general science and literature, and who shall comply with the Bye-laws and Regulations of the College, may be proposed to the College to be admitted a Member of the College.

Every Candidate for Membership under the last Bye-law shall furnish proof that he has attained the age of twenty-five years.

Every such Candidate shall produce a testimonial from a Fellow or Member of the College, satisfactory to the Censors' Board, to the effect that, as regards moral character and conduct, he is a fit and proper person to be admitted a Member of the College.

(Section 8.)—Every such Candidate shall produce proof of having passed an examination in the subjects of general education; and in the case of Candidates who shall have commenced their Professional studies after September, 1861, the examination in general education must have been passed before they commenced their Professional studies.

(Section 9.)—Every such Candidate (except such as shall be admissible under the provisions of Section 18) shall produce proof of his having been engaged in the study of Physic during a period of five years, of which four years at least shall have been passed at a Medical school or schools recognised by the College.

(Section 10.)—Every such Candidate (except such as shall be admissible under the provisions of Section 18) shall produce evidence satisfactory to the Censors' Board of his having studied the following subjects :—Anatomy, with Dissections; Physiology; Chemistry, with Practical Chemistry; Materia Medica and Botany; Morbid Anatomy; Principles and Practice of Medicine; Principles and Practice of Surgery; Midwifery, and the diseases peculiar to Women and Children; Forensic Medicine; of his having attended diligently, during three years, the Medical practice, and during one year the Surgical practice, of an Hospital containing at least 100 beds, and of his having served the office of Clinical Clerk during at least six months.

Every such Candidate who has prosecuted his studies abroad, whether in part or to the full extent required by the preceding Bye-law (except such as shall be admissible under the provisions of Section 18), shall, nevertheless, bring proof of his having attended, during at least twelve months, the Medical practice of an Hospital in the United Kingdom containing 100 beds.

No such Candidate shall be admitted to Examination who is engaged in trade, or who dispenses medicine, or makes any engagement with a chemist, or any other person, for the supply of medicine, or who practises Medicine or Surgery in partnership, by deed or otherwise, so long as that partnership continues.

Every such candidate (except in cases specially exempted under Sections 17 and 18) shall have given proof of his acquirements by written answers to questions placed before him, and shall have been examined *vivâ voce* at three separate meetings of the Censors' Board, and shall have been approved by the President and Censors, or by the major part of them, at each Examination.

Except so far as otherwise provided by Bye-law, the Candidate for Membership shall be examined in Physiology, in Pathology, and in Therapeutics, in three separate examinations, by written questions, as well as *vivâ voce* at three meetings of the Censors' Board. At, or in connexion with, the Second Examination before the Censors' Board, the Candidate's knowledge of Practical Medicine shall be tested, by requiring him to examine persons labouring under disease, and to describe morbid specimens. At the commencement of the first *vivâ voce* Examination, the Candidate may, if he think fit, declare in writing what honours have been conferred upon him, in regard to his knowledge of Literature, Science, or Medicine; and such declaration shall, if it seem fit to the Censors' Board, be recorded in the annals of the College.

(Section 17.)—Any such Candidate who has already obtained the Degree of Doctor or Bachelor of Medicine at a University in the United Kingdom, wherein the courses of study, and the Examinations to be undergone by the students previously to graduation, shall have been adjudged by the Censors' Board to be entirely satisfactory, shall be exempt (if the Censors shall think fit) from all or any parts of the Examinations hereinbefore described, except such as relate to Pathology and Therapeutics. Every Candidate for the Membership will, however, be required to translate into English a passage from a Latin author, and he will have the opportunity of showing a knowledge of Greek, or of one or more of the modern European languages.

(Section 18.)—If any such Candidate who has attained the age of forty years, but has not fulfilled all the conditions required by Sections 8, 9, and 10, shall produce testimonials, not merely satisfactory as to his moral character and conduct and his general and Professional acquirements, but further, showing that he has improved the art or extended the science of Medicine, or has at least distinguished himself highly as a Medical Practitioner, the Censors' Board, having well weighed and considered these testimonials, may, if they see fit, submit them to the Fellows at a general meeting, and it shall be determined by the votes of the Fellows present, or of the majority of them, taken by ballot, whether the Candidate shall be admitted to Examination, which shall, in every such case, be as full and complete as the Censors may deem sufficient.

In the case of Candidates for Membership who shall have commenced their Professional studies after September, 1864, the first Examination, comprising Anatomy, Physiology, Chemistry, and Materia Medica, shall not be undergone until after the termination of two years of Professional study at a recognised Medical School or Schools. Testimonial of proficiency in the subjects comprised in the first Examination granted by any Corporation or University, after a course of study and an Examination satisfactory to the Censors' Board, will be accepted in lieu of the first Examination conducted at the College.

The second and third Examinations, comprising Pathology and Therapeutics, shall not be undergone until after the completion of the required course of Professional study, and at least two years after the Candidate has passed the first Examination.

LICENTIATES.

The College, under its Charter, grants licences (which are not to extend to make the Licentiates Members of the Corporation) to persons who shall conform to the following Bye-laws and Regulations :—

Every Candidate for the College Licence (except in cases specially exempted) is required to produce satisfactory evidence to the following effect :—1. Of having attained the age of 21 years. 2. Of moral character. 3. Of having passed a preliminary Examination in the subjects of general education. 4. Of having been registered as a Medical Student. 5. Of having been engaged in Professional studies during four years (of which the first two years and one other year shall have been passed at a recognised Medical School or Schools), and of having attended the Medical Practice at a recognised Hospital or Hospitals during two years of that period, and the Surgical Practice during twelve months; and of having been engaged during twelve months in the Clinical Study of Diseases peculiar to Women. One of the last two years of Professional study may be passed at a Medical School, Hospital, Infirmary, or Dispensary recognised by the College. 6. Of having studied the following subjects :—Anatomy (with dissections) during two Winter Sessions of six months each; Physiology during two Winter Sessions of six months each; Chemistry during six months; Practical Chemistry during three months; Materia Medica during three months; Practical Pharmacy during three months; Botany during three months; Morbid Anatomy during six months, or certified attendance in the Post-mortem Room during the period of Clinical Study; Principles or Practice of Medicine during two Winter Sessions of six months each; Principles and Practice of Surgery during six months; Clinical Medicine during one Winter Session and one Summer Session, or nine months; Clinical Surgery during six months; Midwifery and the Diseases peculiar to Women during three months. A certificate must also be produced of having attended not less than twenty Labours; Forensic Medicine during three months. 7. Of having passed the Professional Examinations.

Any Candidate, being a "Registered Medical Practitioner," whose qualification or qualifications shall have been obtained before the first day of January, 1861, having been, with the consent of the College, admitted a candidate for the Licence, will be examined on the Principles and Practice of Medicine, Surgery, and Midwifery; but he will be exempted from such other parts of the Professional Examinations as his qualifications may seem to the Examiners to render in his case unnecessary.

Any Candidate, who has already obtained the Degree of Doctor or Bachelor of Medicine at a University, approved and recognised by the College, after a course of Study and an Examination satisfactory to the College, or who has already obtained the Licence of the Royal College of Physicians of Edinburgh, or of the King and Queen's College of Physicians in Ireland, after a course of study and an Examination satisfactory to the Examiners appointed by the College, shall be exempt from the First Part of the Professional Examination for the Licence.

The fee to be paid for the Licence to practise Physic as a Licentiate of the College is fifteen guineas.

No Fellow, Member, or Licentiate of the College shall assume the title of Doctor of Medicine, or use any other name, title, designation, or distinction, implying that he is a Graduate in Medicine of a University, unless he be a Graduate in Medicine of a University.

Licentiates of this College shall not compound or dispense medicines except for patients under their own care.

No Licentiate of this College shall, by virtue of his Licence, represent himself as being a Fellow or Member of a College of Physicians.

THE PROFESSIONAL EXAMINATION.

Every Candidate, before he is admitted to examination, will be required to sign a declaration, stating whether he has or has not been rejected within three months by any of the Examining Boards included in Schedule (A) of the Medical Act.

The Examination is divided into two parts.(a) The first part, or primary examination, will be conducted as follows:—On the first day, evening, from seven to ten, by written questions on Anatomy and Physiology. Second day, afternoon, from one to four, by written questions on Chemistry, Materia Medica, and Practical Pharmacy. Evening, commencing at seven o'clock, *viva voce*, on the subjects stated above. The second part, or Pass Examination, will be conducted as follows :—On the first day, evening, from seven to ten, by written questions on the Principles and Practice of Medicine. Second day, morning—The Candidate's practical knowledge will be tested, by requiring him to examine persons labouring under Disease, either at the College or in the Medical Wards of an Hospital. Evening, from seven to ten, by written questions on Midwifery and the Diseases peculiar to Women, and on the Principles and Practice of Surgery. Third day, morning—The Candidate's practical knowledge will be tested, by requiring him to examine persons labouring under disease in the Surgical Wards of an Hospital. Evening, commencing at seven o'clock, *viva voce*, on the subjects stated above.

The first part of the Professional Examination shall not be undergone until after the termination of two years of Professional study at a recognised Medical School, and the second part not until after the termination of four years of Professional study, and at least eighteen months after the Candidate has passed the first Examination, except in the case of Students who have commenced their Professional Education before October, 1851.

Candidates who commenced Medical studies at a recognised Medical School before March 10, 1864, are admissible to the Pass Examination at the end of the fourth Winter Session, eighteen months having elapsed since the first Professional Examination was passed.

Any candidate who shall fail to pass any of these Examinations will not be re-admitted to Examination until after the lapse of six months.

Every Candidate intending to present himself for Examination is required to give fourteen days' notice in writing to the Registrar of the College, at the same time transmitting the following Certificates :—*For the first part.*—Evidence of having passed an Arts Examination; of having been duly registered as a Medical Student; and of having completed two years of Professional Study. *For the second part.*—Evidence of having completed four years of Professional Study; of having attended not less than twenty labours; and of having attained the age of 21 years. A testimonial of moral character is required of every Candidate.

Blank forms of the required Certificates of attendance on Hospital Practice and on Lectures may be obtained on application at the College.

The fee for admission to the first part of the Examination is £5 5s; the fee for admission to the second part of the Examination is £10 10s.; and there is no further fee for the Licence.

ROYAL COLLEGE OF SURGEONS OF ENGLAND,

LINCOLN'S-INN-FIELDS.

REGULATIONS RELATING TO THE FELLOWSHIP BY EXAMINATION.

Preliminary Examination.—Candidates will be required to produce one or other of the following Certificates or Testa-

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(a) Examinations of Candidates for the College Licence will take place, commencing as follows :—

1866.

First Part or Primary :—		Second Part or Pass :—	
Tuesday	October 2	Tuesday	October 9
Tuesday	December 4	Tuesday	December 11
1867.			
Tuesday	February 5	Tuesday	February 12
Tuesday	April 2	Tuesday	April 9
Tuesday	July 2	Tuesday	July 9
Tuesday	October 1	Tuesday	October 8
Tuesday	December 3	Tuesday	December 10

murs, viz.:—1. Of Graduation in Arts at one of the following Universities:—Oxford, Cambridge, Dublin, London, Durham, Queen's University in Ireland, Edinburgh, Glasgow, Aberdeen, and St. Andrews; Calcutta, Madras, and Bombay. Canada—McGill's College, Montreal; and Queen's College, Kingston. 2. A Certificate or Testamur of Graduation in Arts at a Foreign University, on the special recommendation of the Court of Examiners, approved by the Council; or of having passed such Examinations in Arts as shall from time to time be required for graduation in Medicine by a University recognised for this purpose. The following are the Universities at present recognised, viz.:—Oxford, Cambridge, Dublin, London, and Durham. 3. Candidates who shall not be able to produce one or other of the foregoing Certificates will be required to pass an examination in English, Classics, and Mathematics, conducted by the Board of Examiners of the Royal College of Preceptors, under the direction and supervision of the Council of the College.

The following are the subjects of the Examination (No. 3) during the year 1866, viz.:—Part I.—Compulsory Subjects.—1. Reading aloud a passage from some English author. 2. Writing from dictation. 3. English grammar. 4. Writing a short English composition; such as a description of a place, an account of some useful or natural product, or the like. 5. Arithmetic: The first four rules, simple and compound, vulgar fractions and decimals. 6. The geography of Europe, and particularly of the British Isles. 7. The outlines of English history, that is, the succession of the sovereigns and the leading events of each reign. 8. Euclid, Book I. 9. Translation of a passage from the first book of Cæsar's Commentaries, "De Bello Gallico." 10. Translation of a passage from St. John's Gospel in Greek. 11. Translation of a passage from Voltaire's "Histoire de Charles XII." 12. Mathematics; algebra to simple equations inclusive. Part II.—Papers will also be set on the following four subjects; and each Candidate will be required to offer himself for examination on one subject, at his option:—1. Translation of a passage from the first two books of Schiller's "Geschichte des dreissigjahrigen Krieges." Besides these translations into English, the Candidate will be required to answer questions on the grammar of each subject, whether compulsory or selected. 2. Mechanics (elementary). 3. Chemistry (elementary). 4. Botany and Zoology (classification of plants and animals). The quality of the handwriting and spelling will be taken into account.

N.B.—Each Candidate, prior to his admission to the above Examination, is required to pay the fee of £2. The Examination is at present held in June or July and in December.

NOTE.—*Candidates who have passed an Examination recognised as equivalent to the Preliminary Examination for the Diploma of Member, will be required in order to qualify for the Fellowship to pass in the subjects numbered* 10, 11, *and* 12 *in Part I., and in one, at their option, of the four subjects included in Part II. of the foregoing Examination* (No. 3).

Professional Education.—I. Except in the cases and instances hereinafter provided for to the contrary, every Candidate for admission to the First or Anatomical and Physiological Examination for the Fellowship is required to produce the following Certificates, viz.:—1. Of having passed the Preliminary Examination appointed by the Council, or such other Examination as the Council may from time to time determine to be equivalent thereto. 2. Of having studied Practical Pharmacy during three months. 3. Of having studied Anatomy and Physiology by attendance on Lectures and Demonstrations, and by Dissections, during three winter sessions of not less than six months each, at a recognised School or Schools. 4. Of having attended one course of lectures on Comparative Anatomy, one course of lectures on Chemistry, and a three months' course of Practical Chemistry at a recognised School or Schools.

II. Except in the cases and instances hereinafter provided for to the contrary, every Candidate, before his admission to the second Professional Examination, is required to produce the following Certificates, viz.:—1. Of being 25 years of age. 2. Of having been engaged for six years in the acquirement of Professional knowledge in Hospitals or Schools of Anatomy, Surgery, and Medicine recognised by the Council of the College for that purpose; or if the Candidate be already a Member of the College, he shall produce Certificates of having been engaged for two years in the acquirement of Professional knowledge in recognised Hospitals and Schools, in addition to the Certificates required for the Diploma of Member. 3. Of having attended Lectures on the Theory and Practice of Surgery during two sessions of not less than six months each, at one or more recognised School or Schools. 4. Of having attended one course of Lectures on each of the following subjects, viz.: Theory and Practice of Medicine, Materia Medica, Midwifery with attendance on cases, and Medical Jurisprudence, at one or more recognised School or Schools. 5. Of having attended a course of Lectures on the Operations of Surgery by a recognised Lecturer. 6. Of having performed operations on the dead body under the superintendence of a recognised Teacher. 7. Of instruction and proficiency in the practice of Vaccination. 8. Of having attended the Surgical Practice with Clinical Lectures on Surgery of a recognised Hospital or Hospitals during four Winter and four Summer Sessions, and the Medical Practice with Clinical Lectures on Medicine of a recognised Hospital or Hospitals during one Winter and one Summer Session. 9. Of having, subsequently to the completion of two years' Professional study, served the office of House-Surgeon or Dresser, for not less than six months, in a recognised Hospital in the United Kingdom. 10. The Candidate shall also present for Examination Clinical Reports, with observations thereon, of not less than six Surgical cases taken by himself at one or more of the recognised Hospitals in the United Kingdom, with satisfactory evidence of their authenticity and genuineness.

III. In the case of a Candidate who shall have taken by Examination the Degree of Bachelor or Master of Arts in any University in the United Kingdom recognised by the Council for this purpose, it shall be sufficient for him to produce a Certificate or Certificates that he has been engaged for five years (instead of six years) in the acquirement of Professional knowledge in Hospitals or Schools of Anatomy, Surgery, and Medicine recognised by the Council of the College for tha purpose.

IV. Any Member of the College shall, after the expiration of eight years from the date of his Diploma, be entitled to be admitted to the Professional Examination for the Fellowship upon the production of a Certificate, signed by three Fellows, that he has been for eight years in the Practice of the Profession of Surgery, and that he is a fit and proper person to be admitted a Fellow if upon Examination he shall be found qualified.

Professional Examinations.—1. The Professional Examinations are held twice in the year, in the months of May and November, and at such other times as the Council may appoint. 2. The Professional Examinations shall occupy not less than two days, either successive or at such intervals as the Court of Examiners shall appoint 3. The first Professional Examination includes all or either of the following subjects, viz.:—Anatomy, Physiology, and Dissections; the second Professional Examination includes Pathology, Therapeutics, Surgery, the examination of patients, and operations on the dead body. 4. Prior to his admission to the First or Anatomical and Physiological Examination, the Candidate is required to pay—*a*. A fee of five guineas, to be allowed on the fee for the Diploma of Fellow, but to be retained in case of rejection. 5. Prior to his admission to the Second Professional Examination, the Candidate is required to pay—*a*(a). A fee of five guineas (if a Member) over and above all charges for stamps, to be retained in case of rejection. *b*(a). A fee of twenty-five guineas (if not a Member) over and above all charges for stamps, of which five guineas will be retained in case of rejection. 6. A Candidate whose qualifications shall be found insufficient on his Anatomical and Physiological Examination shall be referred, and shall not be allowed to present himself for re-examination until after the expiration of six months from the date of his reference. 7. A Candidate whose qualifications shall be found insufficient upon his Pathological and Surgical Examination shall be referred, and shall not be allowed to present himself for re-examination until after the expiration of one year from the date of his reference, unless the Court of Examiners shall otherwise determine.

REGULATIONS RESPECTING THE EDUCATION AND EXAMINATION OF CANDIDATES FOR THE DIPLOMA OF MEMBER.

1. *Preliminary General Education and Examination.*—Candidates who commenced their Professional education on or after January 1, 1861, will be required to produce one or other of the following certificates:—Of Graduation in Arts at one of the under-mentioned Universities. The following are the Universities at present recognised—viz., Oxford, Cambridge, Dublin, London, Durham, Queen's University in Ire-

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(a) The sum of £2 paid on the Preliminary Examination will be allowed against these amounts.

land, Edinburgh, Glasgow, Aberdeen, and St. Andrew's; Calcutta, Madras, and Bombay; Canada—McGill College, Montreal, and Queen's College, Kingston. Or, of having passed one of the following Examinations:—Oxford—Responsions or Moderations; Middle-class Examinations, senior. Cambridge—Previous Examination; Middle-class Examinations, senior. Dublin: Entrance Examination. London: Matriculation Examination. Durham: Examination of Students in Arts in their second and first years; Middle-class Examinations, senior; Registration Examination for Medical Students. Queen's University in Ireland: Two years' Arts Course for Diploma of Licentiate in Arts; Preliminary Examinations at end of B.A. course; Middle-class Examinations; Matriculation Examinations. Queen's College, Belfast: Preliminary Examination for non-matriculated students. Edinburgh: Extra Professional Examination for Graduation in Medicine. Aberdeen, Glasgow, and St. Andrew's: Preliminary or Extra Professional Examinations for Graduation in Medicine. Calcutta, Madras, and Bombay: Matriculation Examinations. McGill College, Montreal: Preliminary Examination in general literature. Queen's College, Kingston, Canada: Matriculation Examination; Preliminary Examination of students in Medicine. University College, Toronto, Canada: Matriculation Examination. The Preliminary Examination for the Fellowship of this College. The Preliminary Examination of the Royal College of Surgeons in Ireland. The Preliminary Examination of the Royal College of Surgeons of Edinburgh. The Preliminary Examination of the Faculty of Physicians and Surgeons of Glasgow. The Examination in Arts of the Society of Apothecaries of London. The Examination in Arts of the Apothecaries' Hall of Ireland. The First-class Examination of the Royal College of Preceptors. Testamur of the Codrington College, Barbadoes. Or the degree of Associate of Arts granted by the Tasmanian Council of Education, with a certificate that the student has been examined in Latin and Mathematics. Candidates who shall not be able to produce one or other of the foregoing certificates will be required to pass an Examination in English, Classics, and Mathematics, conducted by the Board of Examiners of the Royal College of Preceptors, under the direction and supervision of this College.

The following are the subjects of the Preliminary Examination during the year 1866—viz., Part I.—1. Reading aloud a passage from some English author. 2. Writing from dictation. 3. English grammar. 4. Writing a short English composition; such as a description of a place, an account of some useful or natural product, or the like. 5. Arithmetic. No candidate will be passed who does not show a competent knowledge of the first four rules, simple and compound, of vulgar fractions, and of decimals. 6. Questions on the geography of Europe, and particularly of the British Isles. 7. Questions on the outlines of English History—that is, the succession of the sovereigns and the leading events of each reign. 8. Euclid, Book I. 9. Translation of a passage from the first book of Cæsar's Commentaries, "De Bello Gallico." Part II.—Papers will also be set on the following seven subjects; and each candidate will be required to offer himself for examination on one subject at least, at the option of the candidate; but no candidate will be allowed to offer himself for examination on more than four subjects:—1. Translation of a passage from St. John's Gospel in Greek. 2. Translation of a passage from Voltaire's "Histoire de Charles XII." 3. Translation of a passage from the first two books of Schiller's "Geschichte des dreissigjahrigen Krieges." Besides these translations into English, the candidate will be required to answer questions on the grammar of each subject, whether compulsory or selected. 4. Mathematics. Algebra to simple equations inclusive. 5. Mechanics. The questions will be chiefly of an elementary character. 6. Chemistry. The questions will be on the elementary facts of chemistry. 7. Botany and Zoology. The questions will be on the classification of plants and animals. The quality of the handwriting and the spelling will be taken into account.

N.B.—Each candidate, prior to his admission to the above Examination, is required to pay the fee of £2. The Examination is at present held in June or July, and in December.

NOTE.—A Candidate in order to qualify for the Fellowship is required to pass in the subjects numbered 1, 2, and 4, and in one, at his option, of the subjects numbered 3, 5, 6, and 7, Part II., in addition to the compulsory subjects contained in Part I.

In the subjects for the foregoing Examination, during the year 1867, *the second book will be substituted for the first book of Cæsar's Commentaries, "De Bello Gallico," and the first book of the Anabasis of Xenophon for St. John's Gospel in Greek.*

2. *Professional Education.*—I. Professional Studies prior to the date at which the Candidate shall have passed an Examination in General Knowledge in conformity with the Regulation in the preceding Section are not recognised.(b)

II. The following will be considered as the commencement of Professional Education:—1. Attendance on the Practice of a Hospital, or other Public Institution recognised by this College for that purpose. 2. Instruction as the pupil of a legally qualified Surgeon, *holding the appointment of Surgeon to a Hospital, General Dispensary, or Union Workhouse, or where such opportunities of practical instruction are afforded as shall be satisfactory to the Council.* 3. Attendance on Lectures on Anatomy, Physiology, or Chemistry, by Lecturers recognised by this College. *The commencement of Professional Study, otherwise than by attendance on Lectures in recognised Medical Schools, or by attendance on the Practice of recognised Hospitals, will not be admitted until a certificate thereof shall be furnished to the Secretary for registration at the College, by the Practitioner whose pupil the Candidate shall have become, or by the Medical Superintendent of the Hospital or other Institution to the practice of which he shall have entered; and will, consequently, date only from the reception of such Certificate by the Secretary, the Certificate to be accompanied by proof of having passed the necessary Preliminary Examination in General Knowledge.*

III. Candidates will be required to produce the following other Certificates:—1. Of being twenty-one years of age. 2. Of having been engaged during four years in the acquirement of Professional knowledge. 3. Of having studied Practical Pharmacy during three months. 4. Of having attended Lectures on Anatomy, delivered not less frequently than four times in each week, during two Winter Sessions. 5. Of having performed Dissections during not less than two Winter Sessions. 6. Of having attended Lectures on Physiology delivered not less frequently than twice in each week, during two Winter Sessions. 7. Of having attended Lectures on Surgery during two Winter Sessions, *of which one Course must not be earlier than the third Winter Session at a recognised Medical School.* 8. Of having attended one Course of Lectures on each of the following subjects—viz., Chemistry, Materia Medica, Medicine, and Midwifery. 9 Of Instruction and Proficiency in the practice of Vaccination. 10. Of having attended, at a recognised Hospital or Hospitals in the United Kingdom or Colonies, the Practice of Surgery, and Clinical Lectures on Surgery, during three Winter (c) and two Summer (d) Sessions. 11. Of having attended, at a recognised Hospital or Hospitals in the United Kingdom or Colonies, the Practice of Medicine, and Clinical Lectures on Medicine, during one Winter and one Summer Session. 12. *Of having, subsequently to the completion of two years' Professional education, taken charge of patients under the superintendence of a Surgeon, during not less than six months, at a Hospital, General Dispensary, or Parochial or Union Infirmary recognised for this purpose, or in such other similar manner as, in the opinion of the Council, shall afford sufficient opportunity for the acquirement of Practical Surgery.*

N.B.—Blank Forms of the required Certificates may be obtained on application to the Secretary, and all necessary Certificates will be retained at the College.

IV.—1. Certificates will not be received on more than one branch of Science from one and the same Lecturer; but Anatomy and Dissections will be considered as one branch of Science.

2. Certificates will not be recognised from any Hospital in the United Kingdom unless the Surgeons thereto be members of one of the legally constituted Colleges of Surgeons in the United Kingdom; nor from any School of Anatomy and Physiology or Midwifery, unless the teachers in such School be members of some legally constituted College of Physicians or Surgeons in the United Kingdom; nor from any School of Surgery, unless the teachers in such School be members of one of the legally constituted Colleges of Surgeons in the United Kingdom.

3. No Metropolitan Hospital will be recognised by this

(b) This Regulation applies to Candidates who commenced their Professional Education on or after October 1, 1862.

(c) The Winter Session comprises a period of six months and, in England, commences on October 1 and terminateson March 31.

(d) The Summer Session comprises a period of three months, and, in England, commences on May 1, and terminates on July 31.

College which contains less than 150, and no Provincial or Colonial Hospital which contains less than 100 patients.

4. The recognition of Colonial Hospitals and Schools is governed by the same Regulations, with respect to number of Patients and to Courses of Lectures, as apply to the recognition of Provincial Hospitals and Schools in England.

5. Certificates of attendance upon the practice of a recognised Provincial or Colonial Hospital unconnected with, or not in convenient proximity to, a recognised Medical School, will not be received for more than one Winter and one Summer Session of the Hospital attendance required by the Regulations of this College; and in such cases Clinical Lectures will not be necessary, *but a Certificate of having acted as Dresser for the period of at least six months will be required.*

6. Certificates will not be received from Candidates who have studied in London, unless they shall have registered at the College their cards of admission to attendance on Lectures and Hospital Practice within fifteen days from the commencement of the Session; nor from Candidates who have studied in the Provincial Schools in England, unless their names shall be duly returned from their respective Schools.

N.B.—At the registration in October, Candidates who shall have commenced their Professional Education subsequently to October 1, 1862, will be required to produce a Certificate of having passed one or other of the Preliminary Examinations in General Knowledge recognised by this College.

NOTE.—*The Regulations in italics in Sections II. and III. apply to Candidates in the United Kingdom who commenced their Professional Education on or after October* 1, 1863*; and to Candidates who commenced their Professional Education in the Colonies on or after October* 1, 1864.

7. Those Candidates who shall have pursued the whole of their studies in Scotland or Ireland will be admitted to examination upon the production of the several Certificates required respectively by the College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the College of Surgeons in Ireland from Candidates for their Diploma, together with a certificate of instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the Preliminary Examination, at least four entire years in the acquirement of Professional knowledge; and in the case of Candidates who shall have pursued the whole of their studies at recognised Foreign or Colonial Universities, upon the production of the several Certificates required for their Degree by the authorities of such Universities together with a Certificate of instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the Preliminary Examination, at least four entire years in the acquirement of Professional knowledge.

8. Members or Licentiates of any legally constituted College of Surgeons in the United Kingdom, and Graduates in Surgery of any University recognised for this purpose by this College, will be admitted to examination on producing their Diploma, Licence, or Degree, together with proof of being twenty-one years of age, a Certificate of instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the Preliminary Examination, at least four entire years in the acquirement of Professional knowledge.

9. Graduates in Medicine of any legally constituted College or University recognised for this purpose by this College, will be admitted to examination on adducing, together with their Diploma or Degree, proof of being twenty-one years of age, a Certificate of instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the Preliminary Examination, at least four entire years in the acquirement of Professional knowledge.

V. *Professional Examination.*—This Examination is divided into two parts. 1. The First or Primary Examination on Anatomy and Physiology is partly written and partly demonstrative on the recently dissected Subject, and on prepared parts of the human body. 2. The Second or Pass Eaxmination, on Pathology, Surgery, and Surgical Anatomy, is partly written and partly oral. 3. The Primary Examinations are held in the months of January, April, May, July, and November, and the Pass Examinations generally in the ensuing week respectively. 4. Candidates will not be admitted to the Primary or Anatomical and Physiological Examination, until after the termination of the second Winter Session of their attendance at a recognised School or Schools; nor to the Pass or Pathological and Surgical Examination, until after the termination of the fourth year of their Professional education. 5. The fee of Five Guineas paid by each Candidate prior to his Primary Examination will not be returned, but will be allowed in the fee on his admission as a Member. 6. A Candidate having entered his name for either the Primary or Pass Examination, who shall fail to attend the meeting of the Court for which he shall have received a card, will not be allowed to present himself for examination within the period of three months from the date at which he shall have so failed to attend. 7. A Candidate referred on the Primary Examination is required, prior to his admission to re-examination, to produce a Certificate of the performance of dissections during not less than three months subsequently to the date of his reference. 8. A Candidate referred on the Pass Examination is required, prior to his admission to re-examination, to produce a certificate of at least six months' further attendance on the Surgical Practice of a recognised Hospital, together with Lectures on Clinical Surgery, subsequently to the date of his reference.

THE SOCIETY OF APOTHECARIES,

BLACKFRIARS, E.C.

REGULATIONS, ETC.

Every Candidate for a Certificate of Qualification to practise as an Apothecary will be required to produce Testimonials—

1. Of having passed a Preliminary Examination in Arts as a test of General Education.

This Examination must be passed before the commencement of Professional Studies, which is defined by the Medical Council "to be the time of commencing Studies at a Medical School."

2. Of having served an Apprenticeship or Pupilage of not less than five years to a Practitioner qualified by the Act of 1815. This period may include the time spent in attending Lectures and Hospital Practice.

3. Of having attained the full age of twenty-one years, of which satisfactory evidence will be required.

4. Of good moral conduct.

5. And of having pursued a course of Medical study in conformity with the Regulations of the Court.

COURSE OF STUDY.

Every Candidate whose attendance on Lectures shall commence on or after the 1st of October, 1863, must attend the following Lectures and Medical Practice during not less than three winter and three summer sessions: each winter session to consist of not less than six months, and to commence not sooner than the 1st nor later than the 15th of October; and each summer session to extend from the 1st of May to the 31st of July.

First Year.—Winter Session.—Chemistry; Anatomy and Physiology; Dissections. Summer Session.—Botany; Materia Medica and Therapeutics; Practical Chemistry.(a)

Second Year.—Winter Session.—Anatomy and Physiology, including Dissections and Demonstrations; Principles and Practice of Medicine; Clinical Medical Practice. Summer Session.—Midwifery and Diseases of Women and Children (b); Forensic Medicine and Toxicology; Clinical Medical Practice.

Third Year.—Winter Session.—Principles and Practice of Medicine; Clinical Medical Lectures; Morbid Anatomy; Clinical Medical Practice. Summer Session.—Practical Midwifery and Vaccination (b); Morbid Anatomy; Clinical Medical Practice.

Recognition of Lecturers and Schools.—No Lecturer will be acknowledged by the Court who is not connected with a recognised Medical School, or who teaches on more than two branches of Medical Science. The Lecturer on the Principles and Practice of Medicine must be a legally registered Physician. The Lecturer on Materia Medica and Therapeutics must also be a legally qualified Physician, or a Licentiate of this Court of four years' standing. The Lecturer on Midwifery must be a member of one of the legally constituted Colleges of Physicians or Surgeons in the United Kingdom of four years' standing; or he must have been a Licentiate of this Court for the same period.

(a) By Practical Chemistry is intended a *specific* course of instruction in the Laboratory, with an opportunity of personal manipulation in the ordinary processes of Chemistry, and of acquiring a knowledge of the various re-agents for poisons.

(b) A Certificate of attendance, on not less than 20 cases, will be received from a legally qualified Practitioner.

Hospitals and Dispensaries.—No Hospital will be recognised by the Court unless—1. It contain at least 100 beds. 2. It be under the care of two or more legally qualified Physicians, and a legally qualified Medical Practitioner. 3. The Physicians give Lectures on Clinical Medicine, and instruction in Morbid Anatomy. No Dispensary will be recognised by the Court, unless it be situated in some town where there is a recognised Medical School, and be under the care of at least two Physicians and a legally qualified Medical Practitioner. No Medical Practice will be available, unless it be attended in conformity with the course of study prescribed for pupils.

Registration of Testimonials.—All testimonials must be given on a printed schedule, and the blanks therein must be filled up by the Lecturers themselves. Students will be supplied with schedules at the time of their first registration in London at this Hall; in the Provincial Towns, from the gentlemen who keep the Registers of the Medical Schools, and whose names may be known by application to the Secretary of this Court. All Students in London are required personally to register the several classes for which they have taken tickets; and those only will be considered as complying with the regulations of the Court, whose names and classes in the Register correspond with their schedules. Tickets of admission to Lectures and Medical Practice must be registered within the first fifteen days of the months of October and May. Due notice of the days and hours of such registrations will be given from time to time. The Court also require Students at the Provincial Medical Schools to register their names in their own handwriting, with the Registrar of each respective School, within the first fifteen days of October and May.

Examination in Arts.—An Examination in Arts will take place at the Hall three times in the year—viz., on the last Friday and Saturday in the months of January, April, and September. N.B. By order of the Medical Council an Examination in Arts is compulsory on all Gentlemen commencing their studies on or after October 1, 1861, and must be passed previous to registration. Testimonials of proficiency in General Education will be received as exempting from the Examination in Arts at the Hall from the Educational Bodies recognised by the General Council, and also from any of the Licensing Bodies under the Medical Act of 1858.

Syllabus of Subjects for Examination, 1867.(c)—English History: More particularly the period since the accession of James I. The English Language: Its Structure and Grammar. Proficiency in Composition will be judged of by the style of the answers generally. Mathematics: The Ordinary Rules of Arithmetic; Vulgar and Decimal Fractions; Addition, Subtraction, Multiplication, and Division of Algebraical Quantities; Simple Equations; the First Book of Euclid. Natural Philosophy: Explain the Composition and Resolution of Statical Forces; describe the Mechanical Powers, and state the ratio of the Power to the Weight in each; define the Centre of Gravity; give the general Laws of Motion; state the Law of the Motion of Falling Bodies; define Specific Gravity, and show how it may be ascertained; describe and explain the Barometer, the Siphon, the Common Pump and Forcing Pump, and the Air Pump. The Latin Language: January Examination—Virgil, Æneid, Books I. and II.; April Examination—Cicero, Or. in Catilinam I. and II.; September Examination—Horace, Odes, Books I. and II. Easy Grammatical Questions will be introduced into the Latin Paper, and each Candidate will be expected to give satisfactory answers to these.

Voluntary Examination.(c)—The Greek Language: Homer, Iliad, Book I.; Grammatical Questions. Logic: Whately's Elements of Logic, the Introduction, First Book, and Second Book to the end of Chapter III.

Professional Examinations.—The Court of Examiners meet in the Hall every Thursday, where Candidates are required to attend at a quarter before four o'clock. Every person intending to offer himself for examination must give notice in writing to the Clerk of the Society on or before the Monday previous to the day of Examination, and must at the same time deposit all the required testimonials (as before specified) with the fee, at the office of the Beadle, where attendance is given every day, except Sunday, from ten to four o'clock, and Saturdays from ten to two. The examination of Candidates is divided into two parts, and is conducted partly in writing and partly *vivâ voce*.

First Examination, which may be passed after the second Winter Session, embraces the following subjects:—Latin, of the Pharmacopœia and Physicians' Prescriptions. Anatomy and Physiology. General and Practical Chemistry. Botany, Materia Medica, and Therapeutics.

Second or Pass Examination, after the third Summer Session (the five years' pupilage being completed):—Practice of Medicine and Pathology; Midwifery, including the Diseases of Women and Children; Forensic Medicine and Toxicology.

The Court of Examiners have determined that all Graduates in Medicine of a British University be in future admitted to a practical Examination in the Practice of Medicine and Midwifery only.

The examination of Candidates for certificates of qualification to act as Assistant, in compounding and dispensing medicines, will be as follows:—In translating Physicians' Prescriptions, and the Pharmacopœia Londinensis. In Pharmacy and Materia Medica.

By the 22nd section of the Act of Parliament, no rejected Candidate can be re-examined until the expiration of six months from his former examination. A Candidate rejected on his first Professional Examination can be admitted for re-examination after the expiration of three months.

Fees.—For a Certificate of Qualification to Practise, Six Guineas; for an Assistant's Certificate, Two Guineas.

Students' Prizes.—The Society of Apothecaries annually offer two prizes for proficiency in the knowledge of Botany, and also two prizes for proficiency in the knowledge of Materia Medica and Pharmaceutical Chemistry.

The prizes consist of a Gold Medal awarded to the Candidate who distinguishes himself the most in the examination; and of a Silver Medal and a Book to the Candidate who does so in the next degree.

ARMY MEDICAL DEPARTMENT,

WHITEHALL-YARD.

QUALIFICATIONS AND EXAMINATION OF CANDIDATES FOR COMMISSIONS IN THE ARMY MEDICAL SERVICE.

1. Every Candidate desirous of presenting himself for admission to the Competitive Examination required for the Army Medical Service must be unmarried. He must produce a birth certificate from the District Registrar, or a certificate of baptism in which the date of birth is stated; or if neither of these can be obtained, an affidavit from one of the parents, or from some other near relative who can attest the date of birth, will be accepted. The certificate or affidavit must show that the Candidate is not above 28 nor under 21 years of age. He must also produce certificates of moral conduct and character, one of them from the parochial minister if possible.

2. The Candidate must make a declaration that he labours under no mental or constitutional disease, nor any imperfection or disability that can interfere with the most efficient discharge of the duties of a Medical officer in any climate. He must also attest his readiness to engage for general service immediately on being gazetted.

3. The Candidate must possess a Diploma in Surgery, or a licence to practise it, as well as a Degree in Medicine, or a licence to practise it, in Great Britain or Ireland.

4. Certificate of registration in accordance with the Medical Act of 1858, and of age and character, must be lodged at the Army Medical Department for examination and registry, at least one week before the Candidate appears for examination.

5. On producing the foregoing qualifications, the Candidate will be examined by the Examining Board in the following subjects:—Anatomy and Physiology, Surgery, Medicine, including Therapeutics, the Diseases of Women and Children, Chemistry and Pharmacy, and a practical knowledge of drugs. (The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of Surgical Apparatus, and the examination of Medical and Surgical patients at the bedside.) The eligibility of each Candidate for the Army Medical Service will be determined by the result of the examinations in these subjects only. Candidates *who desire* it will be examined in Comparative Anatomy, Zoology, and Botany, with special reference to Materia Medica, and the number of marks gained in these

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(c) On October 1, 1868, the following regulations of the General Medical Council will come into operation, and the Preliminary Examination at the Hall will thenceforth be modified in accordance therewith. "The following subjects shall constitute a minimum to be required of Candidates for Preliminary Examination, viz.:—Compulsory Subjects—1. English Language, including Grammar and Composition; 2. Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations; 3. Geometry—First Two Books of Euclid; 4. Latin, including Translation and Grammar; and 5. One of the following Optional Subjects—1. Greek (after the year 1869, Greek shall be one of the compulsory subjects); 2. French; 3. German; 4. Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics."

IX. Each Candidate is examined, both in writing and *viva voce*—first, on Chemistry, Botany, and Natural History; secondly, on Anatomy, Institutes of Medicine and Surgery; and, thirdly, on Materia Medica, Pathology, Practice of Medicine, Clinical Medicine, Clinical Surgery, Midwifery, and Medical Jurisprudence. The Examinations on Anatomy, Chemistry, Institutes of Medicine, Botany, and Natural History are conducted, as far as possible, by Demonstrations of objects placed before the Candidates; and those on Medicine and Surgery in part by Clinical Demonstrations in the Hospital.

X. Students who profess themselves ready to submit to an Examination on the First Division of these subjects at the end of their second year may be admitted to Examination at that time.

XI. Students who have passed their Examination on the First Division of these subjects may be admitted to Examination on the Second Division at the end of their third year.

XII. The Examination on the Third Division cannot take place until the Candidate has completed his fourth *Annus Medicus*.

XIII. Candidates may, if they choose, be admitted to Examination on the first two of these Divisions at the end of their third year; or to the three Examinations at the end of their fourth year.

XIV. If any Candidate at these Examinations be found unqualified, he cannot be again admitted to Examination unless he has studied during another year two of the prescribed subjects, either in the University or in some other School of Medicine.

XVIII. The Degree of Doctor of Medicine may be conferred on any Candidate who has obtained the Degree of Bachelor of Medicine, and is of the age of twenty-four years, and has been engaged, subsequently to his having received the Degree of Bachelor of Medicine, for at least two years in attendance on an Hospital, or in the Military or Naval Medical Services, or in Medical and Surgical Practice: provided always, that the Degree of Doctor of Medicine shall not be conferred on any person, unless he be a Graduate in Arts of one of the Universities of England, Scotland, or Ireland, or of such other Universities as are above specified, or unless he shall, before or at the time of his obtaining the Degree of Bachelor of Medicine, or within three years thereafter, have passed a satisfactory Examination in Greek, and in Logic or Moral Philosophy, and in one at least of the following subjects, namely, French, German, Higher Mathematics, and Natural Philosophy.

XXI. Persons who began their Medical Studies before the 4th of February, 1861, are entitled to graduate under the system in force before or after that date, according as they may comply with the regulations in force in the University before or after that date.

Fees for Degrees.—Examination in Botany, Chemistry, and Natural History, £5 5s.; Examination in Anatomy, Physiology, and Surgery, £5 5s; Final Examination during last Summer Session, £5 5s.; total Fees for M.B. Diploma, £15 15s. Additional Fee for C.M. Diploma, £5 5s.; Additional Fee for M.D. Diploma, £5 5s.; Government stamp-duty for M.D. only, £10. Note.—Total Fees and Stamp for graduating as M.D. only, by Regulations for Students commencing before February, 1861, £25.

Notice to Candidates for Graduation in Medicine.—Candidates who commenced their Medical studies by attendance on Qualifying Classes before the 4th day of February, 1861, are entitled to appear for Examination for the Degree of Doctor of Medicine, after four years' study, on completing their twenty-first year, and without having taken the Degree of Bachelor of Medicine. They are also exempted from the Preliminary Examinations mentioned in Sections I. and II., and require only to undergo an Examination in Latin. They are also exempted from attendance on Practical Chemistry and Practical Midwifery, and require only three months of Clinical Surgery and eighteen months of Hospital attendance.

Candidates who commenced their studies before 1825 require only one year's Hospital attendance, and are exempted from the fourth year of attendance at Classes, from the necessity of a year's study in Edinburgh, and from attendance on Clinical Surgery, Medical Jurisprudence, Natural History, Practical Anatomy, Pathology, and Surgery distinct from Anatomy. Those who commenced between 1825 and 1831 are exempted from attendance on General Pathology, and also on Surgery distinct from Anatomy. Those who commenced between 1825 and 1833 are required to attend only two of the following classes—viz., Clinical Surgery, Medical Jurisprudence, Natural History, Practical Anatomy. Those who commenced before 1833 are exempted from attendance on Practical Pharmacy and Dispensary Practice.

In Provincial Schools a Candidate can make one Annus Medicus only, and this is constituted by attendance on a qualified Hospital, along with a course of Practical Anatomy.

In the Hospital Schools of London, in the Extra-Academical School of Edinburgh, and in the School of the College of Surgeons of Dublin, a candidate may make two Anni Medici—one of which must be constituted by Hospital Attendance and Practical Anatomy, and the other by at least two six-months' courses, or one six-months' course, and two three-months' courses. The classes at these schools only qualify to the extent of four.

The Edinburgh Extra-Academical Classes only qualify if the fee paid at the commencement of the Session is the same as that paid to the Professors in the University.

In London, the Classes at University College and King's College are reckoned equivalent to those of Universities. But the three-months' courses of Materia Medica and Midwifery do not qualify. Preliminary Examinations in Arts, 23rd and 24th October, 1866; 26th and 27th March, 1867. First Professional Examination, 27th October, 1866; 1st April, 1867. Second Professional Examination, 10th July, 1866; 10th April, 1867. Final Professional Examination, 5th, 6th, and 7th June, 1866. Defence of Theses, 31st July. Graduation, 1st August. Candidates who appear for Examination must produce certificates of complete courses of the subjects on which they are to be examined. The Fee for Examination must be deposited with the Secretary before the day of Examination. In the event of the Candidate not passing, the fee is not returned, but he may appear at future examinations without paying an extra fee. The fees are:—For the Degree of M.B., three Examinations, £5 5s. each, £15 15s. For the Degree of C.M., £5 5s additional. For the Degree of M.D., £5 5s. additional to that for M.B., exclusive of £10 Government stamp. Note.—Total fees and stamp for graduating as M.D. only, by Regulations for Students commencing before February, 1861, £25.

MEDICAL DEGREES.—PRELIMINARY EDUCATION IN ARTS.
PROGRAMME FOR 1866-67.

I. Examinations on the Preliminary Branches of Extra-Professional Education will take place on Tuesday and Wednesday, 23rd and 24th October, 1866; and on Tuesday and Wednesday, 26th and 27th March, 1867. Examination on Tuesday—English, Arithmetic, Mechanics, Greek, Higher Mathematics, and German. Examination on Wednesday—Latin, Elements of Mathematics, Natural Philosophy, French, Logic, and Moral Philosophy. 1. English.—Writing out a narrative, with strict attention to correct spelling, the proper selection of words, the form of the sentences, and punctuation. 2. Latin.—Sixth Æneid of Virgil, and an easy passage from a Latin prose author. 3. Arithmetic.—The Common Rules, including Decimals. 4. Elements of Mathematics.—Euclid, Books i., ii., iii., and the Rudiments of Algebra, including Simple Equations. A knowledge of Euclid alone will not be sufficient. 5. Elements of Mechanics.—Elementary Mechanics and Hydrostatics.

II. At the same dates Examinations will take place in conformity with Section II. of the Statutes, which enacts that no Candidate shall be admitted to a Professional Examination who has not passed a satisfactory Examination on at least two of the following subjects (in addition to the subjects mentioned above):—1. Greek.—First Book of Xenophon's Anabasis. 2. French—La Fontaine's Fables. 3. German.—Schiller's Wallenstein. 4. Higher Mathematics.—Euclid, Books i. to vi.—Algebra, Trigonometry, and Conic Sections. 5. Natural Philosophy.—Elements of Natual Philosophy by Golding Bird and Brooke to end of Acoustics. 6. Logic.—Whately's Elements of Logic, Books ii. and iii. 7. Moral Philosophy.—Springs of Action—Duties—Ethical Theories, as, *e. g.*, in Stewart's "Outlines," Part II.

III. In Section XVII. of the said Statutes it is enacted, that the Degree of Doctor of Medicine shall not be conferred on any person unless he be a Graduate in Arts, or unless he shall, before or at the time of his obtaining the Degree of Bachelor of Medicine, or within three years thereafter, have passed a satisfactory Examination on three of the subjects mentioned in Section II. Two of these must be Greek and Logic or Moral Philosophy, and the third may be any one of the following subjects—namely, French, German, Higher Mathematics, Natural Philosophy.

Examinations of the same extent, and on the same subjects, at other British Universities granting the degree of M.D., will exempt from these Preliminary Examinations. Certificates of having passed such Examinations must be produced, with an official notice of the subjects on which the Candidate has passed an examination.

Examinations in Latin for Students who come under the old Statutes, in consequence of having commenced their Medical Curriculum by attendance on classes before February 4, 1861, will take place on Wednesday, October 24, 1866, and on Wednesday, March 27, 1867; and will be confined to the following works:—

1. Second Book of Cicero de Natura Deorum.
2. Sixth Æneid of Virgil.

The Medical Faculty have resolved that the Written and Oral Examinations on Chemistry, Botany, and Natural History, in October, 1866, and April, 1867, shall be restricted in the following manner:—

1. *Chemistry.*—A knowledge of the General Laws of Affinity and Equivalents will be required. There must be a general acquaintance with the chief chemical properties of the more common elementary bodies and their compounds, especially those relating to air and water, and those commonly used in Medicine. In Organic Chemistry, the leading laws must be known, and the chief families of compounds, such as ethers and alcohols, must be familiar to the Candidate. But special knowledge will be required of the Chemistry of the Nutritive and Digestive Fluids, the Excretions, and the Chemistry of Food.

2. *Botany.*—The Structure and Functions of Plants, the Principles of Classification, Classes, Sub-Classes, and Sections of the Natural System (see Balfour's "Class-Book," or his "Manual of Botany"). Botanical characters to be demonstrated on conspicuous Specimens of the following Natural Orders:—Ranunculaceæ, Papaveraceæ, Cruciferæ, Caryophllaceæ, Malvaceæ, Leguminosæ, Rosaceæ, Onagraceæ, Umbelliferæ, Dipsacaceæ, Compositæ, Boraginaceæ, Labiatæ, Scrophulariaceæ, Primulaceæ, Euphorbiaceæ, Amentiferæ, Coniferæ, Orchidaceæ, Amaryllidaceæ, Liliaceæ, Palmæ, Gramineæ, Filices. The Student will be examined practically on the Microscopical Structure of Plants, and he will be required to describe the Organs of Fresh Plants put into his hands.

3. *Natural History.*—The general principles of Zoological Classification. Characters depending on specialisation of organs, and on Morphological type. The general Morphology of the Primary Groups of the Animal Kingdom. The general Morphology of the classes of the Vetebrata, and of the orders of Amphibia, Reptilia, and Mammalia. The principal Morphological and Physiological characters of the following groups:—Insecta, Crustaceæ, Echinodermata, Cephalopoda, Gasteropoda, Lamellibranchiata, Actinozoa, Hydrozoa, Rhizopoda.

Candidates who mean to appear at any of these Examinations must inscribe their names, with the number of their Matriculation Ticket and their address, ten days at least before the date of the Examination, in a Book which is kept at the Secretary's Office, College. Those who claim to be under the old Statutes must produce evidence of having attended qualifying Classes before February 4, 1861.

UNIVERSITY OF ABERDEEN.

The regulations for granting Medical Degrees are framed in conformity with an Ordinance of the Universities' (Scotland) Commissioners, dated March 16, 1861, and approved by Her Majesty in Council.

The following are the Degrees in Medicine granted by this University—namely, Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.).

The Preliminary Examination and Professional Curriculum and Examination for the Degrees of M.B., C.M., and M.D., being in conformity with the Ordinances of the Scotch Universities' Commissioners, are nearly the same as those of the Universities of Edinburgh, Glasgow, and St. Andrews.

The studies of Candidates for the Degrees of Bachelor of Medicine and Master in Surgery are subject to these regulations:—

One at least of the four years of Medical and Surgical study must be in the University of Aberdeen.

Another of such four years must be either in this University or in some other University entitled to give the Degree of Doctor of Medicine.

FEES FOR GRADUATION.

1. Each Candidate for the Degree of M.B. shall pay a fee of five guineas in respect of each of the three Professional Examinations.

2. If the Candidate desires to be admitted to the Degree of Bachelor of Medicine only, he shall not, on admission thereto, be required to pay any further fee in addition to the fifteen guineas so paid by him; but if he desires to be admitted to the Degree of Master in Surgery also, he shall, on being admitted to such Degree, pay a further fee of five guineas.

3. And every Candidate for the Degree of Doctor of Medicine shall pay, in addition to the fees paid by him for the Degree of Bachelor of Medicine, a fee of five guineas, exclusive of any stamp duty which may for the time be exigible.

EXEMPTION FROM THE FOREGOING REGULATIONS.

Students who shall have begun their Medical studies before the first Tuesday of November, 1861, are entitled to appear for examination for the Degree of M.D. after four years' study, one of which must have been at the University of Aberdeen.

Further information may be obtained from the Dean of the Medical Faculty, Professor Macrobin, M.D.

UNIVERSITY OF ST. ANDREWS.

The regulations for granting Medical Degrees are framed in conformity with an Ordinance of the Universities' (Scotland) Commissioners; they therefore generally correspond with those of the Universities of Edinburgh, Aberdeen, and Glasgow.

The Degrees in Medicine granted by the University of St. Andrews are those of Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.).

The Preliminary Examination and Professional Curriculum and Examinations for these Degrees are generally the same as those of the Universities of Edinburgh, Aberdeen, and Glasgow. The following regulations, however, for Candidates for the Degrees of Bachelor of Medicine and Master of Surgery present some difference:—

No one shall be received as a Candidate for the Degree of Bachelor of Medicine or Master in Surgery unless two years at least of his four years of Medical and Surgical Study shall have been in one or more of the following Universities and Colleges, viz.:—The University of St. Andrews; the University of Glasgow; the University of Aberdeen; the University of Edinburgh; the University of Oxford; the University of Cambridge; Trinity College, Dublin; Queen's College, Belfast; Queen's College, Cork; and Queen's College, Galway.

The remaining years of Medical and Surgical Study, other than those for which provision is made by the Ninth Section, may be either in one or more of the Universities and Colleges above specified, or in the Hospital Schools of London, or in the School of the College of Surgeons in Dublin, or under such private teachers of Medicine as may from time to time receive recognition from the University Court.

Attendance on the Lectures of any private teacher in Edinburgh, Glasgow, or Aberdeen, shall not be reckoned for graduation in St. Andrews, if the fee for such Lectures be of less amount than is charged for the like Course of Lectures in the University of Edinburgh, of Glasgow, or of Aberdeen, according as the teacher lectures in Edinburgh, Glasgow, or Aberdeen.

Every Candidate for the Degrees of Bachelor of Medicine and Master in Surgery shall be examined both in writing and *viva voce*—first, on Chemistry, Botany, Elementary Anatomy, and Materia Medica; secondly, on advanced Anatomy, Zoology, with Comparative Anatomy, Physiology, and Surgery; and, thirdly, on Practice of Medicine, Clinical Medicine, Clinical Surgery, Midwifery, General Pathology, and Medical Jurisprudence.

FEES FOR GRADUATION.

For the Degree of Bachelor of Medicine five guineas in respect of each of the three divisions of the Examination on Professional subjects; and if the Candidate desires to be admitted to the Degree of Bachelor of Medicine only, he shall not, on admission thereto, be required to pay any further fee in addition to the fifteen guineas so paid by him; but, if he desires to be admitted to the Degree of Master in Surgery also, he shall, on being admitted to such Degree, pay a further fee of five guineas; and every Candidate for the Degree of Doctor of Medicine, who has previously obtained the Degree of Bachelor of Medicine, shall pay, in addition to the fees paid by him as a Candidate for the Degree of Bachelor of Medicine, a fee of five guineas, exclusive of any stamp duty which may for the time be exigible.

N.B.—The Degree of Doctor of Medicine may be conferred by the University of St. Andrews on any registered Medical Practitioner above the age of forty years, whose Professional position and experience are such as, in the estimation of the University, to entitle him to that Degree, and who shall, on examination, satisfy the Medical Examiners of the sufficiency of his Professional knowledge; provided always, that Degrees shall not be conferred under this Section to a greater number than ten in any one year. Fee £52 10s.

REGULATIONS AS REGARDS THE EXAMINATION OF REGISTERED MEDICAL PRACTITIONERS ABOVE THE AGE OF FORTY YEARS.

On or before the 25th day of March in each year, Candidates shall lodge with the Registrar of the University the following certificates and deposits:—

I. A Certificate of Age.

II. Certificates from three Medical Men, of such acknowledged reputation in the Profession, or of such standing in the Medical Schools, as shall satisfy the Senatus of the Professional Position and Experience of the Candidate.

III. A certain portion (viz., £10 10s.) of the Graduation Fees; which sum shall be forfeited should the Candidate fail to appear at the time appointed for examination, or should he fail to pass the prescribed examination.

IV. The Examination shall be conducted both in writing and *viva voce*, and shall include the following subjects:—

1. Materia Medica and General Therapeutics.
2. Medical Jurisprudence.
3. Practice of Medicine and Pathology.
4. Surgery.
5. Midwifery.

As regards the last two subjects—viz., Surgery and Midwifery—a minute knowledge shall not be required from those who do not practise these branches of the Profession.

Further information may be obtained on application to the Registrar of the University.

UNIVERSITY OF GLASGOW.

Three Degrees in Medicine are granted, viz.:—Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.). [The Preliminary Examination, Curriculum, and Professional Examinations for these Degrees being in conformity with the Ordinance of the Scottish University Commissioners, are the same as for the Universities of Edinburgh, St. Andrews, and Aberdeen.]

Of the four years constituting the Curriculum, one at least shall have been passed in the University of Glasgow, and another either in that University or some other University entitled to give Degrees in Medicine.

These Statutes apply to all Candidates who commenced their Medical studies on or after October 1, 1861. Candidates who began their Medical studies before that date are entitled to obtain their Degrees according to the regulations existing at the time when they commenced their studies.

The annual term for conferring Medical and Surgical Degrees is the third Thursday in May.

The fees for the Degrees are as follows:—For the Degree of M.B. (for each of three examinations, £5 5s.), £15 15s.; for that of C.M. (in addition to the fee for M.B.), £5 5s.; for the Degree of M.D. (in addition to the fee for M.B.), £5 5s.; and the Government stamp for the Diploma, &c., £10 3s.

The Preliminary Examinations of Medical Students in branches of General Education take place at the beginning and at the end of the winter session.

The regulations under which the above Degrees are granted, and the notices of the subjects of Examination, will be obtained by application to the Registrar of the University.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

REGULATIONS FOR THE LICENCE, 1866-67.

These are the same as those for the Double Qualification in Medicine and Surgery conferred by the Colleges of Physicians and Surgeons (see below), with the following exceptions in Professional education :—Anatomy, 1 Course, six months ; Practical Anatomy, 1 Course, six months ; or 2 Courses, three months each ; Botany (unless taken as a branch of preliminary study), 1 Course, three months ; Physiology or Institutes of Medicine, 1 Course, six months ; no third Course of Medicine ; Clinical Surgery, 1 Course, three months ; no Third Course of Surgery ; Pathological Anatomy, 1 Course, three months ; or General Pathology, 1 Course, three months ; Practical Pharmacy, 1 Course, three months.

Candidates for the Licence of the College who already possess a qualification from a recognised Licensing Body, or who have passed the First Professional Examination before a Qualifying Body, will not be required to be re-examined on Anatomy, Physiology, and Chemistry, but will be at once admitted to the Second Part of the Examination.

No Candidate is admissible to Examination who has been rejected by any other Licensing Board within three months previous to his Examination.

The fee payable by a Licentiate is Ten Guineas. In the event of a Candidate being unsuccessful at his Examination, the sum of Two Guineas will be retained to defray expenses.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

REGULATIONS TO BE OBSERVED BY CANDIDATES FOR THE DIPLOMA.

These are the same as those given below for the conjoined qualification in Medicine and Surgery conferred by the Colleges of Physicians and Surgeons, with the following exceptions in Professional education :—

No third course of Medicine and no course of Pathological Anatomy are required.

A certificate of three months' instruction in Pathological Anatomy at the post-mortem room of a recognised Hospital will be required from Candidates commencing Professional study after October 1, 1861.

The following order of Study is recommended as a guide to the Student, though not enjoined :—First Year : Anatomy, Practical Anatomy, Chemistry, Practical or Analytical Chemistry, Hospital. Second Year : Anatomy, Practical Anatomy, Physiology, Surgery, Materia Medica (the last either in this or the Third Year), Hospital. Third Year : Practice of Physic, Clinical Surgery, Practical Anatomy, Practical Pharmacy, Pathological Anatomy, Hospital. Fourth Year : Surgery, or Clinical Surgery, Midwifery and the Diseases of Women and Children, Clinical Medicine, Medical Jurisprudence, Practical Midwifery, Hospital.

It is strongly recommended to Students to avail themselves of any opportunities which they may possess of attending Lectures on Ophthalmic and Mental Diseases ; also on Botany, Zoology, Comparative Anatomy, and the use of the Microscope, in addition to the Courses of Lectures which are absolutely prescribed.

The Regulations for Registration and the Preliminary Examination in General Education generally correspond with those to be observed by Candidates for the joint qualifications of the Royal Colleges of Physicians and Surgeons, Edinburgh.

PROFESSIONAL EXAMINATIONS FOR THE DIPLOMA OF THE COLLEGE.

1. Candidates for the Diploma of the College shall be subjected to two Professional Examinations, to be conducted at separate sittings, partly in writing and partly orally.

2. The First Examination shall embrace Anatomy, Physiology, and Chemistry, and shall take place not sooner than the end of the second Winter Session.

3. Opportunities for both Examinations will be presented six times in each year.(a) On each of these occasions the Candidates shall assemble to write answers to the questions proposed, and the oral examinations will be conducted on the days immediately succeeding.

4. Candidates who desire to pass the First Professional Examination must apply to the Secretary on or before the Saturday preceding the day of Examination,(b) and must produce tickets and certificates of attendance in regard to all those Courses of Study which have reference to the subjects of that Examination. They must also produce evidence of having passed the Preliminary Examination.

5. The sum of £4 must be paid to the Treasurer of the College for this Examination not later than 10 a.m. of the day preceding it. This sum will be considered as paid to account of the entire fee of £10 payable for the Diploma.

6. In the case of a Candidate being unsuccessful at this Examination, £2 will be returned to him, the remaining £2 being retained to meet the expense of the Examination.

7. Candidates who have passed the first Professional Examination of any of the Licensing Boards recognised by the Medical Act, will be admissible to the second Professional Examination on producing Certificates of the whole course of Study, and paying the fee of £10. In conducting the Examination, none of the subjects set down in Section 9 will be omitted, even if some of them should have formed part of the first Examination by another Board. Unsuccessful Candidates, under this Regulation, will receive back £8 of the £10 paid by them.

8. Registered Medical Practitioners whose Degree or Licence in Medicine is dated prior to October 1, 1861, are exempt from the first Professional Examination. The Examinations under this Regulation may take place on the first and third Tuesdays of each month.

9. The Second Examination shall embrace Surgery and Surgical Anatomy ; also Medicine, Midwifery, Materia Medica, and Medical Jurisprudence ; and shall not take place before the termination of the Winter Session of the last year of study.

10. Applications for Examination must be made to the Secretary not later than the Saturday previous to the day of the first Examination.

11. Every Candidate must produce to the Secretary—1st, satisfactory evidence of his having attained the age of twenty-one years ; 2nd, the tickets and the Certificates of his classes ; 3rd, the Certificate of his having passed the first Professional Examination ; 4th, a tabular statement (for which a printed form will be furnished by the Officer) exhibiting the full amount of his Professional education, and distinguishing the Classes, Hospitals, and Dispensaries attended during each session of his studies. If he have been an Apprentice, he must also insert the name of his master, the date of his indenture, and the length of time for which he was bound. This statement, accurately filled up, must be attested by his signature, and will be preserved by the College as a record.

12. If the Candidate have been an Apprentice to a Fellow of the College, he must also produce his discharged indenture.

13. On the production of these documents, the Secretary will give the Candidate a letter authorising the Examiners to take him on trial.

14. The remaining fee payable to the College (being £6), together with the receipt for the fee paid for the first Professional Examination, must be lodged, not later than 10 a.m. of the day preceding the Examination day, in the hands of the Treasurer, who will certify this upon the Inspector's letter. The sum of £4 will be returned to unsuccessful Candidates.

15. Unsuccessful Candidates at either the first or second Examination will be remitted to their studies for a period to be determined by the judgment of the Examiners, but not in any case less than three months.

16. Candidates, on showing sufficient reason for it, may be admitted to a Special Examination, on days other than those appointed above, on paying an extra fee of £4, which will not be returned in the event of their not being successful.

17. In order to test more effectually the practical knowledge of Candidates, recent Dissections and Anatomical specimens, Surgical Apparatus, specimens of Surgical Pathology, and articles of the Materia Medica, will be employed during the Examinations ; and every Candidate will be required to write out formulæ of prescription. The Examination may also con-

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(a) For days of Examination see next page.

(b) Candidates at a distance are requested to send their certificates much earlier, so as to give sufficient time for the exchange of one or two explanatory letters ; as much disappointment has been occasioned by the discovery of defects in their Course of Study when it was too late to rectify them by the production of documents.

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sist, in part, of the actual examination of persons labouring under disease.

FEES.

1. For the Diploma of the College, £10. 2. For a Certificate of Qualification to act as Assistant-Surgeon in the Navy, when no previous qualification has been received from the College, £5 5s. 3. For a Certificate to an Assistant-Surgeon of the Royal Navy of Qualification to act as full Surgeon, £5 5s. The sums stated above include all fees of every kind, and the Officer is prohibited from receiving any.

Note.—The Fee payable for the Diploma by Apprentices of those who were Fellows of the College prior to the Charter of 1851 is £5.

The following will be the periods of Examination for the Diploma of the Royal College of Surgeons of Edinburgh, for the year 1866-67 :—

I. Preliminary Examinations in General Education, on Saturday, October 27, 1866 ; Saturday, November 10, 1866 ; Saturday, April 27, 1867 ; Saturday, July 27, 1867.

II. First Professional Examinations, on Tuesday, Oct. 23, 1866 ; Tuesday, January 22, 1867 ; Tuesday, April 2, 1867 ; Tuesday, April 30, 1867 ; Tuesday, July 9, 1866 ; Tuesday, July 23, 1867 ; Tuesday, October 22, 1867.

III. The Second Professional Examinations will take place immediately after the conclusion of each of the First Professional Examinations, at each of the above-mentioned periods. They will generally be begun on the Thursday after the first Examinations, and in no case on any earlier day.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.

The Royal College of Physicians of Edinburgh, and the Royal College of Surgeons of Edinburgh, while they still continue to give their Diplomas separately, under separate regulations, have made arrangements by which, after one series of examinations, the Student may obtain the Diplomas of both Colleges.

The object of the joint examination is to give to Students facilities for obtaining from two separate bodies, and at less expense, a qualification in Medicine and a qualification in Surgery. Students passing that examination successfully will be enabled to register two qualifications under the Medical Act—Licentiate of the Royal College of Physicians of Edinburgh, and Licentiate of the Royal College of Surgeons of Edinburgh.

The arrangement for thus conferring a double qualification by the co-operation of the two Colleges is in conformity with Section XIX. of the Medical Act, and received the special sanction of the General Council of Medical Education and Registration, at a meeting held on August 7, 1859.

PROFESSIONAL EDUCATION.

Candidates commencing Professional study after October 1, 1865, must have been engaged in Professional Study during four years after the Examination in General Education, which shall include not less than four Winter Sessions', or three Winter and two Summer Sessions' attendance at a recognised Medical School.(a)

The Candidate must have attended the following separate and distinct courses of lectures :—

Anatomy : Two Courses, Six Months each.(b) Practical Anatomy : Twelve Months ; or, at the option of the Candidate, Anatomy : One Course, Six Months ; Practical Anatomy : Eighteen Months. Chemistry : One Course, Six Months. Practical or Analytical Chemistry : One Course, Three Months. Materia Medica : One Course, Three Months. Physiology : Not less than Fifty Lectures.(c) Practice of Medicine : One Course, Six Months. Clinical Medicine, Six Months.(d) A Third Course of Medicine, which may be either Practice of Medicine or Clinical Medicine, at the option of the Student : One Course, Six Months. Principles and Practice of Surgery : One Course, Six Months. Clinical Surgery : One Course, Six Months. A Third Course of Surgery, which may either be Principles and Practice of Surgery or Clinical Surgery, at the option of the student : One Course, Six Months.(d) Midwifery and the Diseases of Women and Children : One Course, Three Months. Medical Jurisprudence : One Course Three Months. Pathological Anatomy : Three Months.(e)

Besides the above-mentioned Courses of Lectures the Candidate must have attended at least six cases of labour under the superintendence of a qualified Medical Practitioner, either in a recognised maternity Hospital, or a Dispensary where Midwifery cases are admitted, or in private practice ; and must produce a certificate to that effect from the Practitioner under whom he attended. He must also have attended for three months a course of instruction in Practical Pharmacy at the Laboratory of an Apothecary, or of a Member of the Pharmaceutical Society of Great Britain, or of a Chemist and Druggist recognised by either College on special application, or of a public Hospital or Dispensary, or as Assistant to a registered Practitioner who dispenses medicines to his own patients.

The Candidate must also have attended for twenty-four months a public general Hospital containing, on an average, at least eighty patients. He must also have attended, for six months, the practice of a public Dispensary specially recognised by either College ; or have been engaged for six months as visiting Assistant to a registered Practitioner.

A Certificate of Proficiency in Vaccination, signed by a registered Practitioner, will be required of every Candidate.(f)

The six months' Courses delivered in Scotland must consist of not fewer than 100 Lectures, with the exception of Clinical Medicine and Clinical Surgery. The three months' Courses must consist of not fewer than 50 Lectures.

The following order of study is recommended as a guide to the Student, though not enjoined :—First Year : Anatomy, Practical Anatomy, Chemistry, Practical or Analytical Chemistry, Hospital. Second Year : Anatomy, Practical Anatomy, Physiology, Surgery, Materia Medica (the last either in this or the third year), Hospital. Third Year : Practice of Medicine, Clinical Surgery, Practical Anatomy, Practical Pharmacy, Clinical Medicine, Pathological Anatomy, Hospital. Fourth Year : Surgery or Clinical Surgery, Midwifery and the Diseases of Women and Children, Practice of Medicine or Clinical Medicine, Medical Jurisprudence, Practical Midwifery, Hospital.

REGISTRATION.

1. A book shall be kept in the hall of each College for the registration of all Medical Students who may apply. In one or other of these books, all Edinburgh Students who desire to possess Diplomas of the Colleges must be registered, whether they attend Professors in the University or other qualified teachers.

2. No Student beginning Professional study after September, 1865, can be registered who has not passed the Preliminary Examination in General Education of the Colleges, or one of the equivalent Examinations recognised by the Colleges.

3. The Register shall be closed within fifteen days after the commencement of each Session or Term.

5. Every Student shall pay annually, on his first registration for the year, the sum of 5s., and shall receive a Certificate of Registration, duly attested by the Registrar.

PRELIMINARY EXAMINATION IN GENERAL EDUCATION.

1. The subjects of the Preliminary Examination in General Education during the year 1865-66 shall be as follows, namely :—1. English Grammar and Composition, including Meanings and Derivation of Words. 2. Latin : The Fifth Book of Cæsar's Commentaries De Bello Gallico—Horace De Arte Poetica—Exercises in Parsing, and in rendering English correctly into Latin, the Latin words being supplied. 3. Arithmetic : The Common Rules—Vulgar and Decimal Fractions. 4 and 5. Any two of the following, at the option of the Candidate : (1) Algebra : To Simple Equations, inclusive ; (2) Geometry : Euclid, Books I., II., and III. ; (3) Natural Philosophy : Mechanics and Hydrostatics (Lardner's Handbook) ; (4) Greek : St. Mark's Gospel—Anabasis of Xenophon, Book I. ; (5) French : Voltaire, Histoire de Charles

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(a) Candidates commencing study prior to the above date will be admitted to examination after four Winter Sessions' or three Winter and two Summer Sessions' attendance on classes at a regular Medical School.

(b) The two Courses must not be simultaneous.

(c) In those Schools of England and Ireland in which two separate Courses of Lectures are delivered at separate hours, one on Anatomy, the other on Anatomy and Physiology, the former of these Courses will be received as a Course of Anatomy, and the other as a Course of Physiology.

(d) Two Courses of Clinical Medicine, of three months each, if not simultaneous, will be held as equivalent to one Course of six months. They must be attended during the period of attendance at the Hospital where they are delivered. The same rules will apply to Clinical Surgery.

(e) A Certificate of attendance on the post-mortem examinations at a general Hospital will be accepted in lieu of this Course.

(f) By a regulation of the Privy Council, of date December 1, 1859, no one can be appointed as a contractor for Vaccination under the English Poor-law who does not produce a Certificate of Proficiency in Vaccination from a person authorised by the Privy Council to grant the same. A Certificator in Vaccination has been appointed in Edinburgh by the Privy Council.

XII ; (6) German : The Third Book of Schiller's "Geschichte des dreissigjährigen Kriegs ;" (7) Botany : Vegetable Anatomy and Organography — Natural Orders Ranunculaceæ, Papaveraceæ, Caryophyllaceæ, Rosaceæ, and Orchidaceæ ; (8) Zoology : General Classification of the Animal Kingdom —Characters and Subdivisions of the Vertebrata—Characters of the Insecta, Crustacea, Cephalopoda, and Gasteropoda. N.B. In Greek, French, and German, parsing of the words in the passages given to be translated will be required.

2. Testimonials of proficiency granted by certain educational bodies will be accepted as sufficient evidence of general education, and will exempt from the Preliminary Examination.

3. After September, 1865, all Students who intend becoming Candidates for the Diplomas of the Colleges must have passed the complete Examination in General Education, and have had their names inscribed in the Register of Medical Students instituted by the General Medical Council, before they commence their Professional studies.

4. The Preliminary Examinations shall take place at stated periods, and shall be conducted by a special Board of Examiners in Arts.

5. Candidates, the commencement of whose Professional Studies was prior to October 1st, 1865, may pass the Preliminary Examination in General Education at any of the periods previous to the first Professional Examination, but are recommended to do so at the earliest possible period. Candidates under this regulation, who have not passed a Preliminary Examination in General Education, will be required to undergo that examination on the day before the first Professional Examination, and shall pay a fee of 1*l.*

6. Students who intend to undergo the Preliminary Examination shall give in their names, addresses, and places of birth to the officer of either College, not later than three days before the day of examination, and shall pay a fee of 10s., not to be returned in case of rejection.

PROFESSIONAL EXAMINATIONS.

1. Candidates for the double qualification shall be subjected to two Professional Examinations, to be conducted at separate times, partly in writing and partly orally.

2. The first Examination shall embrace Anatomy, Physiology, and Chemistry, and take place not sooner than the end of the Second Winter Session.

3. Opportunities for both Examinations will be presented six times in each year. On each of those occasions the Candidates shall assemble for the purpose of writing answers to the questions proposed. The Oral Examinations will be conducted on the days immediately succeeding.

4. Candidates who desire to pass the first Professional Examination must apply to the Inspector of Certificates on or before the Saturday preceding the day of examination, and must produce tickets, and also certificates of attendance in regard to all those courses of study which have reference to the subjects of that examination. They must also produce a certificate of having passed the Preliminary Examination.

5. The sum of 6*l.* must be paid to the Inspector of Certificates for this examination, not later than 10 A.M. of the day preceding it. This sum will be considered as paid to account of the entire fee of 16*l.* payable for the two Diplomas.

6. In the case of a Candidate being unsuccessful at this examination, 4*l.* will be returned to him ; the remaining 2*l.* being retained to meet the expense of examination.

7. Candidates who have passed the first Professional Examination of any of the Licensing Boards recognised by the Medical Act will be admissible to the second Professional Examination on producing certificates of the whole Course of Study prescribed, and paying the fee of £16. In conducting the examination, none of the subjects set down in Section 8 will be omitted, even if some of them should have formed part of the first Examination by another Board. Unsuccessful candidates under this regulation will receive back £14 of the £16 paid by them.

8. The second Examination shall embrace Medicine, Surgery and Surgical Anatomy, Midwifery, Pathological Anatomy, Materia Medica and Pharmacy, and Medical Jurisprudence ; and shall not take place before the termination of the Winter Session of the last year of study.

9. Applications for examination must be made to the Inspector of Certificates not later than the Saturday previous to the day of examination.

10. Every Candidate must produce to the Inspector—1st, satisfactory evidence of his having attained the age of 21 years ; 2nd, tickets and certificates of his classes ; 3rd, a certificate of having passed the first Professional Examination ; and 4th, a tabular statement (for which a printed form will be furnished by the Inspector), exhibiting the full amount of his Professional Education, and distinguishing the Classes, Hospitals, and Dispensaries attended during each Session of his Studies. The tabular statement accurately filled up, must be attested by his signature, and will be preserved by the Colleges as a record.

11. The fee payable for this examination, which shall be £10, must be lodged with the Inspector not later than 10 a.m. of the day preceding the examination day.

12. On the production of the above documents, and after receiving the fees, the Inspector shall give the Candidate a letter authorising the Examiners to take him on trial.

13. Unsuccessful Candidates at either the first or second Examination shall be remitted to their studies for a period to be determined by the judgment of the Examiners, but not in any case less than three months.

14. In case of a Candidate being unsuccessful at the second Examination, £8 will be returned to him ; the remaining £2 being retained to meet the expense of the examination.

15. In order to test more effectually the practical knowledge of Candidates, recent dissections and anatomical specimens, articles of the Materia Medica, chemical tests, the microscope, Surgical apparatus, and pathological specimens, will be employed during the examinations ; and every Candidate will be required to write out formulæ of prescriptions. The examination may also consist, in part, of the actual examination of persons labouring under disease.

16. Candidates, on showing sufficient reason for it, may be admitted to a special examination, on days other than those appointed above, on paying an extra fee of £5, which will not be returned in the event of their not being successful.

17. No Candidate shall be admissible to examination who has been rejected by any other Licensing Board within the three months preceding his examination.

The following will be the periods of examination for the double qualification of the Royal Colleges of Physicians and Surgeons of Edinburgh, for the year 1866-67 :—I. Preliminary Examinations in General Education : On Saturday, October 27, 1866 ; on Saturday, November 10, 1866 ; On Saturday, April 27, 1867 ; On Saturday, July 27, 1867. II. First Professional Examinations : On Wednesday, October 31, 1866 ; On Tuesday, January 29, 1867 ; On Tuesday, April 9, 1867 ; On Tuesday, May 7, 1867 ; On Tuesday, July 16, 1867 ; On Tuesday, July 30, 1867 ; On Tuesday, October 29, 1867. III. The Second Professional Examinations will take place immediately after the conclusion of the First Professional Examinations at each of the above-mentioned periods.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

REGULATIONS RELATING TO ADMISSION TO THE FELLOWSHIP.

The Faculty embraces in its Fellowship both Physicians and Surgeons, and Candidates for admission may apply in either capacity, according to their qualifications. The proposal of a Candidate requires to be made at an ordinary meeting of two Fellows, but no proposal is received till the Candidate has, by letter, intimated to the President the Medical or Surgical qualification (as the case may be) on which he desires admission.

The Fee to be paid by a Fellow is £50. In case of a non-resident, in consideration of his inability to participate in all the privileges of the Fellowship, the Fee is £25, subject to the condition that the full Fee shall be payable should he at any subsequent time come to reside within five miles of the Faculty Hall.

ABSTRACT OF REGULATIONS FOR THE LICENCE, 1865-66.

Course of Study.—(1). Anatomy, two courses, six months each. (2). Practical Anatomy, twelve months. (3). Chemistry, one course, six months. (4). Practical or Analytical Chemistry, one course, three months. (5). Physiology, not less than fifty Lectures. (6). Practice of Medicine, one course, six months. (7). Clinical Medicine, one course, six months. (8). Principles and Practice of Surgery, one course, six months. (9). Clinical Surgery, one course, six months. (10). In addition to the above courses of Surgery and Clinical Surgery, one six months' course of either of these at the option of the student ; Materia Medica, one course, three months. (11). Midwifery and the Diseases of Women and Children, one course, three months. (12). Medical Jurisprudence, one course, three months. (13). Practical Midwifery, attendance on at least six cases of labour. (14). Pathological Anatomy, three months' instruction in the post-mortem room of a recognised Hospital. (15). Practical Pharmacy, three months' practical instruction. (16). Hospital and Dispensary Practice, twenty-four months' attendance on the practice of a public General Hospital, containing on the average at least eighty patients.

A Certificate of Proficiency in Vaccination, signed by a Registered Practitioner, will be required of every Candidate. Candidates commencing Professional study after October 1, 1865, must have been engaged in Professional study during four years, which shall include not less than four Winter Sessions' or three Winter and two Summer Sessions' attendance at a recognised Medical School.

(Candidates commencing Professional Study prior to the above date are admitted to Examination after four Winter Sessions', or three Winter and two Summer Sessions' attendance at a regular Medical School.)

Candidates are subjected to two Professional Examinations. The First Examination embraces Anatomy, Physiology, and Chemistry, and cannot be undergone before the end of the Second Winter Session of Study.

The Second Examination embraces all the other subjects of the Curriculum, and cannot be undergone before the termination of the full period of Study.

Intending Candidates must produce evidence—1st, of being 21 years of age; and 2nd, of having passed the First Examination. They will also present to the Secretary for inspection their Class and Hospital Certificates, and write out a tabulated statement of their whole course of Study, for which the Secretary, on application, will supply Candidates with printed forms.

The fee for the Diploma is £10—£4 for the First and £6 for the Second Examination.

First Examinations will be held on the second Tuesday of every month. Second Examinations will take place immediately on the termination of the First Examinations. A Candidate, on showing a sufficient reason, may be admitted to Examination, on a day specially arranged, by paying an extra fee of £2.

All applicants for the Licence must have passed a Preliminary Examination before commencing Professional Study. The Examination shall embrace the following subjects:—1, English; 2, Latin; 3, Arithmetic; 4 and 5, any two of the following, at the option of the Candidate:—(1) Algebra, (2) Geometry, (3) Natural Philosophy, (4) Greek, (5) French, (6) German, (7) Botany, (8) Zoology. Testimonial of proficiency granted by the Bodies specified in the Recommendations of the General Medical Council will exempt from the Preliminary Examination.

DOUBLE QUALIFICATION.

The Faculty of Physicians and Surgeons of Glasgow and the Royal College of Physicians of Edinburgh conjointly grant their Diplomas to Candidates after one series of Examinations before a Board of Examiners in which each Body is represented. The object is to afford facilities to Candidates for obtaining, at less expense, a Double Qualification in Medicine and Surgery. Candidates must have attended a Course of Medicine in addition to the Curriculum required for the Diploma of the Faculty. The fee for the two Diplomas granted conjointly is £16—£6 for the First and £10 for the Second Examination.

The days of Examination may be learned on application to the Secretary.

A Candidate, on showing sufficient reason, may be admitted to Examination, on a day specially arranged, by paying an extra fee of £5.

The remaining Regulations are the same as those for the Diploma of the Faculty.

For further information application may be made to the Secretary of the Faculty, 242, St. Vincent-street, Glasgow.

FACULTY OF MEDICINE IN IRELAND.

UNIVERSITIES, COLLEGES, COURSES OF STUDY, DEGREES, AND LICENCES TO PRACTISE.

The following Bodies grant one or more Degrees or Licences to practise Medicine or Surgery, and provide courses of instruction in the Medical Sciences:—The University of Dublin grants the Degrees of M.B. or Bachelor of Medicine; M.D. or Doctor of Medicine; M.C. or Master of Surgery; also Licences in Medicine (L.M.) and Surgery (L.S.). The Queen's University in Ireland, with its Provincial Colleges at Belfast, Cork, and Galway; this University confers the Degrees of M.D. and M.Ch. The King and Queen's College of Physicians in Ireland, granting a Licence and Fellowship. This Institution, in connexion with the Medical Faculty of the University of Dublin, constitutes the School of Physic in Ireland. The Royal College of Surgeons in Ireland, which grants Letters Testimonial qualifying to practise Surgery as a Licentiate, and also confers a Fellowship. Fellows and Licentiates of the Colleges of Physicians and Surgeons may obtain from their respective Colleges a Diploma in Midwifery. The Rotunda and Coombe Lying-in Hospitals grant Diplomas in Midwifery, which are, however, not recognised under the Medical Act. The Governor and Company of the Apothecaries' Hall of Ireland also confer a Diploma.

The Medical Session in Ireland commences about the first week in November.

UNIVERSITY OF DUBLIN.

TRINITY COLLEGE.

SCHOOL OF PHYSIC.

The following Degrees and Licences in Medicine and Surgery are granted by the University of Dublin, in conformity with the Charter of Queen Elizabeth, and are entitled to be registered under the Medical Act, 21 and 22 Vict. cap. 90:—1. Bachelor in Medicine. 2. Doctor in Medicine. 3. Master in Surgery. 4. Licentiate in Medicine. 5. Licentiate in Surgery.

The qualifications requisite for these Licences and Degrees are the following:—

I. BACHELOR IN MEDICINE.

A. *Qualification in Arts.*—The Bachelor in Medicine must be a Bachelor in Arts of Dublin, Oxford, or Cambridge.

B. *Qualification in Medicine.*—Four years, at least, spent in the study of Medicine, including the following Courses of Lectures:—1. Anatomy and Physiology. 2. Practical Anatomy. 3. Surgery. 4. Chemistry. 5. Materia Medica and Pharmacy. 6. Institutes of Medicine and Pathology. 7. Practice of Medicine. 8. Midwifery. Each of these eight Courses is of six months' duration. 9. Botany. 10. Practical Chemistry. 11. Medical Jurisprudence. Each of these Courses is of three months' duration. 12. Nine months' attendance on the Clinical Instruction given in the Hospital of Sir Patrick Dunn. 13. Nine months' attendance on the Clinical Instruction of any Medico-Chirurgical Hospital approved by the Board of Trinity College. Fee payable for the Degree of M.B., £10.

After the completion of the foregoing Courses, the Candidates for the Degree of Bachelor in Medicine must pass a public Examination, of at least two days' duration, partly written and partly oral.

The Lectures of the Professors of the School of Physic, Trinity College, are recognised by the Royal College of Surgeons of Ireland, by the King and Queen's College of Physicians, and by all the other Licensing Corporations in the United Kingdom.

II. DOCTOR IN MEDICINE.

A. *Qualification in Arts.*—The Doctor in Medicine must be a Bachelor in Arts of Dublin, Oxford, or Cambridge, of three years' standing.

B. *Qualification in Medicine.*—The Doctor in Medicine requires no qualification in Medicine, additional to that necessary for the Bachelor in Medicine. Fee payable for Degree of M.D., £12.

III. MASTER IN SURGERY.

A. *Qualification in Arts.*—The Master in Surgery must be a Bachelor of Arts of Dublin, Oxford, or Cambridge.

B. *Qualification in Surgery.*—Four years' study of Surgery and attendance on the following courses:—1. Anatomy and Physiology, two courses, each of six months. 2. Theory and Practice of Surgery, two courses, each of six months. 3. Demonstrations and Dissections, three courses, each of six months. 4. Practice of Medicine. 5. Chemistry. 6. Materia Medica. 7. Midwifery, one course each, of six months' duration. 8. Practical Chemistry. 9. Botany. 10. Medical Jurisprudence, one course each, of three months' duration. 11. Attendance on the Clinical Instruction of three Sessions, of nine months each, in any of the recognised Medico-Chirurgical Hospitals.

Having completed the foregoing courses, the Candidate for this Degree must pass a public Examination, partly written and partly oral. Fee payable for Degree of M.Ch., £10.

IV. LICENTIATE IN MEDICINE.

A. *Qualification in Arts.*—The Licentiate in Medicine must have kept one full year in Arts.

B. *Qualification in Medicine.*—Same as the qualification for the Degree of Bachelor in Medicine—viz., attendance on the prescribed courses of instruction, and the passing of a similar public Examination. Fee payable for the Licence in Medicine, £5.

V. LICENTIATE IN SURGERY.

A. *Qualification in Arts.*—The Licentiate in Surgery must have kept one full year in Arts.

B. *Qualification in Surgery.*—Same as for the Degree of Master in Surgery—viz., attendance on the prescribed courses of instruction, and the passing of a similar public Examination. Fee payable for the Licence in Surgery, £5.

MEDICAL SCHOLARSHIPS.

Two Medical Scholarships are given annually by the Board of Trinity College, value £20 per annum each, tenable for two years; the Examinations for which are held each year in June, in the following subjects:—Anatomy, Chemistry, Materia Medica, and Botany.

MEDICAL SCHOOL EXHIBITIONS.

The Professors of the University School give three Exhibitions annually, two senior, value £15 and £10, open to all Students who have been three years attending the School. The subjects being—Practice of Medicine, Surgery, Pathology, Midwifery, and Forensic Medicine.

One Junior, value £15.—The time and subjects of Examination being the same as those for the Medical Scholarships.

Expense of obtaining the Degrees of Bachelor in Medicine and Master in Surgery in the University of Dublin.

I. Lectures	£47	5	0
II. Hospitals	31	10	0
III. Degree Fees	20	0	0
IV. Examination Fees	10	0	0
	£108	15	0
Private Tuition, say	20	0	0
	£128	15	0

The courses of Lectures may be attended in any of the following Schools, provided always that one *Annus Medicus* be kept in the School of Physic of the University:—1. School of Physic, Trinity College; 2. Royal College of Surgeons; 3. Richmond Hospital School; 4. Dr. Steeven's Hospital School; 5. Peter-street School; 6. Catholic University School.

Four courses—viz., Anatomy, Chemistry, Botany, and Surgery, are free to Students in Arts, matriculated in Medicine, having their names on the College Books.

The Hospitals recognised by Trinity College are—1. Sir Patrick Dun's Hospital; 2. Richmond, Whitworth, and Hardwicke; 3. Meath Hospital; 4. Dr. Steeven's Hospital; 5. Jervis-street Infirmary; 6. City of Dublin Hospital; 7. Mercer's Hospital; 8. St. Vincent's Hospital; 9. Adelaide Hospital; 10. Mater Misericordiæ Hospital.

N.B.—As no Degrees in Medicine or Surgery are conferred except upon Graduates in Arts, the expense of the Degree of Bachelor in Arts, amounting altogether to £82 4s., should be added to the foregoing, making the total cost something over £200.

THE QUEEN'S UNIVERSITY IN IRELAND,

granting the Degrees of Doctor in Medicine and Master in Surgery, is the centre or head of the Queen's Colleges of Belfast, Cork, and Galway, each of which possesses a Faculty of Medicine. The curriculum of Medical Study extends over a period of four years, and is divided into two periods of two years each. The first period comprises attendance on Chemistry, Natural History, Anatomy and Physiology, Practical Anatomy, Materia Medica, and Pharmacy. The second period comprises attendance on Anatomy and Physiology, Practical Anatomy, Theory and Practice of Surgery, Midwifery, and Diseases of Women and Children, Theory and Practice of Medicine, Medical Jurisprudence. At least two of the above Courses of Lectures must be attended in some one of the Queen's Colleges; the remainder may be taken, at the option of the Candidate, in any University, College, or School recogcognised by the Senate of the Queen's University. Candidates are required before graduating to have also attended in one of the Colleges of the Queen's University Lectures on Natural Philosophy, and on one Modern Language, and to have passed the Matriculation Examination. They are further required to attend, during the first period, Practical Chemistry in a recognised Laboratory, and the Practice during six months of a Medico-Chirurgical Hospital, containing at least sixty beds, together with Clinical Lectures delivered therein; during the second period at a recognised Midwifery Hospital, with the Clinical Lectures therein delivered, for a period of three months; or a Midwifery Dispensary for the same period; or ten cases of Labour, under the superintendence of the Medical officer of any Hospital or Dispensary where cases of labour are treated; and eighteen months' Practice of a Medico-Chirurgical Hospital, containing at least sixty beds, and in which Clinical Instruction is delivered. There are two University Examinations: one comprising the subjects of study in the first period, the other the subjects of the second period. Candidates may, if they prefer to do so, pass both these Examinations at the same time. The University Examinations are held twice in each year, in June and September. Further information will be found in the "Queen's University Calendar," or may be obtained by application to the Secretary, Queen's University, Dublin Castle.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

REGULATIONS RESPECTING THE EDUCATION, EXAMINATION, AND ADMISSION OF CANDIDATES FOR THE LICENTIATESHIP IN MEDICINE.

Candidates for the Licentiateship in Medicine are required to give proof of their having attained the age of 21 years, of having been engaged during a period of four years in the study of Medicine at a School or Schools recognised by the College, and shall also produce evidence of having studied the following subjects, viz.:—Anatomy, Physiology, Practical Anatomy, Chemistry, Practical Chemistry, Materia Medica, and Botany, Medical Jurisprudence, Practice of Medicine and Pathology, Surgery, Midwifery, and of having attended a Medico-Chirurgical Hospital, in which regular Courses of Clinical Lectures are delivered, together with Clinical Instruction for twenty-seven months, or such Hospital for eighteen months, with nine months' attendance on a Medical Hospital, and similar courses of Clinical Lectures and Clinical Instruction; the attendance in each case being for not more than nine months in any year—namely, for six winter and three summer months, and the attendance on a Medico-Chirurgical Hospital and Medical Hospital not being taken out in the same year, and of having attended Practical Midwifery.

Candidates who are not personally known to any Fellow of the College are required to transmit testimonials of character from registered Physicians or Surgeons.

The Examination is divided into two parts:—

First Part.—Anatomy, Physiology, Botany, and Chemistry.

Second Part.—Materia Medica, Practice of Medicine, Medical Jurisprudence, and Midwifery.

Students may be examined in the subjects of the first part at the termination of the first period of study; or in all the subjects of their education, on the completion of their Medical studies.

Candidates are required to have passed an Examination in the following subjects of preliminary education before the Board of Examiners of this College, previous to or within the first two years of their Professional studies; or to have passed, within the period specified, an Examination in General Education held by some of the qualifying Bodies, or by some one of the National Education Bodies approved by the College:—

English—Composition. Modern Languages—French or German. Greek. Latin. Mathematics—Euclid, First and Second Books. Arithmetic.

Students in Arts, of one year's standing, of any University in the United Kingdom, requiring Examinations in the first year; Graduates or Licentiates in Medicine or Surgery of any University or College in Great Britain or Ireland, will be exempted from the Preliminary Examination.

The above regulations respecting Preliminary Examination will not apply to Candidates who commenced their Professional education previously to January 1, 1861.

Candidates qualified as follows are required to undergo the second part of the Professional Examination only, viz.:—1. Graduates in Medicine of a University in the United Kingdom, or of any foreign University approved by the College. 2. Fellows, Members, or Licentiates of the Royal Colleges of Physicians of London or Edinburgh. 3. Graduates or Licentiates in Surgery.

Licence in Midwifery. Members of the College who may desire to obtain the Licence in Midwifery will be required to undergo a special Examination.

Candidates for the Licence in Midwifery, who are not Members of the College, will be admitted to Examination for such Licence in Midwifery on the following qualifications :—The Degree or Licence in Medicine or Surgery from any University or College of Physicians or Surgeons in the United Kingdom, together with a certificate of having attended a six months' Course of Lectures on Midwifery, with the attendance for six months at a recognised Lying-in-Hospital, or of having attended Practical Midwifery for six months.

Fees for Licence and Examinations.—The fee for the Licence is £15 15s., which may be divided as follows, viz. :—For Examination at the termination of the first period of study, £5 5s. The Final Examination for the Licence, £10 10s. Fee for the Midwifery Diploma, £3 3s. Fee for the Licences in Medicine and Midwifery, if taken out at the same time, £16. Fee for the Preliminary Examination, 10s.

The Admission fee, with the exception of two guineas deducted to meet the expense of Examination, will be returned to any Candidate who may be rejected.

ROYAL COLLEGE OF SURGEONS, IRELAND.

Fellows of the College are Members of the Corporation, and are admitted by examination. Letters Testimonial are granted to Licentiates, and a Diploma in Midwifery to Fellows and Licentiates educated and examined in that branch of Surgery.

Candidates for the Fellowship must be 25 years of age, and must give proof of liberal preliminary education and good conduct during Professional education. They are required to produce certificates of Surgical studies for six years, and also of practice as House-Surgeon or Dresser in an Hospital; as well as certificates of attendance on Hospitals, Lectures, and Dissections, as required from Licentiates; with the addition of Botany, Comparative Anatomy, and Natural Philosophy. Fee, £26 5s.; if the Candidate be a Licentiate, £10 10s.

Candidates for Letters Testimonial are required to produce certificates of preliminary classical education, of four years' Professional study (three of them in recognised schools), also three years' attendance on Hospital Practice and Dissections. Fee, £21.

Candidates for the Midwifery Diploma, who must be Fellows or Licentiates of the College, are required to produce certificates of attendance on Midwifery Lectures and Practice, with proof of having attended thirty cases of parturition.

Candidates for the Fellowship and Letters Testimonial are publicly examined on two separate days in Anatomy, Physiology, Surgery, Practice of Medicine, and Pharmacy. The Examiners are elected by a sworn jury of the Council appointed by lot, Teachers being ineligible.

Certificates of attendance on Lectures and of the performance of Dissections are received from Professors and Lecturers in all Universities, Colleges, and recognised schools in Her Majesty's dominions, as qualifications for the Fellowship and Letters Testimonial of this College; and also certificates of attendance on all Hospitals recognised by the Council, where Clinical instruction is given.

By a late regulation quarterly examinations of Candidates for Letters Testimonial in two classes (senior and junior) are held early in January, May, August, and November, without interruption of the usual special Examinations.

THE APOTHECARIES' HALL OF IRELAND.

BYE-LAWS AND REGULATIONS REGARDING THE LICENCE TO PRACTISE AS AN APOTHECARY.

Every Candidate is required to undergo a Preliminary and a Professional Examination.

THE PRELIMINARY EDUCATION AND EXAMINATION

include—1. English; 2. Mathematics; 3. French; 4. Latin; 5. Greek; 6. Natural Philosophy; 7. Natural History.

A Preliminary Examination will be held at the Hall four times in the year, viz., on the third Friday in the months of January, April, July, and October, at the hour of Two o'clock p.m. This Examination will be conducted by Graduates in Arts of the University of Dublin, with Assessors from the Court of the Hall.

Unsuccessful Candidates will not be re-admitted to Examination until after the lapse of six months.

Certificates in Arts granted by any of the Bodies named in Schedule (A) of the Medical Act, or by any Educational Institution approved of by the Medical Council, will be recognised by the Hall.

THE PROFESSIONAL EDUCATION AND EXAMINATION.

Every Candidate for the Licence to practise must produce Certificates to the following effect :—

1. Of having passed an Examination in Arts previously to entering on Professional study.
2. Of being registered as a Student in Medicine by one of the Bodies named in Schedule (A) of the Medical Act.
3. Of being at least twenty-one years of age, and of good moral character.
4. Of Apprenticeship to a qualified Apothecary, or of having been engaged at practical Pharmacy with an Apothecary for a period of three years subsequent to having passed the Examination in Arts.
5. Of having spent four years in Professional study.
6. Of having attended the following Courses, viz. :—Chemistry, during one winter session; Anatomy and Physiology, during two winter sessions; Demonstrations and Dissections, during two winter sessions; Botany and Natural History, during one summer session; Materia Medica and Therapeutics, during one summer session; Practical Chemistry (in a recognised Laboratory), during three months; Principles and Practice of Medicine, during one winter session; Midwifery and Diseases of Women and Children, during six months; Practical Midwifery at a recognised Hospital (attendance upon twenty cases); Surgery, during one winter session; Medical Jurisprudence, during one summer session; Instruction in the Practice of Vaccination.
7. Of having attended, at a recognised Hospital or Hospitals, the Practice of Medicine and Clinical Lectures on Medicine, during two winter and two summer sessions; also the Practice of Surgery and Clinical Lectures on Surgery, during one winter and one summer session.

The Examination for the Licence to practise is divided into two parts.

The First Part comprehends Chemistry, Botany, Anatomy, Physiology, Materia Medica, and Pharmacy.

The Second—Medicine, Surgery (Principles of), Pathology, Midwifery, Forensic Medicine, and Hygiene.

The First Part may be undergone at the close of the second winter session, and after the Candidate has attended the Courses upon the several subjects named for this Examination, and the second not before the completion of the fourth winter session.

The Licence of the Apothecaries' Hall, Dublin, entitles its possessor to be registered as a Medical Practitioner, under the Medical Act, and to practise Medicine and Pharmacy in Great Britain and Ireland.

The Professional Examination will be held upon the first two Fridays in each month, with the exception of the month of August, and will commence at twelve o'clock, noon, by means of printed or written questions, to which written answers will be required. Each Candidate must have his paper completed (with his name affixed thereto) by the hour of two o'clock p.m., when the Candidates will be examined orally.

Candidates for the Licence must lodge their testimonials and enrol their names and address with the Clerk at the Hall, in Dublin, a week prior to the day of Examination.

A rejected Candidate cannot be re-admitted to Examination until after the expiration of six months.

Candidates for the Certificate of Assistant to an Apothecary, in Compounding and Dispensing Medicine, must have completed at least three years of his Apprenticeship with an Apothecary, or have a Certificate from an Apothecary of having been engaged at practical Pharmacy for a period of three years, together with a Certificate of good moral character.

The Examination of the intended Assistant will be restricted to the British Pharmacopœia and to Pharmacy, scientific and practical, including the history and character of Medicines, their preparation, combination, and doses, and the translation of Latin Prescriptions.

An Examination of Apprentices is held at the Hall in the first week in May annually, upon some subject of Medical Chemistry, which is announced by the Council of the Hall at the commencement of the previous Winter Session, and a Prize of Five Guineas is awarded to the successful competitor.

In reference to the foregoing Education and Examinations it is required by the Council of the Hall that every Candidate for the Preliminary Examination, or Certificate of Apprentice, shall have read all the Books in the prescribed Course, and shall pass such Examination as will satisfactorily test his grammatical Knowledge of the Languages, his acquaintance with the working of the several problems and calculations and his familiarity with the leading events of English History, and with the elements of Physical and Natural Science.

In each department numerical values will be attached to the answers, and only Candidates who attain a certain proficiency will obtain "the Certificate in Arts" or "Certificate of Apprentice."

This Examination will be conducted by printed papers, and the answers will be required in writing.

In the first part of the Examination for "the Licence" the Candidate is required to recognise and describe samples of Drugs and Plants used in Medicine, and to indicate the chemical and physical means of distinguishing them; to enumerate and explain the Pharmaceutic preparations of the Pharmacopœia, with their uses and doses; to translate Latin prescriptions correctly; and to answer questions in Human Anatomy, and in Vegetable and Animal Physiology.

This Examination will be partly written and partly oral.

In the second part, the Candidate, having passed the first part satisfactorily, must answer questions in the several departments of Practical Medicine, and demonstrate and define diseased structure and injuries from pathological illustration, and give also the appropriate treatment and the form of prescription suitable in each case.

This Examination will be also partly written and partly oral.

Doctors of Medicine of any of the Universities in the United Kingdom, or Surgeons of any of the Royal Colleges of Surgeons, whose qualifications as such appear in the Medical Register, and who, having first passed an Examination in Arts, have also served an Apprenticeship, or the required Term at Practical Pharmacy, to a qualified Apothecary, may obtain the Licence of the Hall by undergoing an Examination—the former in Pharmacy, and the latter in Medicine and Pharmacy; in either case the Examination of the Candidate will be confined to one day's Examination.

TO CORRESPONDENTS.

We beg to return our best thanks to the Registrars and Secretaries of the various Universities, Colleges, and Schools for their prompt replies to our Circular, and for the trouble they have taken in supplying the latest Regulations of the Institutions with which they are connected.

In order to confine the whole of this week's Number to information specially important to Students, we are compelled to defer answers to several Correspondents, together with all notices of passing events, until next week.

Medical Times and Gazette.

SATURDAY, SEPTEMBER 15.

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ADDRESS TO STUDENTS.

Once more we mark the approach of the Medical Session, of the time when the Medical Schools again burst into active life, by the issue of our "Students' Number," and once more we accompany it, as is our wont, with a few words of advice, warning, and encouragement.

It would require a very lively imagination and considerable credulity to believe that any one ever consults the "Students' Number" of a Medical Journal for guidance in the choice of a Profession. It is written for and studied by those whose path in life is selected, who have already chosen the Medical Profession, and entered on its preparatory studies. We are, therefore, relieved from all necessity of proffering any advice on that subject, or of pointing out the tastes and aptitudes, the qualities and gifts of mind and body, most fitted for that Profession, and most likely to insure success in it. Having then to address those who have of their own choice, or by the will and direction of others, cast in their lot for good or for evil with us, our object will be to say a few words which may help them so to spend their days of Studentship that the result shall be the greatest possible amount of good to themselves and others.

It may be doubted whether the selection of the particular Medical School any Student shall enter at is ever ruled by a careful comparison of the respective merits or defects of the several schools. If the son of a Medical man is to follow his father's Profession, he generally goes, as a matter of course, to his father's School; and in other cases the choice is usually made according to the advice of the nearest Medical relative, or of the dearest Medical friend of the family, or of the special Medical "guide, philosopher, and friend" of each youth, the man under whose care he has made his first steps in the Profession, the master whose pupil or apprentice he has been. But if any real selection has still to be made, we would offer a few hints on the subject. Choose a large school rather than a small one, a school attached to a large rather than one belonging to a smaller Hospital. Not to mention other advantages, there will be greater emulation in a large school, a greater number and variety of intellects to try your own against, a larger number of your fellow-men to study and observe, more life and vitality in general; and a knowledge of human nature is most important to the Medical Practitioner.

Go to a School where the Tutorial system is developed as much as possible, instead of only the Professorial, where the individual Student is looked after and cared for as well as the class. You will need every help and encouragement possible, and the appointment of "Medical Tutors" in some of our Schools is an invaluable step in the right direction. It is the development of the English as distinguished from the German and Scotch methods of instruction. You would doubtless always find the Professor most ready and willing to answer any questions and explain any difficulties, and always most courteous and kind in affording you every possible assistance. But his office is to lecture, and he has most probably Hospital duties besides; his time seems fully occupied, while the Tutor's special work and office is to look after you, to superintend and guide your studies, to help you in all your difficulties, to encourage and aid you if diligent, to rouse and spur you on if idle. You need never hesitate in seeking his advice and help. He is there to supplement and fill in the work of the Professor.

Do not be attracted by a long and showy prize list, or by the mere number of Lecturers and a multiplicity of courses of lectures. Seek for the greatest degree and fulness of clinical teaching; and look to the kind rather than to the number of prizes offered for competition. The class prize system—that is, the medals, books, etc., offered for written examinations in the subjects of each class—fosters a system of cramming from books, a kind of superior grinding. It may make bookworms of you, but not good Practitioners. A far better plan is that of those Schools in which the offices of Dresser, Clinical Clerk, House Physician and Surgeon, and so on, are given as the rewards of the industrious Student—rewards to be gained by hard and steady work in the laboratory, the dissecting room, and the out-patient rooms and wards of the Hospital, as well as in the lecture-room and the library. Prizes of special value, by placing you in posts of some responsibility and greatly increasing your opportunities of gaining knowledge and experience, besides rewarding your past efforts.

Another most admirable and desirable feature in some Schools is the introduction of the collegiate system, the provision of sets of rooms within the Hospital walls where Students live under the superintendence of a warden, aud subject to a certain degree of discipline. If the School at which you enter has adopted this system, obtain rooms in College if you possibly can. You will find its rules and restraints a great help against the temptations of London and the liberty of student life. The warden will be ready to be your constant and true friend and counsellor, and your fellow-residents, as a rule, will be the best and most earnest of the Students of your School, and therefore your most desirable companions and friends; and their companionship and society will be a safeguard and protection against the tedium and the temptations most likely to attack the solitary student.

But whatever may be the School you enter, brace yourselves up for hard, steady, unflinching Professional work. Steady, unflinching work, for you will have no time to spare for amusements. Steady, unflinching Professional work, for you will have no time for work of any other kind. Mathematics, classical and general literature, modern languages—all these have their value, and a very high value, but this is not the time for you to study them. Your previous education and your "preliminary" studies ought to have given you a solid foundation of knowledge in these subjects, which you may most profitably enlarge and build on in future times, when you will have more leisure at your command; but now, during the Medical Sessions, you must devote all your energies to Professional study. Be not tempted either to think that you can work well and learn "your London" also. Some may tell you that you can work hard and play hard, that "all work and no play makes Jack a dull boy," that you will need change, and so on. Believe it not. The time before you is all too short for what you have to learn. Your "jealous mistress," Science, rewards well her persevering votaries, but will suffer no divided allegiance. The School and the Hospital must for the time be the whole world to you; and while the extent of your studies there will demand all your time and call forth all your energies, the variety of them and their changes of interest, by calling into play alternately different faculties, will supply all the recreation needed for intellectual vigour and health.

We shall not attempt to give you any advice as to the exact order of your studies, or the exact way in which you should work. The former will be prescribed more or less closely by the arrangements of the School; and concerning the latter you will have advice enough in the Introductory Lectures, and from the authorities you have to work under. Seek also eagerly and gladly the friendship of the best and most distinguished among your senior fellow-Students—the men who have most recently, and successfully, met and conquered the difficulties you have now to face. But as with all the instruction, so with all the advice you receive, examine, weigh, and test all for and by yourself. Trust none blindly. No two men are exactly alike in mental qualities and gifts, and so no two can best learn in exactly the same way. You must, after all, be in this your own teacher to a great extent; of yourself and by your own experience you must learn how to learn.

This much, however, we would earnestly press upon you. There are two great and distinct methods by which you must learn—from books and by observation; you must sedulously follow both. By hard study in the lecture-room, in the library, and by the fireside; by cultivating chiefly or almost solely the reflective faculties, you may carry off class-prizes in numbers, and be enabled to pass brilliant written and *vivâ voce* examinations, you may become a learned, careful, thoughtful, anxious Practitioner, but not the ready, confident man of action whom the public delight to trust in.

By cultivating only the perceptive faculties you may become ready and self-confident enough, but at the same time shallow, narrow-minded, boastful; empirical in its worst sense—the loud "practical" man; liable to be constantly believing in fallacies long since exploded, and in half-truths long ago expanded into or merged in larger and fuller truths; given to loudly trumpeting forth as new discoveries things that had been noted and tested before their "new discoverer" was "born or thought of;" all this, observation alone may make you, but it will never make you the accomplished, finished Practitioner who is looked up to, honoured, and esteemed, alike by the Profession and the public."

Read and study books, new and old, and get as much learning as you can; but study still more "the living books, writ by the finger of God," which crowd the out-patient rooms and the Hospital wards. Cultivate zealously all your senses, so that you may rapidly and accurately note and compare facts and signs of every kind. Watch, study, and learn your fellow-creatures, in health and in sickness. Observe well the interdependence of all the functions, of each part upon every other, no one part or function being able to say to any other, "I have no need of thee;" but each ministering to the well-being of each and of the whole. Then learn how each part behaves under disease; how one function can aid and supplement another when this is impaired or injured by disease or decay; how this wonderfully and fearfully made body of ours is "fitted for disease as well as for health, for the storm as well as the calm." Diligently, zealously, jealously, note every case of disease that comes before you—the slighter cases that you will meet with in the out-patients' rooms, the graver ones that fill the wards; note every stage, every change, every complication; pursue each case to its termination; follow it to the dead-house, if such shall be its sad bourne, and there learn how the destroyer broke into the stronghold of life.

Thus working, you will really fit yourselves to practise our noble Profession; you will learn how to handle and use all the weapons at your disposal, and how best and most quickly to meet, and even to anticipate, all the varied attacks of the enemy you have engaged to fight.

You have stern, hard work before you; you must "spurn delights and live laborious days;" but as you toil on your powers of understanding and grasping facts will become larger and more incisive till work becomes a pleasure and "the curse of labour is changed into the blessing of exertion." And your reward will be great; you will derive great and high pleasure in the practice of your Profession, and you will be successful. Not always, or all equally, successful in acquiring wealth, but certainly successful in winning affection, esteem, and honour from honourable men. You will not all start equally in the race—some will be happier as to external circumstances than others, will have greater advantages of station, interest, and the like, but if you have them not, still take courage; they are not essentials, and, to quote one of our most gifted teachers, "he that has them not may be sure that industry can ear [illegible] honour all that circumstances can give."

TABLE OF FEES CHARGED IN THE MEDICAL SCHOOLS OF ENGLAND

FOR ALL LECTURES AND HOSPITAL PRACTICE REQUIRED FOR THE LICENTIATE EXAMINATIONS OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE LONDON SOCIETY OF APOTHECARIES, AND FOR THE MEMBERSHIP EXAMINATION OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

London.

St. Bartholomew's	£99	15	0
Charing-cross Hospital	72	11	0
St. George's Hospital	94	4	0
Guy's Hospital	90	0	0
King's College	99	6	6
London Hospital	88	4	0
St. Mary's Hospital (in one sum)	84	4	0
,, ,, or (in instalments)	89	5	0
Middlesex Hospital	105	0	0
St. Thomas's Hospital	90	0	0
University College	93	3	0
Westminster Hospital	78	15	0

The Provinces.

Birmingham—Queen's College and Hospital	£63	0	0
Birmingham—Sydenham College and General Hospital	80	17	0
Birmingham—Sydenham College and Queen's Hospital	63	0	0
Bristol Medical School and Bristol Royal Infirmary	93	8	0
Bristol Medical School and Bristol General Hospital	79	16	0
Hull Medical School and Hospital	63	1	0
Leeds Medical School and Infirmary	86	2	0
Liverpool Royal Infirmary and School	81	15	0
Manchester Medical School (Lectures only)	42	0	0
Newcastle School and Infirmary (in one payment)	64	1	0
,, ,, or (in three payments)	75	12	0
Sheffield Medical School and Infirmary	76	15	0

METROPOLITAN SCHOOL OF DENTAL SCIENCE.—WINTER SESSION.—Lectures: Dental Surgery, Tuesdays, at 7 p.m.; Dental Mechanics, Thursdays, at 7 p.m. Summer Session—Dental Anatomy and Physiology, Mr. Fuller; Metallurgy, Mr. Tribe. The National Dental Hospital is open daily (Sundays excepted) from 9 to 11 a.m.

TABLES

GIVING THE NAMES OF LECTURERS, HOURS OF LECTURE, DAYS OF ATTENDANCE, AND FEES IN THE METROPOLITAN MEDICAL SCHOOLS AND HOSPITALS.

LECTURES.	ST. BARTHOLOMEW'S.					CHARING CROSS.					ST. GEORGE'S.				
	Lecturers.	Days and Hours.	Fees.			Lecturers.	Days and Hours.	Fees.			Lecturers.	Days and Hours.	Fees.		
			1 Course	2 Courses	Per-petual.			1 Course	2 Courses	Per-petual.			1 Course	2 Courses	Per-petual.
WINTER SESSION.			£ s.	£ s.	£ s.			£ s.	£ s.	£ s.			£ s.	£ s.	£ s.
PRINCIPLES AND PRACTICE OF MEDICINE	Dr. Black	M 2.30 Tu and Th 3 30	5 5	..	7 7	Dr. Chowne Dr. H. Salter	M W F 2.30	4 4	6 6	7 7	Dr. Barclay	M W F 12	6 6	..	6 6
SURGERY	Mr. Paget Mr. Coote	M F 3.30 W 9	5 5	..	7 7	Mr. Hancock Mr. Canton	Tu Th S 9	3 3	5 5	6 6	Mr. Tatum	Tu Th S 12 15	4 4	..	6 6
DESCRIPTIVE & SURGICAL ANATOMY	Mr. Holden Mr. Callender	Tu W Th F 2.30	5 5	7 7	10 10	Mr. Barwell	M W F 9 Tu Th 4.30	4 4	6 6	7 7	Mr. Holmes Mr. Rouse	M W Th F 2·45	6 6	..	8 8
ANATOMICAL DEMONSTRATIONS.	Mr. Smith Mr. M. Baker	Daily 10.15 till 2	3 3	5 5	..		Daily	2 2	4 4	4 4	Mr. Pick Mr. Braine Dr. Williams Mr. Haward	..	..	..	..
GENERAL ANATOMY AND PHYSIOLOGY	Mr. Savory	M Tu Th F 9	5 5	7 7	10 10	Dr. Morris Tonge	M Tu Th F 3.30	4 4	6 6	7 7	Dr. W. Ogle	Tu S 2.45	6 6	..	8 8
CHEMISTRY	Dr. Odling	M F 10.30 W 10.15	5 5	..	7 7	Mr. Heaton	M W F 10	5 5	6 6	7 7	Dr. Noad	Tu Th F 11.30	6 6	..	8 8
NATURAL PHILOSOPHY ..	..	..	..	..	..	Dr. Diver	W Th F 11.30	3 3	..	..	..	..	..	..	..
HOSPITAL PRACTICE—															
Physicians	Dr. Farre Dr. Jeaffreson Dr. Black Dr. Martin	M W F 10.30 M W F 8 Th 1 M Tu Th 1 M Tu Th F S 1.30	12 12 6 mths	18 18 2 yrs.	26 5	Dr. Chowne Dr. H. Salter	Daily 1	10 10 6 mths	15 15 12 mths	21 0	Dr. Page Dr. Fuller Dr. Barclay Dr. J. Ogle	M F 1 Tu S 1 M F 1 T S 1	8 8 6 mths	16 16 1 year	25 4
Assistant-Physicians ..	Dr. Edwards Dr. Harris Dr. Andrew Dr. Southey	Tu F 11 W S 11 Th 11 M 11	..	..	..	Dr. Headland Dr. Pollock	12 to 2	..	..	..	Dr. Wadham Dr. Dickinson	Tu S 12 M F 12	..	..	..
Surgeons	Mr. Wormald Mr. Paget Mr. Coote Mr. Holden	M Tu S 1.30 M Tu Th F S 1.30 M W F S 1.30 Tu F S 1.30	15 15 6 mths	21 0 1 year	26 5	Mr. Hancock Mr. Canton	Daily 1	10 10 6 mths	15 15 12 mths	21 0	Mr. Tatum Mr. P. Hewett Mr. Pollock Mr. H. Lee	M F 1 M F 1 Tu S 1 Tu S 1	15 15 6 mths	21 0 1 year	42 0
Assistant Surgeons	Mr. Savory Mr. Callender Mr. T Smith Mr. Willett	W S 12 Tu F 12 Th 12 M 12	..	..	..	Mr. Hird Mr. Barwell	12 to 2	..	..	..	Mr. Holmes Mr. Brodhurst	M F 12 Tu S 12	..	..	..
Physician-Accoucheur ..	Dr. Greenhalgh	W [illegible] S 9	..	..	..	Dr. Parson	..	..	..	..	..	..	..	..	..
CLINICAL MEDICINE ..	Dr. Farre Dr. Black Dr. Martin	Tu 12	..	..	..	By the Physicians	..	..	..	..	By the Physicians	M 1.45	..	..	..
CLINICAL SURGERY ..	Mr. Skey Mr. Paget Mr. Coote Mr. Holden	M 1 Th 1.30 S 9	..	..	..	By the Surgeons	..	..	..	..	By the Surgeons	Tu 1.45	..	..	..
DISEASES OF WOMEN ..	Dr. Greenhalgh	Alt W 3.30	..	..	..	..	..	..	..	..	..	..	..	..	..
MORBID ANATOMY AND PATHOLOGY	Dr. Andrew The Surgeons	12	..	..	..	Dr. J. Pollock	Tu F 3 sum	..	..	..	Dr. J Ogle Mr. Lee	S 2 W 1.45 sum	..	..	..
SUMMER SESSION.															
MATERIA MEDICA	Dr. Farre	Tu W Th S 10	5 5	..	6 6	Dr. Headland	M W F 9	3 3	5 5	6 6	Dr. Dickinson	Tu Th S 9	4 4	..	5 5
BOTANY	Rev. G Henslow	M W F 10	3 3	..	4 4		M W F 10	2 2	3 3	4 4	Dr. M. Masters	Tu Th S 2.30	3 3	..	4 4
FORENSIC MEDICINE ..	Dr. Edwards	M Th S 9	3 3	..	4 4	Mr. Hird Mr Tuson	M W F 4	2 2	3 3	4 4	Dr. Wadham	M W F 2 30	4 4	..	5 5
MIDWIFERY	Dr. Greenhalgh	Tu W F S 8.30 a.m	5 5	..	6 6	Dr. Chowne Dr. Pearson	M W Th 3	3 3	5 5	6 6	Vacant	M W F 9	5 5	..	6 6
PRACTICAL CHEMISTRY ..	Dr. Odling	M Tu Th F 10.15 to 1	2 2	..	3 3	Mr. Heaton	M W F 11	2 2	..	..	Dr. Noad	M W Th F 10	4 4	..	..
MICROSCOPIC ANATOMY ..	Mr. Savory	.	..	..	..	..	..	..	..	..	..	..	..	..	..
DEMONSTRATIONS OF MICROSCOPIC ANATOMY ..	Dr. Southey Mr Vernon	..	.	..	..	..	..	..	..	..	..	..	..	..	..
EXPERIMENTAL PHILOSOPHY	..	..	..	..	..	..	..	..	..	..	Dr. Noad	..	4 4	..	..
COMPARATIVE ANATOMY..	Dr. Church	Tu Th 11 *Summer*	2 2	..	3 3	Mr. W. H. Spencer	Tu Th S 4	3 3	..	4 4	..	..	..	..	..
DRESSERSHIPS	..	..	12 12 3 mths	18 18 6 mths	26 5 1 year	..	..	..	..	..	..	..	..	..	..
DENTAL SURGERY	Mr Coleman	..	..	..	..	Mr. Parkinson	..	..	..	..	Mr. Vasey	Tu 10	[illegible] 1	..	..
PSYCHOLOGICAL MEDICINE	..	..	..	..	..	..	..	..	..	..	Dr. Blandford	..	..	..	..
OPERATIVE SURGERY ..	Mr. Smith Mr. M. Baker	..	2 2	..	..	Mr. Barwell	..	..	..	..	Mr. Holmes	..	4 4	..	..
PRACTICAL PHARMACY ..	Mr. Wood	..	..	..	..	..	..	..	..	..	..	..	..	..	..
											Compounding Fee	..	..	..	100 0
Entrance to the Lectures and Hospital Practice for the Licences of the Col. of Phys. and Soc. of Apoth., and the M.R.C.S. Exam.	..	..	..	..	99 15	..	..	..	..	72 11	..	..	..	..	90 0
To the Hospital Practice only	..	..	..	..	..	..	..	..	..	31 1	..	..	..	..	37 16
To the Lectures only	..	..	..	..	54 12	..	..	..	..	46 4	..	..	..	..	..
Unlimited to all Lectures ..	..	..	..	..	65 2	..	..	..	..	..	..	..	..	..	..

LECTURES.	GUY'S.					KING'S COLLEGE AND HOSPITAL.					LONDON.				
	Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Per-petual.	Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Per-petual.	Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Per-petual.
WINTER SESSION.			£ s.	£ s.	£ s.			£ s.	£ s.	£ s			£ s.	£ s.	£ s.
PRINCIPLES AND PRACTICE OF MEDICINE	Dr. Owen Rees Dr. Wilks	M W F 3	5 5	..	..	Dr. G. Johnson	Tu S 4 Th 5	7 7	..	7 7	Dr. H. Davies Dr. A. Clark Dr. Ramskill	W Th 9 F 4	5 5	.	6 6
SURGERY	Mr. Birkett Mr. Poland	Tu Th S 3.30	5 5	..	..	Sir W. Fergusson	M W F 5	5 5	..	7 7	Mr. Hutchinson	Tu F S 9	5 5	..	6 6
DESCRIPTIVE & SURGICAL ANATOMY	Mr. C. Forster Mr. Durham	Tu W Th F 9	5 5	..	..	Mr. Partridge	Daily 9	6 6	..	9 9	Mr. Adams Mr. Rivington	M TuThF3	5 5	..	8 8
ANATOMICAL DEMONSTRATIONS	Mr. Bankart Dr. Pye Smith Mr. Phillips	Daily 9 to 4	5 5	..	..	Mr. Wood *Ass.-Demonst.* Mr. Bellamy Mr. Nettleship Mr. Robinson	..	..	..	..	Mr. Rivington Mr. J. Adams Mr. W. Tay	Daily 10 to 3 exc. W. & S after.	5 5	..	8 8
GENERAL ANATOMY AND PHYSIOLOGY	Dr. Pavy	M W F 4.15	5 5	..	..	Dr. L. Beale	M W Th F 4	6 6	..	9 9	Dr. H. Jackson Dr. Mackenzie	M W Th 4	4 4	..	6 6
CHEMISTRY	Dr. Alf. Taylor	Tu Th S 11	5 5	..	..	Dr. Miller Mr. Hadow *dem*	M W Th S 10.15	7 7	..	9 9	Dr. Letheby	M W F 10.30	7 7	..	7 7
HOSPITAL PRACTICE—															
Physicians	Dr. Barlow Dr. Owen Rees Dr. Habershon Dr. Oldham *obs.*	M F 1.30 W S 1.30 Tu F 1.30 Tu F 1.30	10 10 3 mths	15 15 6 mths	26 5	*In-patients—* Dr. Johnson Dr. Beale Dr. Garrod *Out-patients—* Dr. Guy Dr. Priestley, *obs.*	 M W F 1.30 Tu Th S 9 Tu Th S 1.30 M W F 1 Tu Th S 1.30	10 10 6 mths	15 15 18 mths	21 0	Dr. Fraser Dr. Davies Dr. A. Clark Dr. Head, *obs.*	Daily 8 or 1 W S 1.30	6 6 6 mths	12 12 Period reqd. by Apoth. H.	21 0
Assistant-Physicians ..	Dr. Wilks Dr. Pavy Dr. Moxon Dr. J. B. Hicks *obs.*	W 12 F 12 M 12 Th S 12 M F 1.30	..	..	..	Dr. C. Evans Dr. A Duffin Dr. Harley Dr. Playfair *obs.*	MWF1 win M W F 1 Tu Th S 1 M W F 12.30	..	..	..	Dr. Ramskill Dr. Down Dr. H. Jackson Dr. Palfrey, *obs*	Daily 1 W S 1	..	..	..
Surgeons	Mr. Cock Mr. Hilton Mr. Birkett Mr. Poland Mr. Poland *oph.* Mr. Hinton *aur*	M Th S 1.30 M Th 1.30 M Th 1.30 W S 1.30 Tu 12	10 10 3 mths	15 15 6 mths	26 5	Sir W. Fergusson Mr. Partridge Mr. Wells, *oph.*	Tu Th S 1.30 M W F 1.30 Tu Th S 1	15 15 6 mths	21 0 21 mths	26 5	Mr. Adams Mr. Curling Mr. Hutchinson	Daily 1	8 8 6 mths	18 18 18 mths	25 0 3 years
Assistant-Surgeons	Mr. C. Forster Mr. Bryant Mr. A Durham Mr. Bader *oph.* Eye Wards	S 12 M Th 12 W 12 Tu F 12 W S 1.30	..	..	..	Mr. Wood Mr. H Smith Mr. Watson	Tu Th S 1 sum M W F 1 Tu Th S 1	..	..	..	Mr. Maunder Mr. Couper Mr. Little Mr. Rivington	Daily 1	..	..	..
CLINICAL MEDICINE ..	*Winter—* Dr. Barlow Dr. O. Rees Dr. Habershon *Summer—* Dr. Wilks Dr. Pavy Dr. Moxon	Weekly Weekly	..	..	..	Dr. Johnson Dr. Beale Dr. Garrod Dr. Priestley *obs.*	Every alt. M 2 p.m. S 9 Every alt. Tu 2 p.m. Every alt. Th 3	..	..	..	By the Physicians	..	..	..	..
CLINICAL SURGERY ..	*Winter—* Mr. Cock Mr. Hilton Mr. Birkett Mr. Poland *Summer—* Mr. C. Forster Mr. Bryant Mr. Durham	Weekly Weekly	..	..	..	Sir W. Fergusson Mr. Partridge Mr. Wells, *oph.*	Every alt. Th 2 p.m. Every alt. F 2 p.m. Every W 1	..	..	..	By the Surgeons	..	..	..	..
DISEASES OF WOMEN ..	Dr. Oldham Dr. Hicks	Weekly	..	..	..	..	..	..	..	..	..	..	..	..	..
MORBID ANATOMY AND PATHOLOGY	Dr. Moxon	Daily 2.30 S 8.45 sum	..	..	..	Dr. Beale, Physicians & Surgeons	Tu 4 sum	2 2	..	..	Dr. Hughlings Jackson Dr. Sutton Mr. Little	2.30	..	..	..
SUMMER SESSION.															
MATERIA MEDICA	Dr. Habershon	Tu Th S 3	4 4	..	..	Dr. A. B. Garrod	Tu W Th F 8 a.m.	4 4	..	6 6	Dr. J. L. Down	Tu Th F 4	3 3	..	4 4
BOTANY	Mr. Johnson	Tu Th S 11.30	4 4	..	..	Mr. Bentley	M Tu Th F 12.15	3 3	..	4 4	Dr. Dresser	M W F 10	3 3	..	4 4
FORENSIC MEDICINE ..	Dr. A. Taylor	Tu Th S 10	4 4	..	..	Dr. Guy	M Tu W F 3	3 3	..	4 4	Dr. Ramsbotham Mr. Rodgers	Daily exc. Sat 10.15	3 3	..	4 4
MIDWIFERY	Dr. Oldham Dr. B. Hicks	Tu W Th F 8.45 a.m.	5 5	..	..	Dr. W. O. Priestley	Tu W Th F 9	6 6	..	6 6	Dr. Ramsbotham	M Tu W Th F 3	4 4	..	6 6
PRACTICAL CHEMISTRY ..	Dr. Stevenson	M W F 10 to 1	4 4	..	..	Mr C. L. Bloxam	M W F 10.15	4 4	..	8 8	Dr. Letheby	M Th S 9	2 2	..	..
COMPARATIVE ANATOMY ..	Dr. Pye-Smith	Tu S 12.15	4 4	..	..	Mr. R. Jones	M W F 4	3 3	..	4 4	Mr. Rivington	TuTh11.30	3 3	..	..
PRACTICAL HISTOLOGY ..	..	..	..	..	..	..	..	..	..	..	Dr. H. Jackson Dr. Mackenzie	..	..	..	..
NATURAL PHILOSOPHY ..	Dr. Fagge	W 12 win.	..	..	..	..	..	..	..	..	..	..	..	.	..
OPERATIVE SURGERY ..	Mr. Bryant	W 3	..	..	..	..	..	..	..	..	Mr. Maunder	..	..	..	..
DENTAL SURGERY	Mr. Salter	..	..	..	..	Mr. Cartwright	Tu F 9	6 6	..	8 8	Mr. Barrett	..	2 2	..	..
AURAL SURGERY	Mr. Hinton	..	..	..	..	..	..	..	..	..	..	..	..	..	..
CUTANEOUS DISEASES ..	Dr. Wilks	W 1	..	..	..	..	..	..	..	..	..	..	..	..	..
OPHTHALMIC SURGERY ..	Mr. Poland Mr. Bader	M 8.45 a.m.	..	..	..	Mr. J. S. Wells	M Tu W Th 9	3 3	..	..	Mr. J. Hutchinson	Tu W F 9 in June	..	..	..
PRACTICAL BOTANY ..	Mr. Johnson	Th 12.30	..	..	..	..	..	..	..	..	..	..	..	..	..
USE OF MICROSCOPE ..	Mr. Durham	M 12.30	..	..	..	..	..	..	..	..	..	..	..	..	..
TUTOR'S CLASS	Mr. Bankart Dr. H Fagge Dr. Pye-Smith Mr. Phillips Mr. Eastes Dr. Stevenson	..	..	..	..	Mr. I. B. Yeo	Day.ex S 5 Win. M W F 5	3 3	..	..	Mr J. R. B. Dove	..	..	..	..

Fee for Hospital Practice and Lectures, 1st year, £40; 2nd year, £40; and £10 for each succeeding year. A Perpetual Ticket, £100

Fee for Lectures required by Colleges of Physicians and Surgeons and Hall, £61 19s

Ditto, including Hospital Practice and Matriculation, £99 6s. 6d.

Perpetual to all Courses and Hospital Practice, £117 3s. 6d.

Fees for the Lectures and Hospital Practice, for the Licences of the Royal College of Physicians, Society of Apothecaries, and the Royal College of Surgeons, £88 4s.

To the Lectures alone, £50.

Perpetual Fee to Lectures and Hospital practice, £98 14s.

subjects will be added to the total number of marks obtained in the obligatory part of the Examination by Candidates who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of these branches of Science.

6. The names of Candidates who pass the Preliminary Examination of the Examining Board will be sent to the Director-General and communicated to the Professors of the Army Medical School. The names will be arranged in the order of merit.

7. After passing his Preliminary Examination, every Candidate will be required to attend one entire course of Practical Instruction at the Army Medical School before being admitted to his examination for a Commission, on (1) Hygiene, (2) Clinical and Military Medicine, (3) Clinical and Military Surgery, (4) Pathology of Diseases and Injuries incident to Military Service. These courses to be of not less than four months' duration.

8. At their conclusion the Candidate will be required to pass an examination on the subjects taught in the School. The examination will be conducted by the Professors of the School. The Director-General, or any Medical officer deputed by him, may be present and take part in the examination. If the Candidate give satisfactory evidence of being qualified for the practical duties of an Army Medical officer, he will be eligible for a Commission as Assistant-Surgeon.

9. During the period of his residence at the Army Medical School each Candidate will receive an allowance of 5s. per diem, with quarters, or 7s. per diem without quarters, to cover all costs of maintenance; and he will be required to provide himself with uniform (viz., the regulation undress uniform of an Assistant-Surgeon, but without the sword).

10. All Candidates will be required to conform to such rules of discipline as the Senate may from time to time enact.

The Assistant-Surgeon is subjected to three separate Examinations within the first ten years of his service, each Examination having a definite object. The first, to ascertain, previous to his admission into the Service as a Candidate, his scientific and Professional education, and to test his acquirements in the various branches of Professional knowledge; the second, after having passed through a course of special instruction in the Army Medical School, to test his knowledge of the special duties of an Army Medical Officer; and the third, previous to his promotion, to ascertain that he has kept pace with the progress of Medical Science.

ARMY MEDICAL SCHOOL.

President of the Senate.—Sir James B. Gibson, K.C.B., M.D., Director-General of the Army Medical Department.

Members of the Senate.—Sir Ranald Martin, C.B., Physician to the Indian Council; Inspector-General T. Ross Jameson, M.D., Principal Medical Officer, Royal Victoria Hospital; Deputy-Inspector-General T. Longmore, Professor of Military Surgery; Deputy-Inspector-General W. C. Maclean, Professor of Military Medicine; William Aitken, M.D., Professor of Pathology; E. I. Parkes, M.D., F.R.S., Professor of Military Hygiene.

Assistant Professors.—Staff-Surgeon W. J. Fyffe, P. Davidson, F. François de Chaumont.

Candidates for Commissions in the Army, and in the Queen's Indian Service, proceed to Netley after passing the Competitive Examination at Chelsea. At Netley they attend the Medical and Surgical Practice of the Royal Victoria Hospital, and learn the system and arrangements of Military Hospitals. During four months they attend the Lectures given by the Professors and Assistant-Professors, and go through a course of Practical Instruction in the Hygienic Laboratory and Microscopical Room. The Lectures and Practical Instruction are intended to explain the specialties of Military Medical Practice, attention being directed to gunshot and other wounds, Surgical arrangements in the field during action and sieges, means of transport, field Hospitals; tropical diseases and their means of investigation, service in India and in the various colonies, the sanitary arrangements in peace and war, and the means of carrying out the sanitary regulations. Every opportunity is taken of practising operations on the dead body and practical points of a like kind. See Nos. 9 and 10 above.

NAVY MEDICAL DEPARTMENT.

ADMIRALTY, SOMERSET HOUSE.

REGULATIONS FOR CANDIDATES FOR THE OFFICE OF ASSISTANT-SURGEON IN THE ROYAL NAVY.

A Candidate for entry into the Royal Navy shall make a written application to that effect, addressed to the Secretary of the Admiralty; on the receipt of which application he will be furnished with the Regulations and a printed form, to be filled up by him, to show if he possesses the required qualifications.

As vacancies occur, the number of Candidates required will be ordered to attend at the Admiralty Office, bringing with them the requisite certificates, showing that they are fully qualified by age, Professional ability, etc., when they will be examined by a Board of Medical officers, to be named by their Lordships.

That no person be admitted as an Assistant-Surgeon in the Royal Navy who shall not produce a certificate of being registered under the Medical Act, and a Diploma from one of the Royal Colleges of Surgeons of England, Edinburgh, or Dublin, from the Faculty of Physicians and Surgeons of Glasgow, from Trinity College, Dublin, or from other Corporate Body legally entitled to grant a Diploma in Surgery; nor as a Surgeon unless he shall produce a certificate from one of the said Colleges, Faculty, or Corporate Body, founded on an examination to be passed subsequent to his appointment of Assistant-Surgeon as to his fitness for the situation of Surgeon in the Navy; and in every case the person producing such Diploma and Certificate shall also undergo a further examination, touching his qualifications in all the necessary branches and points of Medicine and Surgery, both at the time of his entry and after serving three years to render himself eligible for Surgeon; and that previously to the admission of Assistant-Surgeons into the Navy, it will be required that they produce proof of having received a preliminary classical education, and that they possess, in particular, a competent knowledge of Latin; also

That they are of good moral character; the certificate of which must be signed by the clergyman of the parish, or by a magistrate of the district.

That they have served an apprenticeship, or have been engaged for not less than six months, in Practical Pharmacy.

That their age be not less than twenty years, or more than twenty-six years.

That they have actually attended a recognised Hospital for eighteen months subsequently to the age of eighteen, in which Hospital the average number of patients is not less than one hundred.

That they have been engaged in actual dissections of the human body twelve months, the certificate of which from the teacher must state the number of subjects or parts dissected by the Candidate.

That they have attended lectures, etc., on the following subjects, at established schools of eminence, by Physicians or Surgeons of the recognised Colleges of Physicians and Surgeons, in the United Kingdom, for periods not less than hereunder stated; observing, however, that such Lectures will not be admitted if the teacher shall lecture on more than one branch of science, or if the Lectures on Anatomy, Surgery, and Medicine be not attended during Winter Sessions of six months each:—Anatomy 18 months; or General Anatomy 12 months, and Comparative Anatomy 6 months, General Surgery 12 months, or Military Surgery 6 months, and General Surgery 6 months. Theory of Medicine 6 months, Practice of Medicine 6 months; if the Lectures on the Theory and Practice of Medicine be given in conjunction, then the period required is 12 months. Clinical Lectures (at an Hospital as above) 12 months; on the Practice of Medicine 6 months, on the Practice of Surgery 6 months, Chemistry 6 months; or Lectures on Chemistry 3 months, and Practical Chemistry 3 months. Materia Medica 6 months. Midwifery 6 months, accompanied by certificates stating the number of Midwifery cases personally attended. Botany 3 months.

A favourable consideration will be given to candidates who have obtained the degree of M.D. at either of the Universities of Oxford, Cambridge, Edinburgh, Dublin, Glasgow, London, or Aberdeen; or who, by possessing a knowledge of the diseases of the eye, and of any branch of science connected with the Profession, such as Medical Jurisprudence, Natural History, Natural Philosophy, etc., appear to be more peculiarly eligible for admission into the service.

By the rules of the service, no Assistant-Surgeon can be promoted to the rank of Surgeon until he shall have served five years (two years of which must be in a ship actually employed at sea), and can produce a certificate from one of the before-mentioned Colleges, Faculty, or Corporate Body; and it is resolved that not any certificate of examination from any of the aforesaid Institutions shall be admitted towards the qualification for Surgeon, unless the certificate shall be obtained on an Examination passed after a period of not less than three years' actual service; observing, that no one can be admitted to an Examination for Surgeon, unless, as hereinbefore mentioned, he can produce a certificate, together with the most satisfactory proof, that he has performed on the dead body, under the superintendence of a professor or teacher of known eminence, all the capital operations of Surgery, and is perfectly competent to perform any operation with skill and dexterity, and thoroughly acquainted with the anatomy of the parts involved in such operation; without which qualification no one hereafter can be promoted to the higher branches of the service; and whenever Assistant-Surgeons already in the service (whose Professional education may not be in accordance with the above) obtain leave to study previously to their passing for Surgeon, they will be required, on their Examination, to produce testimonials of their having availed themselves of the period of leave to complete their education agreeably to these regulations generally.

RULES AND REGULATIONS
OF THE
EXAMINING MEDICAL BODIES IN SCOTLAND.

UNIVERSITY OF EDINBURGH.

STATUTES RELATIVE TO GRADUATION IN MEDICINE.

I. Three Medical Degrees are conferred by the University of Edinburgh, viz.—Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.) The Degree of Master in Surgery is not conferred on any person who does not also at the same time obtain the Degree of Bachelor of Medicine.

II. The preliminary branches of Extra-Professional Education are English, Latin, Arithmetic, the Elements of Mathematics, and the Elements of Mechanics.

III. No Candidate is admitted to a Professional Examination who has not passed a satisfactory examination on at least two of the following subjects, in addition to the subjects mentioned above:—Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, Moral Philosophy; and the examination on these latter subjects also takes place, as far as possible, before the Candidate has entered on his Medical Curriculum.

IV. A Degree in Arts (not being an Honorary Degree) in any one of the Universities of England, Scotland, or Ireland, or in any Colonial or Foreign University, specially recognised for this purpose by the University Court, exempts from all Preliminary Examination.

V. No one is admitted to the Degree of Bachelor of Medicine or Master in Surgery who has not been engaged in Medical and Surgical Study for four years—the Medical Session of each year, or *Annus Medicus*, being constituted by at least two courses of not less than 100 lectures each, or by one such course, and two courses of not less than fifty lectures each; with the exception of the Clinical Courses, in which lectures are to be given at least twice a week during the prescribed periods.

VI. Every Candidate for the Degrees of M.B. and C.M. must give sufficient evidence by certificates—

1. That he has studied each of the following departments of Medical Science, during Courses including not less than 100 Lectures, viz.:—Anatomy, Chemistry, Materia Medica, Institutes of Medicine or Physiology, Practice of Medicine, Surgery, Midwifery, and the Diseases peculiar to Women and Children (two Courses of Midwifery, of Three Months each, being reckoned equivalent to a Six Months' Course, provided different departments of Obstetric Medicine be taught in each of the Courses), General Pathology (or in Schools where there is no such Course, a Three Months' Course of Lectures on Morbid Anatomy, together with a supplemental Course of Practice of Medicine, or Clinical Medicine); Practical Anatomy, Six Months; Practical Chemistry, Three Months; Practical Midwifery (Three Months at a Midwifery Hospital, or a Certificate of attendance on Six Cases from a Registered Medical Practitioner); Clinical Medicine and Clinical Surgery (during Courses of Six Months, or two Courses of Three Months; Lectures being given at least twice a week); Medical Jurisprudence, Botany, and Natural History, including Zoology (during Courses including not less than Fifty Lectures).

2. That he has attended, for at least two years, the Medical and Surgical Practice of a General Hospital which accommodates not fewer than eighty patients, and possesses a distinct Staff of Physicians and Surgeons.

3. That he has been engaged, for at least three months, by apprenticeship or otherwise, in compounding and dispensing Drugs at the Laboratory of an Hospital, Dispensary, Member of a Surgical College or Faculty, Licentiate of the London or Dublin Society of Apothecaries, or a Member of the Pharmaceutical Society of Great Britain.

4. That he has attended, for at least six months, by apprenticeship or otherwise, the Out-practice of an Hospital, or the Practice of a Dispensary, Physician, Surgeon, or Member of the London or Dublin Society of Apothecaries.

VII. The studies of Candidates for the Degrees of Bachelor of Medicine and Master in Surgery are subject to the following Regulations:—

1. One of the four years of Medical and Surgical Study, required by Section V., must be in the University of Edinburgh.

2. Another of such four years of Medical and Surgical Study must be either in the University of Edinburgh, or in some other University entitled to give the Degree of Doctor of Medicine.

3. Attendance during at least six winter months on the Medical or Surgical Practice of a General Hospital which accommodates at least eighty patients, and, during the same period, on a course of Practical Anatomy, may be reckoned as one of such four years, and to that extent shall be held equivalent to one year's attendance on Courses of Lectures, as above prescribed.

4. One year's attendance on the Lectures of Teachers of Medicine in the Hospital Schools of London, or in the School of the College of Surgeons in Dublin, or of such Teachers of Medicine in Edinburgh, or elsewhere, as shall from time to time be recognised by the University Court, may be reckoned as one of such four years, and to that extent shall be held as attendance on Courses of Lectures, as above prescribed.

5. Candidates may, to the extent of Four of the Departments of Medical Study required by Section VI., Sub-section 1, attend in such year or years of their Medical and Surgical Studies, as may be most convenient to them, the Lectures of the Teachers of Medicine specified in the foregoing Subsection 4.

6. All Candidates, not Students of the University, availing themselves of the permission to attend the Lectures of Extra-Academical Teachers in Edinburgh, must, at the commencement of each year of such attendance, enrol their names in a book to be kept by the University for that purpose, paying a fee of the same amount as the Matriculation Fee paid by Students of the University, and having, in respect of such payment, a right to the use of the Library of the University.

7. The fee for attendance on the Lectures of an Extra-Academical Teacher in Edinburgh, with a view to Graduation, must be of the same amount as that exigible by Medical Professors in the University.

8. No Teacher is recognised who is at the same time a Teacher of more than one of the prescribed branches of study, except in those cases where Professors in the University are at liberty to teach two branches.

9. It is not necessary for any Teacher, attendance on whose Lectures is now recognised for the purposes of Graduation in the University, to obtain a new recognition from the University Court; and attendance on the Lectures of every such Teacher will continue to be recognised as heretofore.

10. It is in the power of the University Court, if they shall see cause, at any time to withdraw or suspend the recognition of any Teacher or Teachers.

VIII. Every Candidate must deliver, before the Thirty-first day of March of the year in which he proposes to Graduate, to the Dean of the Faculty of Medicine—

1. A Declaration, in his own handwriting, that he has completed his twenty-first year; and that he will not be, on the day of Graduation, under articles of Apprenticeship to any Surgeon or other master.

2. A Statement of his Studies, as well in Literature and Philosophy as in Medicine, accompanied with proper Certificates.

3. A Thesis composed by himself, to be approved by the Medical Faculty.

LECTURES.	ST. MARY'S.					MIDDLESEX.					ST. THOMAS'S.				
	Lecturers.	Days and Hours.	Fees. 1 Course	Fees. 2 Courses	Fees. Per-petual.	Lecturers.	Days and Hours.	Fees. 1 Course	Fees. 2 Courses	Fees. Per-petual.	Lecturers.	Days and Hours.	Fees. 1 Course	Fees. 2 Courses	Fees. Per-petual.
WINTER SESSION.			£ s.	£ s.	£ s			£ s.	£ s.	£ s			£ s.	£ s.	£ s.
MEDICINE	Dr. Chambers Dr. Handfield Jones	M W Th 4	4 4	..	6 6	Dr. Murchison	Tu Th S 9	6 6	..	8 8	Dr. Peacock	M Th S 2	..	..	..
SURGERY	Mr. Spencer Smith	Tu F 4 W 3	4 4	..	6 6	Mr Shaw Mr. De Morgan	M W F 9	6 6	..	8 8	Mr. Le Gros Clark Mr. Solly	Tu W F 3	..	..	..
DESCRIPTIVE & SURGICAL ANATOMY	Mr. Gascoyen Mr. Norton	M Tu Th F 1.45	6 6	..	8 8	Dr. R. Liveing	Daily exc. S 12	8 8	..	12 12	Mr. S. Jones	M F S 1 W 12.30	..	..	..
ANATOMICAL DEMONSTRATIONS	Mr Norton Mr. Wood	Daily 9 to 5	3 3	..	..	Dr R. Liveing	M Tu W Th F 10—4 S 10—12	6 6	..	8 8	Mr. Rainey Mr. Croft Mr. W. Wagstaffe	Daily 9 to 3	..	..	..
PHYSIOLOGY	Dr. Broadbent Dr. Lawson	M Tu Th F 9 W S 12	6 6	..	8 8	Dr. Sanderson Mr. Hulke	M W F 4	6 6	..	8 8	Dr. Bristowe Mr. Ord	M W F 4	..	..	..
CHEMISTRY	Dr. Matthiessen	M Tu Th F 10.15	5 5	..	7 7	Mr. T. Taylor Mr. Heisch	M W F 3 S 11	6 6	..	8 8	Dr. Bernays	Tu Th S 11	..	..	..
HOSPITAL PRACTICE: *Physicians*	*In-patients—* Dr. Alderson Dr. Sibson Dr. H Jones *Out-patients—* Dr. Sieveking Dr. Markham Dr. Broadbent Dr. T. Smith, *obs.*	M Th 1.15 Tu F 1.15 W S 1.15 Tu F 1 W S 1 M Th 1 Tu S 1.30	7 7 6 mths	12 12 1 year	21 0	Dr. Goodfellow Dr. Thompson Dr. Murchison Dr. J. Hall Davis, *obs.*	Daily 1 W S 1	12 12 6 mths	21 0 18 mths	25 0	Dr. Barker Dr. J. R. Bennett Dr. Goolden Dr. Peacock Dr. Bristowe Dr. Barnes, *obs*	Physicians' visits, 8.30 to 9.30 a.m.	..	..	..
Assistant-Physicians ..	Dr. Broadbent Dr. C. Bastian	M Th 1	..	..	..	Dr. Greenhow Dr. B. Sanderson Dr. Liveing	..	..	..	..	Dr. Clapton Dr. Gervis, *obs.*	..	..	..	..
Surgeons	*In-patients—* Mr. Lane Mr. Spencer Smith Mr. H. Walton *Out-patients—* Mr. J. Lane Mr. Gascoyen Mr. Ernest Hart, *opht.*	Tu F 1 15 M Th 1.15 W S 1.15 Tu F 1 M Th 1 Tu S 1.30	9 9 6 mths	21 0 1 year	31 6	Mr. Shaw Mr. De Morgan Mr. Moore Mr. Nunn Mr. Hulke, *opht*	Daily 1 T F 8.30 & 1.30	15 15 12 mths	21 0 3 years	25 0	Mr. Solly Mr. Le Gros Clark Mr. Simon	Surgeons' visits, 8.30 to 9.30 a.m.			
Assistant Surgeons	Mr. Gascoyen	M Th 1	..	..	..	Mr. Hulke Mr. Lawson	..	..	..	..	Mr. S. Jones Mr. J. Croft	..	..	..	..
CLINICAL MEDICINE ..	Dr. Alderson Dr Sibson Dr. H. Jones	M 2 Every alt. Tu 2 Every alt S 2	..	..	..	The Physicians The Phys-Acc.	Tu Th 3 w. M W F S 3 sum. M 10	..	..	..	Dr. Barker Dr. Bennett } Dr. Goolden } Dr. Peacock } Dr. Bristowe }	*Winter—* M 3 After their visits *Summer—* M S 2	..	..	..
CLINICAL SURGERY ..	Mr. Lane Mr. Spencer Smith Mr. H. Walton	Every F 2 Every alt. Th 2 Every alt. S 2	..	..	..	The Surgeons. The Oph-Surg.	Tu Th 3 w. M W F S 3 sum. Tu 3	..	..	..	By the Surgeons }	After their visits	..	..	..
DISEASES OF WOMEN ..	Dr. T. Smith	..	..	..	..	..	..	..	..	..	Dr. Barnes Dr. Gervis	..	..	..	..
MORBID ANATOMY AND PATHOLOGY	Dr. Charlton Bastian	Summer	..	..	..	Mr. Sibley Dr. Cayley	Tu Th 4	3 3	..	4 4	Dr. J. Wale Hicks, M.B.	Daily 9.30	..	..	..
SUMMER SESSION.															
MATERIA MEDICA.	Dr. Sieveking	Tu W Th F 8 a.m	4 4	..	6 6	Dr. H. Thompson	M W F 9	4 4	..	5 5	Dr. Clapton	Tu Th F 2	..	..	..
BOTANY	Dr. Dresser	M W F 12	3 3	..	4 4	Dr. T. S. Cobbold	M W F S 4	4 4	..	5 5	Dr. J. W. Hicks	M W F 12	..	..	..
FORENSIC MEDICINE ..	Dr. Randall	M Tu Th 10	3 3	..	4 4	Dr. Greenhow	Tu Th S 9	4 4	..	5 5	Dr. Stone	Tu Th 12 S 11	..	..	..
MIDWIFERY	Dr. Tyler Smith	Daily ex. S 9	4 4	..	6 6	Dr. J. Hall Davis	M W F 10	5 5	..	7 7	Dr. R. Barnes	M Tu Th F 3	..	..	..
PRACTICAL CHEMISTRY ..	Dr. Matthiessen	Tu Th S 11.30—1	3 3	..	..	Mr. Taylor Mr. Heisch	M W F 11	3 3	..	..	Dr. Bernays	F 11	..	..	..
COMPARATIVE ANATOMY	Mr. S. G. Mivart	W F 10	2 2	..	3 3	Dr. T. S. Cobbold	Tu Th 4	5 5	..	..	Mr. Ord, M.B.	Tu Th 1	..	..	..
OPHTHALMIC SURGERY ..	Mr. Ernest Hart	Tu 2.45	2 2	..	..	Mr. Hulke	Tu 3 wintr. & summer	..	..	..	Mr. S. Jones	M F 1	..	..	..
PRACTICAL HISTOLOGY ..	Drs. Broadbent and Lawson, with Physiology	..	..	..	..	Dr. Woodham Webb	Tu Th 3	10 10	..	..	Mr. Rainey	Tu 12.30 winter	..	..	..
OPERATIVE SURGERY ..	Mr. J. Lane	Winter	..	..	..	Mr. Nunn	S Winter	5 5	..	..	..	..	..	..	..
DENTAL SURGERY	Mr. Sercombe	Winter W S 9.30	2 2	..	..	..	..	..	..	..	Mr. Elliott	..	..	..	..
GENERAL PATHOLOGY ..	..	..	..	..	..	..	..	..	..	..	Mr. Simon	..	..	..	..
PATHOLOGICAL CHEMISTRY	..	..	..	..	..	..	..	..	..	..	Dr. Thudichum	..	..	..	..
PUBLIC HEALTH	Dr. Randall, with For. Med.	..	..	..	..	Dr. Greenhow	M 4	2 2	..	..	..	..	..	..	..
PRACTICAL PHARMACY ..	..	..	3 3 3 mths	6 6 6 mths	10 10 12 mths	..	..	5 5 6 mths	8 8 12 mths	..	..	..	..	..	..
Fees for the Lectures and Hospital Practice, for the Licences of the Royal College of Physicians, Society of Apothecaries, and the Royal College of Surgeons	..	..	..	..	89 5	..	..	..	..	£105	..	..	..	..	..
To the Lectures alone	..	..	..	..	52 10	..	..	..	..	..	..	..	..	..	..
To the Hospital Practice alone	..	..	..	.	36 15	..	..	..	..	42 0	..	..	..	..	..
Unlimited	..	..	..	..	£105	..	..	..	..	..	..	..	..	..	90 0

LECTURES.	UNIVERSITY COLLEGE AND HOSPITAL.					WESTMINSTER.				
	Lecturers.	Days and Hours.	Fees.			Lecturers.	Days and Hours.	Fees.		
			1 Course	2 Courses	Per-petual.			1 Course	2 Courses	Per-petual.
WINTER SESSION.			£ s. d.	£ s	£ s.			£ s.	£ s.	£ s.
MEDICINE	Dr. Jenner	Day. ex. S 9	6 16 6	..	8 8	Dr. Basham	M Th F 4	5 5	..	7 7
SURGERY	Mr. Marshall	Tu Th F 4	4 14 6	..	6 6	Mr. Holthouse	Tu W 4 Th 5	5 5	..	7 7
DESCRIPTIVE ANATOMY	Mr. Ellis	Daily 12	7 7 0	..	10 10	Mr. Heath	Tu W Th F 9.15	5 5	..	7 7
DEMONSTRATIONS	Mr. Ellis Mr. P. Mason Mr. J. S. Cluff	Daily				Mr. Teevan	Daily 10—1	2 2	..	3 3
PHYSIOLOGY AND GENERAL ANATOMY	Dr. Sharpey	Dailyex. S 10	6 6 0	..	9 9	Mr. Power	M W F 3	5 5	..	7 7
CHEMISTRY	Dr. Williamson	Dailyex. S 11	6 6 0	..	9 9	Dr. Dupré	Tu Th 3 F 10.30	5 5	..	7 7
HOSPITAL PRACTICE—										
Physicians	Dr. Jenner Dr. Hare Dr Reynolds Dr. Harley Dr. W. Fox Dr S. Ringer Dr. Graily Hewitt, *obs.*	Daily 1 & 2 .. Three times a week	.. For 6 months to the Physicians' and Surgeons' practice, £15 15s. To either separately, £10 10s.	.. For 1 year to the Physicians' and Surgeons' practice, £21. To either separately, £15 15s.	..	Dr. Basham Dr. Fincham Dr. Radcliffe Dr. F. Bird, *obs.*	M Th 1.30 W S 1 30 Tu F 1.30 Tu F 3	8 8 6 months	12 12 1 year	21 0
Assistant-Physicians	..	..			..	Dr. Anstie Dr. Gibb Dr. Willis	M Th 1 Tu F 1 W S 1	8 8 6 months	12 12 1 year	21 0
Surgeons	Mr. Erichsen Mr. Marshall Mr. H. Thompson Mr. W Jones, *oph.*	Daily 1 & 2 M W F 1			..	Mr. Holt Mr. Brooke Mr. Holthouse	M Th 1.30 Tu F 1.30 W S 1.30			
Assistant-Surgeons	Mr. Berkeley Hill Mr. Streatfeild, *oph.* Dr. Hillier, Phy. to Skin Infirmary	.. S 9			26 5	Mr. Hillman Mr. Power Mr. Heath	M Th 1 W S 1 Tu F 1	..	..	..
CLINICAL MEDICINE	Dr. Jenner Dr. Hare Dr Reynolds Dr Hillier	Once a fortnight Twice a week Once a fortnight			..	By the Physicians	Weekly	..	..	..
CLINICAL SURGERY	Mr. Erichsen Mr. Marshall Mr. W. Jones, *oph.*	Twice a week Fortnightly Once a fortnight			..	By the Surgeons	Weekly	..	..	..
CLINICAL MIDWIFERY	Dr. G. Hewitt	Fortnightly	..	..	..	..	..	..	..	..
MORBID ANATOMY	Dr. W. Fox	Tu W F 9 summer	3 3 0	..	4 4	Dr. Willis	..	..	..	..
SUMMER SESSION.										
MATERIA MEDICA	Dr. Ringer	Daily except M 12	4 4 0	..	6 6	Dr. Anstie	M Th F 3	3 3	..	4 4
BOTANY	Mr. Oliver	Daily except S 4	3 3 0	..	4 4	Dr. Syme	M W F 11.30	3 3	..	4 4
FORENSIC MEDICINE	Dr. Harley	Tu W Th F 10	3 3 0	..	4 4	Dr. Gibb Dr. Willis	Tu W F 3	3 3	..	4 4
MIDWIFERY	Dr. Graily Hewitt	Daily exc. S 8	4 4 0	..	6 6	Dr. Bird	Tu Th F 4	4 4	..	5 5
PRACTICAL CHEMISTRY	Dr. Williamson	Tu W Th F 11	4 4 0	..	..	Dr. Dupré	Tu Th 9.30	2 2	..	..
COMPARATIVE ANATOMY	Dr. Grant, *with Zoology*	Daily except S 3, from Oct to June	8 8 0	..	9 9	Mr. Power	W S 9.30	2 2	..	..
OPERATIVE SURGERY	In April or May	Daily 7.30 a.m 6 p.m.	5 5 0	..	..	..	..	..	..	..
DENTAL SURGERY	Mr. Ibbetson	Tu Th 6 in Jan	1 1 0	..	..	Mr. Walker	Th 12 winter	..	..	..
NATURAL PHILOSOPHY	Prof. Foster	M W F 4	5 5 0	..	..	Mr. Brooke	Tu 3 sum.	1 1	..	..
OPHTHALMIC SURGERY	Mr. W. Jones	Tu Th	2 2 0	..	..	..	..	..	..	..
PALEO ZOOLOGY	Dr. Grant	Daily except S 3 sum.	1 1 0	..	..	..	..	..	..	..
HISTOLOGY AND PRACTICAL PHYSIOLOGY	Dr. Harley	M S 9—11	3 3 0	..	4 4	..	..	..	..	..
MENTAL DISEASES	Dr. Sankey	Twice a week	1 11 6	..	..	..	..	..	..	..
PRACTICAL PHARMACY	..	..	3 3 0 3 months	..	5 5 6 months	..	..	..	..	..
Fees for the Lectures and Hospital Practice for the Licences of the Royal College of Physicians, Society of Apothecaries, and M.R.C.S.	..	..	..	..	93 3	..	..	..	..	78 15
For the Hospital Practice alone .	..	..	..	..	26 5	..	..	..	..	29 8
Perpetual to Lectures and Hospital Practice .. :	..	..	..	..	..	..	..	..	..	84 0

ADDITIONAL INFORMATION RESPECTING THE METROPOLITAN SCHOOLS, ETC.

ST. BARTHOLOMEW'S HOSPITAL AND MEDICAL COLLEGE.

This Hospital contains 650 beds.

Fees for Lectures and Hospital Practice are payable by instalments—£31 10s. at the beginning of the first Winter Session, £31 10s. at the beginning of the first Summer Session, £36 15s. at the beginning of the second Winter Session. The Midwifery-Assistant, the Clinical Clerks to the Physicians and to the Physician-Accoucheur, and the Clerks to the Assistant-Physicians and Assistant-Surgeons are chosen from the most diligent students.

A Course of Microscopic Demonstrations is given during the Summer Session, under the superintendence of Mr. Savory.

The following Scholarships and Prizes are awarded:—Senior Scholarship of the value of £50, Medicine, Surgery, and Midwifery. Senior Scholarship of the value of £50, Anatomy, Physiology, and Botany. Scholarships of the value of £25 each will be awarded to those students who are placed second in the Examinations for the Senior Scholarships. Junior Scholarships of the value of £50, £30, and £20 are awarded after the General Examination at the end of the Summer and Winter Sessions. Wix Prize, founded 1842, is awarded for the best Essay on "The Connexion between Ancient and Modern Literature, and the Studies of Medical Science." Hitchin's Prize, founded 1851. Subject of Examination—Bishop Butler's Analogy. Bentley Prize, founded 1842. For the best Report of Medical cases occurring in the Wards of the Hospital during the previous year. It is expected that the Reports will comprise the Histories, Progress, Treatment, and Results of not less than Twelve Cases, with observations thereupon. Foster Prize. Subject of Examination—Practical Anatomy—Senior. Treasurer's Prize. Subject of Examination — Practical Anatomy — Junior. The

Kirkes Prize. Subject of Examination—Clinical Medicine. Students preparing for the Universities may be examined by the Tutors. Fee £5 5s. Students preparing for the College of Surgeons are examined by the Lecturers on Surgery, Anatomy, and Physiology, and by the Demonstrators; those preparing for the College of Physicians and for the Apothecaries' Hall are examined by Dr. Edwards, Dr. Andrew, or by the Tutors, Dr. Duckworth, Mr. Baker, and Mr. Shepard. Students of the first year are examined weekly in the several subjects of their studies, by the Tutors.

A Collegiate Establishment, in which students are lodged and boarded, exists in connexion with the Hospital. The Warden is Mr. A. Willett. Each student pays an entrance fee of £2 2s. The expense of board, lodging, etc., is from £1 10s. to £1 13s. a week.

All communications must be addressed to Dr. Andrew or Mr. Callender, at the Hospital.

CHARING-CROSS HOSPITAL.

Students pay a Matriculation fee of £2 2s. on entering to their studies. Those students who enter to separate Courses of Lectures or to Hospital Practice only do not pay the Matriculation Fee. Payment of fees may be made either in one sum (£72 9s.) on Matriculation, or in two sums, the first (£37 5s. 6d.) at the commencement of the Winter Session, the second (£35 3s. 6d.) immediately after the first or Christmas vacation, unless under special circumstances other arrangements are made at the time of entering. Matriculated students have the privilege of attending the course of Practical Microscopical Demonstrations on Healthy and Diseased Structures given by Dr. Salter in the summer, and the practice of the Royal Westminster Ophthalmic Hospital.

Free Scholarships.—Candidates for Free Scholarships are required to be the sons of Professional men, of reduced circumstances and position, or of gentlemen in a corresponding station of society, and are to have had a classical education fitting them for the Medical Profession. They are to send in their application and testimonials before August 1. A printed form for that purpose will be supplied to them on the written application of the Candidates themselves, addressed to the Managers of the College, which application must be accompanied by the official certificate of the candidates having passed the Preliminary Classical Examination either of the London University, of the College of Physicians, the College of Surgeons, or the Society of Apothecaries.

The Medals and Testimonials of Honour are awarded in conformity with the following arrangement:—A Gold Medal is awarded for General Proficiency in all the subjects of the curriculum enjoined by the Colleges and Hall. Competitors for the Governors' Clinical Medals are to have attended the Medical and Surgical Practice of the Hospital for the full period required to qualify for examination by the College of Surgeons and Society of Apothecaries. Competitors for the Silver Class Medals and Testimonials of Honour of the Senior Classes are to be in the last Session of their attendance in the classes for the Medal or Testimonials for which they are competitors. Competitors for the Bronze Medals and Testimonials of Honour of the Junior Classes are to have completed, when the current Session shall be ended, the first Session of attendance in the classes for the Medal or Testimonial for which they are competitors. In those Classes of which only one Session is required by the College of Surgeons and Society of Apothecaries, a Silver Medal is offered for competition instead of a Bronze Medal.

For further information apply to Mr. Hancock, Dean of the Medical College.

ST. GEORGE'S HOSPITAL.

Perpetual Pupils pay at the time of entry a compounding fee of £100. They are admitted to the practice of the Physicians and Surgeons, to all the Lectures (except Practical Chemistry), to compete for all Prizes and Exhibitions, to hold the appointments of House-Physician, House-Surgeon, and Assistant House-Surgeon, and to become Clinical Clerks for two periods of three months each, and Dressers for two similar periods.

Gentlemen are admitted to the Hospital Practice and Lectures required for the Licence of the College of Physicians, for the Diploma of Member of the College of Surgeons, and for the Licence of the Society of Apothecaries, with the exception of Practical Chemistry, on payment of the following fees—viz., £40 for the first year of study, £40 for the second year of study, and £10 for each succeeding year.

Exhibitions and Prizes.—"The William Brown Exhibition," of £40 per annum, tenable for three years: This Exhibition is competed for by perpetual pupils who have commenced their third, but not completed their fourth, Winter Session. It will be "bestowed on the Candidate who shall show the best general fitness for the exercise of the Medical Profession, and whose moral conduct shall in all respects be satisfactory." Sir Charles Clarke's Prize for Good Conduct: The interest of £200 Consols to be awarded annually to the Student of the Hospital "who, by reason of his general good conduct during the preceding year, should be considered the most deserving." The Thompson Medal: A Silver Medal to be awarded annually for the best Clinical Report of Medical and Surgical Cases observed in the Hospital during the preceding twelve months. Sir Benjamin Brodie's Clinical Prize in Surgery will be awarded to the perpetual pupil of the Hospital who shall have delivered to the Surgeons the best Report of not more than twenty Surgical cases which have occurred in the Hospital during the preceding twelve months. The Lewis Powell Clinical Prize in Medicine will be awarded to the perpetual pupil of the Hospital who shall produce the best Report of not more than twenty Medical cases which have occurred in the Hospital during the preceding twelve months. The Henry Charles Johnson Memorial Prize in Anatomy will be awarded to that pupil who shall, in the judgment of the Medical School Committee, exhibit the greatest proficiency in Practical Anatomy. General Proficiency Prizes: To pupils in their first year, £10 10s.; to pupils in their second year, £10 10s.; to pupils in their third year, £10 10s.

House-Physician.—Appointed annually from among the Physicians' perpetual pupils, he has charge of half the Medical cases in the absence of the Physicians.

House-Surgeons.—The appointment is made half-yearly from among the Surgeons' perpetual pupils.

Curator.—A Curator of the Pathological Museum is appointed annually from among the senior pupils, with a salary of £50 per annum.

Registrars.—A Medical and a Surgical Registrar are appointed annually from among the senior pupils, each with a salary of £50 per annum.

An Obstetric Assistant is appointed annually from among the senior pupils, and is eligible for re-appointment. He resides and boards in the Hospital, receives a yearly salary of £100, and must be a legally-qualified Practitioner.

For further information apply to Dr. Barclay.

GUY'S HOSPITAL.

This Hospital contains nearly 600 beds.

Voluntary Examinations are held at four periods of the Student's Course, as follows:—1st. At Entrance, and will take place this year on October 8. It will comprise Elementary Classics, Ancient and Modern History, and Mathematics. The Candidate who shall distinguish himself most receives £25; the second Candidate, £20; and the third, £15. 2nd. At the end of the first Sessional year, in all the subjects of the first year's Course of Study, one sum of £30, another of £25, and a third of £10 10s. (presented by one of the Governors), will be given according to proficiency. 3rd. At the end of the second Sessional year, in the subjects which form the Course of Study up to that time, £35 and £30. 4th. At the end of the third Sessional year, in all the subjects of the Curriculum, £40 and £35. Honorary Certificates are given to candidates who pass creditable Examinations.

Special Examination.—Two Gold Medals are given annually by the Treasurer to Students at the end of their third year; one for Clinical Medicine and the other for Clinical Surgery.

Fees for Hospital Practice and Lectures are paid as follows: First Year £40, Second Year £40, and £10 for every succeeding year of attendance. One payment of £100 entitles a Student to a perpetual ticket. Materials used in practical courses are charged extra.

Ward Clerks, Post-mortem Clerks, Clinical Clerks, Dressers, Resident Obstetric Clerks, and Dressers in the Eye Wards are selected from the Students, according to merit. Each Dresser (except those in the Eye Wards) has the privilege of rooms and commons in the Hospital free of charge for one month of his Course. The Obstetric Clerks have the like privileges for two months each—one month as junior, another as senior. Two House-Surgeons are appointed every four months from those Students who have obtained the College Diploma.

The Registrars, Dr. C. Hilton Fagge and Mr. G. Eastes, and the Demonstrators in Anatomy and Chemistry, will assist pupils in their Studies.

For further information apply to Mr. Stocker, Apothecary to the Hospital.

KING'S COLLEGE.

The fees may be paid either in one sum on Matriculation or in two equal sums; the one at the commencement of the first Winter or Summer Session, the other after the first Christmas vacation, not later than January 21, unless special arrangements are made at the time of entrance. Students are, however, recommended to add £2 2s. for a second Course of Chemistry, as well as the fee for attendance on the Medical Tutor's class for one year, viz., £3 3s. All resident Students are required to attend the Tutor during their first year.

Resident Medical Officers, Clinical Clerks, and Dressers are chosen by examination from Matriculated Students who are Pupils of the Hospital.

Scholarships.—Warneford Scholarships: The sum of £200 is set apart annually for Scholarships in the Medical Department, viz.: "For the encouragement of the previous education of Medical Students," two Scholarships of £25 per annum for three years; "For the encouragement of resident Medical Students," one Scholarship of £25 per annum for two years. College Scholarships: The following are given every year to Matriculated Students of this department:—1. One of £40 for two years, open to Students of the third and fourth year; 2. One of £30 for one year, open to Students of the second year; 3. One of £20 for one year, open to Students of the first year. Daniel Scholarship: £20 tenable for two years is open to every Student of the College who has worked in the laboratory for at least six months.

Prizes.—Leathes' Prizes: Bible and Prayer-book to two Matriculated Medical Students. Warneford Prizes: £40 is expended in the purchase of Medals and Books, as Prizes to two Matriculated Medical Students. Class Prizes are awarded annually for proficiency; these consist of Books of the value of £3. Two Medical Clinical Prizes, one of £3 for the Winter Session, and the other of £2 for the Summer Session; and two Surgical Clinical Prizes of the same value are given for attendance at the Hospital. Todd Medical Clinical Prize: This prize was founded in memory of the late Dr. Todd. It consists of a Bronze Medal and Books to the value of £4 4s.

Residence of Students.—A limited number may reside within the College.

For further information apply to Professor Bentley, Dean of the Medical department.

THE LONDON HOSPITAL.

The Hospital contains 445 beds—135 Medical and 310 Surgical.

The entry fee to Lectures and Hospital Practice is payable in two instalments of £44 2s. each at the commencement of the two first Winter Sessions. A fee of £1 1s. is paid for instruction in Vaccination. The fee to the Library (compulsory) is £1 1s., and is perpetual.

Prizes and Appointments.—1. Two Scholarships. The competition will be restricted to first year's students. The first, £20, will be awarded to the student who shall pass in December, 1866, the best examination in Human Osteology. The second, £25, will be awarded to the student who shall pass, at the end of the Winter Session, the best examination in Anatomy, Physiology, and Chemistry. 2. The Duckworth-Nelson Prize, £10 10s., is awarded by competition once in two years, and is open to all students who have not completed their education. The subjects of examination in 1868 will be Practical Medicine and Surgery. 3. Two Gold Medals are annually awarded to students who shall have most distinguished themselves in the performance of their duties at the Hospital. 4. A Resident Medical Officer, who resides and boards in the Hospital, and receives £75, is appointed for twelve months by the Committee of the Hospital. The Resident Medical Officer is eligible for re-election for the further period of twelve months, and then receives £100. 5. A Medical and Surgical Registrar is appointed by the Committee of the Hospital, and receives £25 a year. Three House-Surgeons, a Resident Accoucheur, an Assistant Medical Officer, two Surgical Dressing Pupils, additional Dressers, an Assistant Dentist, and Post-mortem Clerks are selected from among the Students according to merit.

The Tutor of the Medical College is Mr. J. R. Bathurst Dove.

Further information may be obtained from Mr. Adams, 10, Finsbury-circus, or Mr. Hutchinson, 4, Finsbury-circus, or on application at the College.

ST. MARY'S HOSPITAL.

The Hospital contains 150 beds—65 Medical, and 85 Surgical. The entrance fees may be paid in instalments by arrangement with the Dean of the School.

Resident and Non-Resident Medical Officers, House-Surgeons, Clinical Clerks, and Dressers.—All these Appointments are open to the Pupils without additional fee, and are held in succession, so as to secure a complete system of Clinical training. Five of these Appointments exceed in value an equal number of Scholarships of £50 each. All General Students are required to perform the duties of Clinical Clerks and Dressers for a period of six months during the last two years of their curriculum. A Resident Registrarship within the Hospital has been created with a salary of £100 a year, tenable for two years, preference being given to past House Surgeons and Perpetual Pupils.

Prizes.—Examinations for Prizes are held at the termination of each Session, the Classes being grouped in accordance with the curriculum laid down for Students of the First, Second, and Third Year. The average value of each of these Prizes is £5 5s. A Scholarship in Anatomy, of the annual value of £25 (the holder of which will be styled Assistant-Demonstrator, and assist in the teaching of Practical Anatomy), will be awarded to the best qualified Student. A Prize of £20 for Students for the First Year is awarded at the end of the Winter Session. A Prize of the value of £4 4s. will be given to the Student who shall make the best Anatomical Preparation, such Preparation to become the property of the School. Two Prosectors are appointed annually, who each receive a Certificate and £5 for their services in the Dissecting-room.

The Fee for Instruction in Vaccination is £1 1s. A Fee of £1 1s. is required to be paid to the Library and Reading-room.

Further information may be obtained from Mr. Ernest Hart, Dean of the School.

MIDDLESEX HOSPITAL MEDICAL COLLEGE.

The Hospital contains upwards of 300 beds.

Appointments open to Students.—For the more efficient teaching of Practical Midwifery, the Governors have recently appointed a Resident Obstetric Assistant. Students are aided in their first cases of labour by the Resident Obstetric Assistant.

Clinical Clerks and Dressers.—General Students have the privilege of performing the duties of Clinical Clerks and Dressers. The Clinical Clerk and Dresser of the week must be prepared to remain during the day, and until 7 o'clock in the evening. They dine at the Board-room table, with the view to their being constantly on the spot during the day to assist in case of need, to replace the Clinical Assistant and Junior House-Surgeon if necessary, and to take the opportunity of seeing fresh cases.

The system of giving Prizes for Class work has been discontinued, it having been found to interfere generally with the most important element in the student's education—clinical work in the wards. The Medical Officers still give the Governor's Prize of the value of Twenty-five Guineas to the student who, having distinguished himself generally by conduct and acquirements in the School, shall, at the termination of his third Winter Session, present the best Clinical Reports, and shall pass the most satisfactory Bedside Examination.

While, however, the Lecturers have done away with the ordinary Class Prizes, they have at their disposal rewards in the form of the Five Resident Clinical Appointments, the money value of each of which may be reckoned as, at least, £100. These are open to Students who have complied with the College regulations, and have attended the Written Periodical Class Examinations.

The College Tutor, Dr. R. Liveing, assists by direct instruction, and by examinations, all general Students, especially those who are attending during their first two Sessions, without extra fee.

General fee for the three years' study, 100 guineas. This sum may be paid by instalments of £35 at the beginning of each of three consecutive Sessions.

This fee admits to the Library, to all the Lectures delivered in the College, and also to the benefit of instruction by the College Tutor. It includes all charges for Clinical Clerkships and Dresserships, whereby the Student is enabled to compete for the Resident appointments.

ST. THOMAS'S HOSPITAL.

The admission fee to Hospital Practice and all the Lectures is £40 for the first year, and a similar sum for the second, and £10 for each succeeding year.

Prizes and Appointments.—The William Tite Scholarship, awarded every third year: A Scholarship has been founded by W. Tite, Esq., M.P., F.R.S., the proceeds of £1000 Consols, tenable for three years, on proof of continued residence and good conduct. Preference, in case of equality between Students, to be given to the son of a Medical man, and more particularly of one who has been educated at St. Thomas's Hospital; or to the son of a Medical man of Bath. To the three most distinguished Pupils for general proficiency, the following Prizes are awarded at the end of the Session 1866-67:—First Year's Students, the W. Tite Scholarship; 2nd. A College Prize of £20; 3rd. Ditto of £10. Second Year's Students—1st. A College Prize of £30; 2nd. Ditto of £20; 3rd. Ditto of £10. Clinical Clerks and Dressers are selected according to merit from among Second Year's Students. The Dressers are provided with Rooms and Commons during their period of attendance in the Hospital free of expense. Third Year's Students—1st. A College Prize of £30; 2nd. Ditto of £20; 3rd. Ditto of £10. The Cheselden Medal, founded by George Vaughan, Esq., is awarded in respect of a Special Examination in Surgery and Surgical Anatomy. The Treasurer's Gold Medal is given annually for general proficiency and good conduct. The Grainger Testimonial Prize, of the value of £20, will be awarded biennially to the Third or Fourth Year's Students for the best Physiological Essay. A Newman Smith Prize, to the value of £40, will be awarded in December, 1866, for the best Essay on the Anatomy of the Brain and Spinal Cord, &c.

The House-Surgeons and Resident Accoucheur are chosen from gentlemen who have obtained their Professional Diplomas. All are provided with Rooms and Commons. The two offices of Medical Registrar and Surgical Registrar are from time to time filled from among gentlemen who have completed their studies in the School. Each Registrar, on completing his Annual Report to the satisfaction of the Physicians and Surgeons, receives a gratuity of £40. If the two offices are held by one person, he then receives, on completing his Reports as above, a gratuity of £80.

For further information apply to Mr. R. G. Whitfield, Medical Secretary.

UNIVERSITY COLLEGE, LONDON.

The fee for Lectures and Hospital Practice required by the Colleges of Physicians and Surgeons and the Society of Apothecaries may be paid at once or distributed in payment over three years, as follows:—First Winter Term, £37 10s.; First Summer Term, £16 16s.; Second Winter Term, £25 4s.; Second Summer Term, £7 7s.; Third Summer Term, £6 6s.

Entrance Exhibitions.—Three entrance Exhibitions of the respective value of £30, £20, and £10 per annum, tenable for two years, will be awarded upon Examination to gentlemen who are about to commence their first winter's attendance in a Medical School. The Examination, by written papers, will be in Classics, Elementary Mathematics, Natural Philosophy, and in either French or German at the option of the Candidate, and will take place at the College about the end of September. Notice of intention to compete, addressed to the Secretary, must be left before 2 o'clock on or before Thursday, September 27, at the office of the College, where the Regulations may be obtained.

Scholarships and Exhibitions.—Atkinson Morley Surgical Scholarships: An Annual Scholarship, £45, awarded to the Student who, upon Examination, shall be found to possess the greatest proficiency in the Theory and Practice of Surgery, tenable for three years. Longridge Prize: A Prize of £40 will be awarded in October, 1866, for general proficiency in Medicine and Surgery. Filliter Exhibition: A Prize of £30, awarded annually, founded "for the encouragement of proficiency in Pathological Anatomy."

Medals and Prizes.—Dr. Fellowes's Clinical Medals, one Gold and one Silver, awarded at the end of each term to Pupils who shall have most distinguished themselves by reports and observations on the Medical cases in the Hospital. The Liston Gold Medal will be awarded at the end of the Session to the Pupils who shall have most distinguished themselves by reports and observations on the Surgical cases in the Hospital.

Class Medals and Prizes.—Besides the above, Gold and Silver Medals or other Prizes are awarded in each class.

The appointments of Assistant-Curator to the Museum of Anatomy and Pathology, of Demonstrators of Anatomy, and of Resident Medical Officer to the Hospital—all of which have emoluments attached to them—are almost invariably conferred upon Students of the College.

Offices in the Hospital tenable by Students.—Physicians' Assistants, House-Surgeons, Midwifery Assistants, Physicians' Clerks, Surgeons' Dressers, and Ophthalmic Surgeons' Assistants are selected from the Pupils, without additional fees. The Physicians' Assistants, Obstetric Assistant, and House-Surgeons reside in the Hospital, paying for their board.

Further information may be obtained at the office of University College, London, W.C.

WESTMINSTER HOSPITAL.

The Entry Fee to Lectures and Hospital Practice required by the Colleges of Physicians and Surgeons and the Society of Apothecaries may be paid in three instalments—£36 15s. at the commencement of the first year, £31 10s. at the commencement of the second, and £10 10s. at the commencement of the third year.

Prize Appointments and Prizes.—The offices of House-Physician and House-Surgeon are open to competition amongst Gentlemen who have been educated at the Hospital, and who are qualified to practise under the Medical Registration Act. The House-Physician and House-Surgeon are provided with board and lodging in the Hospital free of expense. Assistant House-Surgeon: Is appointed from among the Senior Students by Examination. Clinical Clerks and Dressers: These appointments are conferred upon the most diligent students.

Prizes.—A Prize of Books or Instruments for each of the Winter and Summer Courses. A Clinical Medicine Prize of the value of 5 guineas. A Clinical Surgery Prize of similar value. A special Prize will be given for Clinical Midwifery by the Westminster Maternity Charity. Chadwick Prize for General Proficiency. A sum of 20 guineas will be awarded, in one or more Prizes, to the most meritorious Student or Students who are attending Lectures and Hospital Practice for the second or third year.

Further information may be obtained from the Dean, Mr. Power.

ENGLISH PROVINCIAL SCHOOLS AND HOSPITALS.

QUEEN'S COLLEGE, BIRMINGHAM.

Dean of the Faculty, W. S. Cox, Esq., F.R.S.

The Michaelmas Term will commence on Tuesday, October 2.

The Composition Fee for the three years' Course of Lectures required by the Colleges of Physicians and Surgeons, Society of Apothecaries, and Army and Navy Boards, is £42. Attendance on the Medical and Surgical Practice of the Queen's Hospital, £21. Total, £63. Fees to be paid half on entry, half at commencement of the second year.

In the Arts Department, Students are prepared under the Resident Classical, Mathematical, and Medical Tutors for the Preliminary Examinations required by the Examining Boards. Inclusive Fees, £15 15s. per annum.

Resident Students of the Arts and Medical Departments are received at a charge of £50 per annum for board and furnished rooms, and live in the College during term time, under the supervision of the Warden and Tutors.

There are four Scholarships to be awarded to deserving Students resident in the College.

Further particulars may be obtained by application to the Rev. the Warden, Queen's College; to the Dean of the Faculty, 24, Temple-row; to Professor Dr. Nelson, 13, Colmore-row; to Professor Clay, 95, Newhall-street; to Professor Dr. Suckling, 7, St. Mary's-row; or to Professor Dr. Hinds, 10, Easy-row, Birmingham, Treasurer to the Professors, who is authorised to enter Students to the College and Hospital.

QUEEN'S HOSPITAL, BIRMINGHAM.

Physicians, Drs. Fleming and Foster. Surgeons, Messrs. J. F. West, J. S. Gamgee, and F. Jordan. Assistant-Surgeon, Mr. J. Wilders. Resident-Physician, Dr. Wood. Resident Surgeon, Dr. Jolly.

Fees.—Medical and Surgical Practice, six months, £6 6s.; ditto, one year, £10 10s.; ditto, three years, £21.

BIRMINGHAM GENERAL HOSPITAL.

Physicians, Drs. G. F. Evans, Bell Fletcher, James Russell, and W. F. Wade. Surgeons, Messrs. D. W. Crompton, Alfred Baker, O. Pemberton, and David Bolton. Resident Physician and Tutor, Dr. Casey. Resident Surgeon, Dr. Steell.

Fees.—Surgical Practice, six months, £10 10s.; ditto, twelve months, £12 12s.; ditto, three years, or the period required by the College, £26 5s. No extra fee for Dressership. Medical Practice, six months, £7 7s.; ditto, twelve months, £10 10s.; ditto, two years, the term required for the Licence of the College of Physicians and Society of Apothecaries, £12 12s.

BRISTOL MEDICAL SCHOOL, SESSION 1866-67.

The Winter Session will commence on Monday, October 1, 1866. Medicine, Dr. Brittan. Surgery, Mr. Coe and Mr. Leonard. General Anatomy and Physiology, Drs. Martyn and Fripp. Descriptive and Surgical Anatomy, Mr. Clark and Mr. Lansdown. Superintendence of Dissections, Messrs. James and Wintle. Chemistry, Mr. Herapath.

Fee for perpetual attendance on all the above Courses, excepting Practical Chemistry, £47 5s.

Competitive Examinations are held amongst Students of the first, second, and third years respectively; and Prizes are annually awarded, amounting in aggregate value to about £40.

Medical and Surgical Hospital Practice and Clinical Lectures are attended at the Royal Infirmary or at the General Hospital.

Further information may be obtained on application to the Honorary Secretary, Dr. G. F. Burder.

BRISTOL ROYAL INFIRMARY.

The Infirmary contains 242 beds. Physicians, Dr. Brittan, Dr. Fairbrother, Dr. Fox, Dr. Beddoe. Surgeons, Mr. Prichard, Mr. Bernard, Mr. Hore, Mr. Leonard, Mr. Clark.

Fees.—For one year, Surgeon's pupil, £12 12s.; Dresser (extra fee), £12 12s. For two years (at one payment), Surgeon's pupil, £21; Dresser (extra fee), £21. For three years (at one payment), Surgeon's pupil, £26 5s.; Dresser (extra fee), £26 5s. Dressers reside in the House in weekly rotation. Physician's pupil, for six months, £8; one year, £15; eighteen months, £20; perpetual, £25. Clinical Clerks are appointed without extra fee. A Gold Medal and other Prizes are awarded annually.

BRISTOL GENERAL HOSPITAL.

The Hospital contains 130 beds. Physicians, Dr. Martyn, Dr. Burder, Dr. Fripp. Surgeons, Mr. Coe, Mr. W. M. Clarke, Mr. Lansdown, Dr. H. Marshall. Physician-Accoucheur, Dr. Swayne. Two Scholarships of £15 15s. each and a Prize of £21 are awarded annually.

Fees.—Medical or Surgical Practice, for six months, £6; one year, £10; perpetual, £20. Extra fee for dresser or Clinical Clerk, £5 5s. Dressers reside in the House in weekly rotation. Library fee, £1 1s. per annum.

HULL AND EAST-RIDING SCHOOL OF MEDICINE AND ANATOMY, KINGSTON-SQUARE, SESSION 1866-67.

The Winter Session will commence on Monday, October 1, 1866. Anatomy, Physiology, and Pathology, Mr. R. M. Craven, daily at 8 a.m. Sessional Course, £5 5s.; Perpetual Course, £8 8s. Anatomy and Anatomical Demonstrations, Mr. Nicholson, daily at 5 p.m. Sessional Course, £4 4s.; Perpetual Course, £6 6s. Principles and Practice of Medicine, Dr. Daly, daily at 3 p.m. Sessional Course, £5 5s.; Perpetual Course, £7 7s. Principles and Practice of Surgery, Dr. King, Tuesday, Thursday, and Saturday, at 4 p.m. Sessional Course, £3 3s.; Perpetual Course, £5 5s. Chemistry, Mr. Walton, Tuesday, Wednesday, Thursday, and Friday, at 8 p.m. Sessional Course, £5 5s.

Summer Session, commencing May 1, 1867. Midwifery and Diseases of Women and Children, Mr. Henry Gibson, daily at 7 a.m. Sessional Course, £4 4s.; Perpetual Course, £6 6s. Materia Medica and Therapeutics, Mr. Holden and Mr. Henson, daily at 8 a.m. Sessional Course, £5 5s.; Perpetual Course, £7 7s. Forensic Medicine, Dr. Munroe, F.L.S., Monday, Wednesday, Friday, and Saturday, at 3 p.m. Sessional Course, £3 3s. Botany, Mr. Niven, Monday, Wednesday, Friday, and Saturday, at 3 p.m. Sessional Course, £3 3s. Practical Chemistry, Mr. Walton. Sessional Course, £2 2s. Perpetual to all the Lectures except Chemistry, £42. Attendance at the above Lectures and at the Hospital, which contains 152 beds, will confer the same qualification as is obtained in the Medical Schools of London. Clinical Lectures will be given at the Hospital twice a week: on Medicine by Sir H. Cooper and Dr. Daly; on Surgery by Dr. Lunn, Mr. Craven, and Dr. King. Perpetual Fee for attendance on the Medical and Surgical Practice, £21. Clinical Lectures, £1 1s. The Library of the Hospital is open to the Students of the Medical School, by an annual payment of 10s. Application for Tickets may be made to Mr. R. M. Craven, 14, Albion-Street, Hull.

LEEDS SCHOOL OF MEDICINE.

The Winter Session will commence on Monday, October 1, 1866. The Introductory Lecture will be delivered by Samuel Hey, Esq., F.R.C.S. Physiology, General Anatomy, and Pathology, by Messrs. W. Hall and T. R. Jessop. Anatomy, by Messrs. T. P. Teale, jun., J. Seaton, R. T. Land, and J. A. Nunneley. Demonstrators of Anatomy, Messrs. Seaton, Land, and Nunneley. Assistant Demonstrators, Messrs. Oglesby and Wright. Surgery, by Messrs. Smith, Hey, and Wheelhouse. Chemistry, by Mr. Scattergood and Mr. Fairley. Principles and Practice of Physic, by Dr. Chadwick, Dr. Heaton, and Dr. Allbutt. Clinical Medicine, by Dr. Chadwick, Dr. Heaton, and Dr. Allbutt. Clinical Surgery, by Mr. S. Hey, Mr. Nunneley, Mr. Wheelhouse, and Mr. T. P. Teale, jun. Summer Session, 1867, commencing May 1.—Materia Medica and Therapeutics, by Dr. Allbutt. Midwifery, by Mr. Smith and Mr. Price. Forensic Medicine and Toxicology, by Dr. P. Smith. Botany, by Mr. Atkinson. Practical Chemistry, by Mr. Fairley. Comparative Anatomy, by Mr. Wheelhouse and Dr. Allbutt. Operative Surgery, by Messrs. Hey, Wheelhouse, and Teale, jun. Fee to all the Courses required by the Examining Bodies, except Practical Chemistry, £42. Silver medals and Certificates of Honour are awarded in each class. Clinical Lectures will be given at the General Infirmary.

Two Clinical Prizes of £10 each, a Forensic Medicine Prize of £10, and two Chemical Scholarships, are awarded to Students.

Clinical Clerkships and Dresserships.—Two Resident Medical Officerships, six Clinical Clerkships, and eight Dresserships are awarded by the Physicians and Surgeons to the General Infirmary.

The fees for attendance upon the Medical Practice of the Infirmary, or upon the Surgical Practice, are as follows, being the same in each case:—One Winter Session, £7 7s.; one Summer Session, £6 6s.; twelve months, £12 12s.; eighteen months, £15 15s.; three years, £21; perpetual, £26 5s.

Applications for Medical Practice are to be made to Dr. Heaton, Claremont.

Applications for Surgical Practice are to be made to Mr. T. Pridgin Teale, jun., 20, Park-row.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.

The Introductory Address will be delivered on October 1, 1866, at two p.m., by Mr. Reginald Harrison.

Hospital Practice, Royal Infirmary.—Physicians, Dr. Vose, Dr. Turnbull, Dr. Inman. Surgeons, Mr. Stubbs, Mr. Long, Mr. Bickersteth. House-Surgeons, Mr. Nash and Mr. Pusey. Pathologist, Dr. Rawdon. Dental Surgeon, Mr. Snape.

Terms for Hospital Attendance and Clinical Lectures:—

	Medical Practice.			Surgical Practice.		
For Six Months	£5	5	0	£5	5	0
One Year	9	9	0	9	9	0
The Second Year.	6	6	0	6	6	0
The Third Year	5	5	0	5	5	0
Perpetual	18	7	6	18	7	6

Lectures, Winter Session.—Medicine, Dr. Cameron. Surgery, Mr. Bickersteth. Physiology, Dr. Waters. Anatomy, Mr. Harrison. Dissections, Dr. Roberts. Chemistry, E. H. Birkenhead, D.Sc.Lond.

Lecturers (Summer Session).—Midwifery, Mr. Steele. Diseases of Children, Dr. Gee. Materia Medica, Dr. Nevins. Medical Jurisprudence, Dr. E. Whittle. Toxicology and Practical Chemistry, Dr. Birkenhead. Botany, Dr. Roberts. Ophthalmic Medicine and Surgery, Dr. Hibbert Taylor. Pathological Anatomy, Dr. Rawdon. Comparative Anatomy and Zoology, Dr. Davidson.

Exhibitions.—Royal Infirmary Medical Scholarship—value £42—consisting of Gold Medal, value £10 10s., and Six Months' Free Board and residence, with Clerkship and Dressership in the Royal Infirmary.—Four Exhibitions—value £31 10s. each—consisting of Six Months' Free Board and Residence in the Royal Infirmary.

The Fee for all the Lectures required by the College of Surgeons and Physicians and the Apothecaries' Hall is £45, payable in advance.

LIVERPOOL NORTHERN HOSPITAL.

Physicians, Dr. Waters and Dr. Roberts; Surgeons, Mr. Hakes, Mr. Manifold, and Mr. Lowndes; Junior Surgeon, Mr. Reginald Harrison.

Fees for Hospital Practice.—Perpetual, 30 guineas; one year, 12 guineas; six months, 9 guineas. For further particulars apply to the House-Surgeon, Mr. Bradley.

MANCHESTER ROYAL SCHOOL OF MEDICINE AND SURGERY, FAULKNER-STREET.

The Winter Session will commence on Monday, October 1, with an Introductory Address by Dr. Browne.

Winter Session, 1866-67.—Physiology, by Mr. Turner and Mr. Smith. Descriptive Anatomy, by Mr. Lund. Practical Anatomy, by Mr. S. M. Bradley. Chemistry, by Mr. Stone. Principles and Practice of Medicine, by Dr. Browne and Dr. Roberts. Principles, Practice, and Operations of Surgery, by Mr. Southam. Anatomy, Physiology, and Pathology of the Eye, by Mr. Hunt.

Summer Session.—Midwifery and Diseases of Women and Children (vacant). General Pathology and Morbid Anatomy, by Dr. Morgan. Materia Medica, Medical Botany, and Therapeutics, by Mr. Somers. Forensic Medicine, by Mr. Harrison. Botany, by Mr. Grindon. Practical Chemistry, by Mr. Stone.

Perpetual fee to the whole of the Lectures required to qualify for Examination at the London University, the Royal Colleges of Physicians and Surgeons, and the Apothecaries' Company, £42.

Hospital Practice at the Royal Infirmary, where Clinical Lectures are regularly delivered by the Physicians and Surgeons of the Institution.

Scholarships.—In addition to prizes for general proficiency, Three Scholarships for perpetual Students will be offered for competition—one of £20 for third year's Students; one of £15 for second year's Students; one of £10 for first year's Students.

Further particulars may be obtained from Mr. Southam, 10, Lever-street.

COLLEGE OF MEDICINE, NEWCASTLE-UPON-TYNE.

Winter Session, commencing October 1, 1866.—Anatomy and Physiology, Dr. Murray. Anatomy, Dr. Nesham, Mr. Armstrong, and Mr. Russell. Medicine, Dr. Charlton and Dr. Embleton. Surgery, Dr. Heath. Chemistry, Dr. Richardson and Mr. Marreco.

Summer Session.—Midwifery, Dr. Gibson. Botany, Mr. Thornhill and Dr. Arnison. Medical Jurisprudence, Dr. Donkin. Materia Medica, Dr. Humble. Practical Chemistry, Dr. Richardson and Mr. Marreco. Operative Surgery, Dr. Heath. Military Surgeon, Sir John Fife. Pathological Anatomy, Dr. Gibb and Dr. Philipson.

Fees for Lectures.—Perpetual Fee for all the Lectures qualifying for the Licence in Medicine, and the Mastership in Surgery, of the University of Durham, the Licence and Membership of the Royal College of Physicians, the Diploma of the College of Surgeons, and the Licence of the Apothecaries' Society, and payable on entering to the first Winter Session, £16 1s.

Hospital Practice.—This can be attended at the Newcastle Infirmary.

Fees for Hospital Practice.—Twelve Months, £7 7s.; Six Months, £5 5s.; Three Months, £4 4s.; Perpetual Fee, £17 17s.; or, if paid by instalments, first year, £7 7s.; second year, £6 6s.; third year, £5 5s. These fees also are payable in advance.

Medical Scholarships in the University of Durham.—Four Scholarships of £25 a year each, tenable each for four years. Two non-resident Clinical Clerkships and four Dresserships are conferred for merit.

College Medals.—At the end of each Session a Silver Medal will be awarded in each of the required classes.

Further particulars may be obtained from Dr. Embleton, Registrar, or Dr. Philipson, Secretary.

SHEFFIELD MEDICAL SCHOOL.

The Winter Session will commence Monday, October 1, 1866. Lectures.—Anatomy, Descriptive and Surgical, by Mr. Skinner and Mr. Le Tall. Demonstrations of Anatomy, by Mr. Wm. Skinner and Mr. A. Jackson. Physiology, by Dr. Mason and Mr. T. H. Morton. Principles and Practice of Medicine, Dr. Elam and Dr. Frank Smith. Principles and Practice of Surgery, by Mr. W. F. Favell and Mr. Parker. Chemistry, by Mr. Allen. Dental Mechanics, Mr. Moseley. Lectures on Clinical Medicine, by Dr. Bartolomé, Dr. Elam, and Dr. Law. Lectures on Clinical Surgery, by Mr. Barber, Mr. Favell, and Mr. Parker. The Summer Session will commence May 1, 1867. Midwifery and Diseases of Women, Dr. Aveling and Dr. Keeling. Materia Medica and Therapeutics, Dr. Young. Medical Jurisprudence, will be filled up shortly. Botany, Mr. Birks and Dr. Mason. Practical Chemistry, Mr. Allen. Ophthalmic Surgery, Mr. Gillott. Dental Surgery, Mr. Merryweather. Hospital Practice at the Sheffield General Infirmary. Fees: Medical Practice, perpetual, £15 15s.; Surgical Practice, perpetual, £21. Perpetual Fee for all Lectures required by the College and Hall, £40.

SYDENHAM COLLEGE MEDICAL SCHOOL, SUMMER-LANE, BIRMINGHAM (Opposite the General Hospital).

The Session 1866-67 will commence on Tuesday, October 2. Anatomy and Physiology, Dr. Jordan, M.D., and Mr. Bartleet, M.B. Practical Anatomy, Mr. F. Jordan; and Demonstrations, Mr. Jones. Principles and Practice of Medicine, Dr. Russell. Principles and Practice of Surgery, Messrs. Baker and Bolton. Surgical Pathology, Mr. Pemberton. Dental Physiology and Surgery, Mr. Howkins. Chemistry, Dr. Hill. Summer Session.—Midwifery, Mr. Bassett. Materia Medica and Therapeutics, Dr. Foster. Practical Chemistry, Dr. Alfred Hill. Botany, Dr. Savage. Forensic Medicine, Dr. Hill and Mr. Swain. Prizes are awarded in each class, and a Council Prize is given for General Proficiency. Fee to all the Lectures required by College and Hall, £42; Perpetual, £50. Further particulars may be obtained on application to the Principal, Dr. Bell Fletcher, Waterloo-street.

MEDICAL SCHOOLS AND HOSPITALS IN SCOTLAND.

UNIVERSITY OF EDINBURGH.

Chancellor—Lord Brougham. *Vice-Chancellor*—Principal Sir David Brewster, K.H. *Rector*—Thomas Carlyle, Esq.

The Session will commence on Thursday, November 1, 1866.

The Classes for Medicine will be opened as follows:—Dietetics, Materia Medica, and Pharmacy, on Thursday, November 1, at 9 o'clock, Professor Christison, M.D.; Chemistry, on Thursday, November 1, at 10 o'clock, Professor Lyon Playfair; Surgery, on Thursday, November 1, at 10 o'clock, Professor Spence; Institutes of Medicine, on Thursday, November 1, at 11 o'clock, Professor Bennett, M.D.; Midwifery and Diseases of Women and Children, on Thursday, November 1, at 11 o'clock, Professor Sir James Y. Simpson, Bart., M.D.; Clinical Surgery (Monday and Thursday), on Thursday, November 1, at 12 o'clock, Professor Syme; Clinical Medicine (Tuesday and Friday), on Tuesday, November 6, from 12 to 2 o'clock, Professors Bennett, Laycock, and Maclagan; Anatomy, on Thursday, November 1, at 1 o'clock, Professor Goodsir; Natural History, on Thursday, November 1, at 2 o'clock, Professor Allman, M.D.; Practice of Physic, on Thursday, November 1, at 3 o'clock, Professor Laycock, M.D.; General Pathology, on Thursday, November 1, at 4 o'clock, Professor Henderson, M.D.; Anatomical Demonstrations, on Thursday, November 1, at 4 o'clock, Professor Goodsir. Royal Infirmary, at noon, daily. Practical Anatomy, under the superintendence of Professor Goodsir; Practical Chemistry, under the superintendence of Professor Lyon Playfair; Analytical Chemistry, under the superintendence of Professor Lyon Playfair; Practical Physiology, under the superintendence of Professor Bennett.

During the Summer Session Lectures will be given on the following subjects:—Botany, by Professor Balfour; Practical Physiology, including Histology, by Professor Bennett; Medical Jurisprudence for Medical and Law Students, by Professor Maclagan; Clinical Medicine; Clinical Surgery, by Professor Syme; Comparative Anatomy, by Professor Goodsir; Anatomical Demonstrations, by Professor Goodsir; Practical Chemistry and Pharmacy, under the direction of Professor Lyon Playfair; Practical Anatomy, under the superintendence of Professor Goodsir; Natural History, by Professor Allman; Medical Psychology, with practical instruction at an Asylum, by Professor Laycock.

Matriculation.—Every Student, before entering with any Professor, must produce a Matriculation Ticket for the ensuing Session. Tickets will be issued at the Matriculation Office at the College, every lawful day, from 10 till 4 o'clock. Enrolment in the General Album is the only legal Record of attendance in the University.

Library.—The Library will be open for the purpose of giving out books to Students, either on loan or for reference in the Hall appropriated for that purpose, every lawful day during the Winter Session from 10 o'clock a.m. till 4 o'clock p.m., except on Saturdays, when it will be shut at 1 o'clock precisely. Every Student applying for books must present to the Librarian his Matriculation Ticket for the Session, with the Ticket of at least one Professor. Every book taken out must be returned within a fortnight uninjured.

For further information apply to the Secretary, Mr. Alexander Smith, at the College.

A Table of Fees may be seen in the Matriculation Office, and in the Reading-room of the Library.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.

WINTER SESSION, 1866-67.

THE following Courses of Lectures on Medical and Surgical Science, and also those delivered in the University, qualify for Examination for the Diplomas of the Royal Colleges of Physicians and Surgeons. Classes open on Thursday, November 1:—Surgery, Dr. P. H. Watson. Surgery (1, Surgeons'-square), Dr. Joseph Bell. Surgery (Minto House), Mr. Annandale. Chemistry (School of Arts, Adam-square), Dr. Stevenson Macadam. Practical Chemistry, Dr. Stevenson Macadam. Analytical Chemistry, Dr. Stevenson Macadam (at Surgeons'-hall). Chemistry (Minto House), Dr. A. C. Brown. Practical Chemistry, Dr. A. C. Brown. Analytical Chemistry, Dr. A. C. Brown. Physiology, Dr. Sanders. Medical Jurisprudence (course commences on Monday, November 5), Dr. Littlejohn. Clinical Medicine (Royal Infirmary), Drs. Sanders, Rutherford Haldane, and Scoresby-Jackson; Dr. J. Matthews Duncan (for Diseases of Women). Clinical Surgery (Royal Infirmary), Dr. Gillespie. Anatomy: Anatomical Demonstrations, Dr. P. D. Handyside. Practical Anatomy (will be commenced October 1), Dr. P. D. Handyside. Practice of Physic, Dr. Rutherford Haldane. Practice of Physic (Minto House), Dr. George W. Balfour. General Pathology, Dr. Grainger Stewart.

Practical Instruction.—Royal Infirmary, 12 noon: Perpetual Ticket, at one payment, £10; annual, £5 5s.; half-yearly, £3 3s.; quarterly, £1 11s. 6d. Separate payments for two years entitle the Student to a perpetual ticket.

Fees—For the first of each of the above Courses, £3 5s.; for the second, £2 4s.; perpetual, £5 5s. To those who have already attended a First Course in Edinburgh, the perpetual fee for that Class is £2 4s. The fees for the following Courses are:—Practical Chemistry and Practical Anatomy, £3 3s. Anatomical Demonstrations, £2 2s.; when taken along with Practical Anatomy, £1 1s.; perpetual, £4 4s. Analytical Chemistry, £2 a month, £5 for three months, or £10 for the Session of six months.

During the Summer Session, 1867, the following Three Months' Courses will be delivered:—Midwifery, Dr. Keiller. Midwifery (Minto House), Dr. J. Matthews Duncan. Medical Jurisprudence, Dr. Littlejohn. Materia Medica and Therapeutics, Dr. Scoresby-Jackson. Clinical Surgery, Dr. Gillespie. Clinical Medicine, Drs. Sanders, Rutherford Haldane, and Scoresby-Jackson; Dr. J. Matthews Duncan (for Diseases of Women). Practical Chemistry and Analytical Chemistry, Dr. Stevenson Macadam at Surgeons' Hall, and Dr. A. C. Brown, 4, High School-yards. Practical Anatomy, Operative Surgery Demonstrations (Regional, Surgical, and Microscopic), and Elementary Anatomy, Dr. P. D. Handyside. Pathological Anatomy, Histology, and Practical Pathological Histology, Dr. Grainger Stewart, Royal Infirmary. Diseases of Children (Royal Hospital for Sick Children), Dr. Keiller. Histology, Dr. Sanders. Military Surgery and Hygiene, Dr. P. H. Watson. Surgical Appliances and Operative Surgery, Dr. Joseph Bell. Surgical Pathology and Operative Surgery, Mr. Annandale. Vaccination (six weeks' course), Dr. Husband. Diseases of the Eye, Dr. Argyll Robertson. Insanity, Dr. Skae.

The minimum cost of education in the above School for the double qualification of Physician and Surgeon from the Royal Colleges of Physicians and Surgeons, including the fees for the Joint Examinations, is £90 4s., which is payable by yearly instalments during the period of study; while the minimum cost for the single qualification of either Physician or Surgeon, including fee for Examination, is £80.

For further information apply to Dr. Stevenson Macadam, Secretary to the Medical and Surgical Schools.

ROYAL INFIRMARY, EDINBURGH.

In this Hospital a portion of the beds is set apart for Clinical Instruction by the Professors of the University of Edinburgh. Courses of Clinical Medicine and Surgery are also given by the ordinary Physicians and Surgeons.

Medical Department.—Professors of Clinical Medicine: Dr. Bennett, Dr. Laycock, and Dr. Maclagan. Extra Physicians and Lecturers on Diseases Peculiar to Women: Dr. Simpson and Dr. J. Matthews Duncan. Ordinary Physicians and Lecturers on Clinical Medicine: Dr. Sanders, Dr. Rutherford Haldane, and Dr. R. E. Scoresby-Jackson. Pathologist and Special Assistant-Physician: Dr. T. Grainger Stewart.

Surgical Department.—Professor of Clinical Surgery: Mr. Syme. Consulting Surgeon: Dr. Dunsmure. Ordinary Acting Surgeons: Mr. Spence, Dr. J. D. Gillespie (Lecturer on Clinical Surgery), and Dr. P. H. Watson. Ophthalmic Surgeon: Mr. Walker. Assistant-Surgeon: Mr. Thomas Annandale. Assistant to Mr. Syme: Dr. Joseph Bell. Dental Surgeon: Dr. John Smith.

Hospital Tickets: Perpetual, in one payment, £10; Annual, £5 5s.; Half-yearly, £3 3s.; Quarterly, £1 11s. 6d. Separate payments for two years entitle the Student to a perpetual ticket.

Appointments.—No fees are payable for any Medical or Surgical Appointment in this Hospital. The subordinate appointments are made by the Physicians and Surgeons, or, on their recommendation, by the Managers; and they are open to all Students and Junior Practitioners holding the Hospital Ticket during the period over which the appointment extends.

UNIVERSITY OF ABERDEEN.

Faculty of Medicine—Session 1866-67.

Winter Session, commencing on the first Tuesday of November.—Anatomy, Professor Struthers, M.D., £3 3s. Anatomical Demonstrations and Practical Anatomy, Prof. Struthers and the Demonstrator, £2 2s. Chemistry, Prof. Brazier, £3 3s. Institutes of Medicine, Prof. Ogilvie, £3 3s. Surgery, Prof. Pirrie, £3 3s. Practice of Medicine, Prof. Macrobin, M.D., £3 3s. Midwifery and Diseases of Women and Children, Prof. Dyce, £3 3s. Zoology, with Comparative Anatomy, Prof. Nicol, £3 3s. Medical Jurisprudence, Prof. Ogston, £3 3s.

Summer Session, commencing on the first Monday in May.—Botany, Prof. Dickie, £3 3s. Materia Medica (100 lectures), Prof. Harvey, £3 3s. Anatomical Demonstrations and Practical Anatomy, Prof. Struthers and the Demonstrator, £2 2s. Practical Chemistry, Prof. Brazier, £3 3s.

Matriculation Fee for the Winter and Summer Sessions, £1. For the Summer Session alone, 10s.

Royal Infirmary—Daily.—Perpetual Fee to Hospital Practice, £6; or First Year, £3 10s.; Second Year, £3. Clinical Medicine and Clinical Surgery—each, £3 3s.

For further information apply to Dr. Macrobin, Dean of the Faculty of Medicine.

UNIVERSITY OF GLASGOW.

Faculty of Medicine.—The Classes open for the Winter Session on Tuesday, October 30, 1866.

Chemistry, Practical Chemistry, and Chemical Laboratory, Dr. Anderson, £3 3s. Natural History, Dr. Young, £3 3s. Practice of Physic, Dr. Gairdner, £3 3s. Anatomy, Anatomical Demonstrations, and Practical Anatomy, Dr. Allen Thomson and Demonstrator, £8 8s. Materia Medica, Dr. Cowan, £3 3s. Forensic Medicine, Dr. Rainy, £3 3s. Surgery, Mr. Lister, £3 3s. Midwifery, Dr. Pagan, £3 3s. Institutes of Medicine, Dr. A. Buchanan, £3 3s. Clinical Medicine and Clinical Surgery, Physicians and Surgeons of Royal Infirmary.

Further information may be obtained from the Registrar of the University.

ANDERSON'S UNIVERSITY, GEORGE-STREET, GLASGOW.

WINTER SESSION 1866-67.

Chemistry, Practical Chemistry, and Laboratory, Dr. Penny; Surgery, Dr. G. H. B. Macleod; Institutes of Medicine (Physiology), Dr. E. Watson; Anatomy, Anatomical Demonstrations, Practical Anatomy, or Dissection, Dr. G. Buchanan; Practice of Medicine, Dr. M'Call Anderson: Materia Medica, Dr. Morton; Hospital Practice in Royal Infirmary; Clinical Lectures in Royal Infirmary.

SUMMER SESSION.

Botany, Mr. Hennedy; Midwifery, Dr. J. G. Wilson; Medical Jurisprudence, Dr. Leishman; Surgical Anatomy, Practical Anatomy, Osteology for beginners, Dr. George Buchanan; Practical Chemistry, Dr. Penny; Operative Surgery, Dr. G. H. B. Macleod.

Class Fees.—For each of the above Courses of Lectures, first Session, £2 2s.; second Session, £1 1s.; afterwards free.

Anatomy Class Fees.—For both Courses (Lectures and Demonstrations), first Session, £4 4s.; second Session, £4 4s.; Perpetual, £8 8s.

Practical Anatomy.—The Dissecting-room is free for two Sessions to those who attend both Courses of Anatomy. After the second year the fee for Practical Anatomy is £1 1s. per Session.

The Fees for all the Lectures and Hospital Practice required of Candidates for the Diplomas of Physician and Surgeon, amount to £40.

GLASGOW ROYAL INFIRMARY.

Physicians, Dr. Orr, Dr. Gairdner, Dr. Steven, and Dr. Perry; Surgeons, Dr. Morton, Dr. G. Buchanan, Mr. Lister, and Dr. E. Watson.

Besides the Clinical instruction given at the bedside, Lectures on the Cases are given four times weekly, at Nine a.m., during the Winter and Summer Sessions. Clinical Medical Lectures on Mondays and Thursdays. Clinical Surgical Lectures on Tuesdays and Fridays.

Fees, admitting to the Medical and Surgical Practice and the Clinical Lectures—Perpetual, £10 10s.; or, for one year, £5 5s.; for second, £5 5s.; for third, £1 1s.; and afterwards free.

SCHOOLS AND HOSPITALS IN IRELAND.

SCHOOL OF PHYSIC, UNIVERSITY OF DUBLIN.

The School was established by Act of Parliament 40th George III., and is under the joint government of the Board of Trinity College and the King and Queen's College of Physicians.

Winter Session.—Institutes of Medicine, Prof. Law. Materia Medica and Pharmacy, Prof. A. Smith. Surgery, Prof. R. Smith. Anatomy and Chirurgery, Prof. McDowel. Practical Anatomy, Dr. Bennett. Chemistry, Prof. Apjohn. Practice of Medicine, Prof. Banks. Midwifery and the Diseases of Women and Children, Prof. Sinclair.

Summer Session.—Botany, vacant. Medical Jurisprudence, Professor Travers. Practical Chemistry, Dr. Apjohn. Hospital Practice and Clinical Lectures at Sir Patrick Dun's Hospital.

The fee for each Course of Lectures is £3 3s.; for each Course of Clinical Lectures, £3 3s.; for attendance on the practice of Sir P. Dun's Hospital, £3 3s.

THE QUEEN'S UNIVERSITY IN IRELAND—QUEEN'S COLLEGE, BELFAST, FACULTY OF MEDICINE.

The Lectures will commence on Wednesday, November 1. Anatomy and Physiology, Dr. P. Redfern. Chemistry, Dr. Thomas Andrews. Practice of Medicine, Dr. James Cuming. Practice of Surgery, Dr. A. Gordon. Materia Medica, Dr. J. S. Reid. Midwifery, Dr. W. Burden. Medical Jurisprudence, Dr. J. F. Hodges. Natural Philosophy, Dr. J. Stevelly. Zoology and Botany, Dr. Wyville Thomson. The Demonstrations in Anatomy are delivered by Dr. Burden. The Course of Botany will commence in May.

Fees.—Anatomy and Physiology—First Course, £3; each subsequent Course, £2. Anatomical Demonstrations and Practical Anatomy—Each Course, £3. Practical Chemistry—£3. Other Medical Lectures—First Course, £2; each subsequent Course, £1.

Two Medical Scholarships are awarded to the Students of each year of the Medical course. The Examinations commence on October 18.

Belfast General Hospital.—Fees for Clinical Instruction—First year, £4 4s.; second year, £3 3s.; third year, £2 2s.; for two years in advance, £6 6s. Hospital Fee, £1 1s. per annum. Three Resident pupils are appointed by examination.

Belfast Lying-in Hospital.—Fee for the Session, £3 3s.

QUEEN'S COLLEGE, CORK.—FACULTY OF MEDICINE.—SESSION 1866-67.

Anatomy, Physiology, and Practical Anatomy, Dr. J. H. Corbett. Practice of Medicine, Dr. C. O'Connor. Practice of Surgery, Dr. W. Tanner. Materia Medica, Dr. P. O'Leary. Midwifery, Dr. J. R. Harvey. Natural Philosophy, Mr. John England. Chemistry and Practical Chemistry, Dr. J. Blyth. Zoology and Botany, Mr. J. R. Greene. Modern Languages, Mr. R. De Vericour. Clinical Medicine and Clinical Surgery, at the North and South Infirmaries, by the Physicians and Surgeons of these Institutions. Clinical Midwifery, at the Lying-in Hospital. The Medical Session will be opened on Monday, October 29, 1866, and the Lectures will commence on October 29.

Eight Scholarships, value £25 each, are awarded to Students of Medicine.

For further information apply to Mr. Robert John Kenny, Registrar.

QUEEN'S COLLEGE, GALWAY.—FACULTY OF MEDICINE.

Anatomy and Physiology, and Practical Anatomy, Dr. Cleland. Practice of Medicine, Dr. N. Colahan. Practice of Surgery, Dr. J. V. Brown. Demonstrator, Dr. McAlister. Materia Medica and Medical Jurisprudence, Mr. S. M'Coy. Midwifery and Diseases of Women and Children, Dr. R. Doherty. Chemistry, Dr. T. H. Rowney. Natural Philosophy, Dr. A. H. Curtis. Botany and Zoology, Dr. A. G. Melville. Logic and Mental Philosophy, Dr. T. W. Moffett. The County Galway Infirmary, Town, and Union Hospitals are in the immediate vicinity of the Queen's College. They are visited every morning by Professors of the College, who deliver Clinical Lectures.

For further information apply to the Registrar, W. Lupton, M.A.

CATHOLIC UNIVERSITY, DUBLIN.

School of Anatomy, Medicine, and Surgery, Cecilia-street, Dame-street.

Winter Session.—Anatomy and Physiology, Drs. Hayden and Cryan. Anatomical Demonstrations, the Professors of Anatomy and Physiology. Chemistry, Dr. W. K. Sullivan. Theory and Practice of Surgery, Mr. A. Ellis. Theory and Practice of Medicine, Dr. R. D. Lyons. Theory and Practice of Midwifery, Dr. J. A. Byrne.

Summer Session.—Practical Chemistry, Dr. W. K. Sullivan. Materia Medica, Dr. F. B. Quinlan. Medical Jurisprudence, Dr. S. M. MacSwiney. Pathology, Dr. R. D. Lyons. Botany

Dr. Sigerson. Natural Philosophy, Mr. H. Hennessy. Logic, Dr. D. B. Dunne.

The Fee for each of the above Courses is £3 3s.

In addition to the usual Class Prizes, two Exhibitions of £20 will be offered for competition in the following *combined* subjects—viz., one in Physiology, Physiological Anatomy, Chemistry, and Botany; and one in Surgery, Practice of Medicine, and Midwifery. A gold medal of the value of £7 will also be awarded at the termination of the Summer Session for the highest attainments in Practical Chemistry, Materia Medica, and Medical Jurisprudence combined. For further particulars apply to the Registrar, Mr. Laffan, at the School.

ROYAL COLLEGE OF SURGEONS IN IRELAND—SCHOOL OF SURGERY.—Session 1866-67.

The public Lectures and the usual Winter Course will commence on Monday, November 5. Anatomy and Physiology, Dr. Jacob. Descriptive Anatomy, Dr. Bevan and Mr. Morgan. Surgery, Mr. Hargrave and Dr. J. S. Hughes. Practice of Medicine, Dr. Benson. Chemistry, Dr. Barker. Materia Medica, Dr. Macnamara. Midwifery, Dr. Sawyer. Medical Jurisprudence, Dr. Geoghegan. Practical Chemistry, Dr. Barker. Comparative Anatomy, Dr. Jacob. Botany, Dr. Mitchell. Hygiene, Dr. Mapother. Dissections under the direction of the Professors of Anatomy and the Demonstrators, Drs. Croly, Stoney, and MacAllister, commence on Monday, October 1.

The Summer Session commences in May and terminates in August, including Materia Medica, Medical Jurisprudence, Botany, Practical Chemistry, and Hygiene.

The fee for each of the above Courses is £3 3s., except Comparative Anatomy, which is free. Practical Instruction in Operative Surgery is given by the Professors of Surgery, separate from the Surgical Lectures, Fee, £5 5s.

For further information application to be made to the Registrar, Mr. John Brennen, at the College.

DR. STEEVEN'S HOSPITAL, DUBLIN,

Contains 250 beds, with distinct Wards for Fever, Syphilis, Diseases of the Eye, and Diseases of Females; there is also in connexion with the Hospital a Maternity Department, and an extensive Dispensary for Out-patients. Systematic Courses of Lectures are delivered during the Winter and Summer Sessions on all the subjects required by the Colleges, Halls, and the Public Service. Physicians, Dr. Freke and Dr. Burke. Obstetric Physician, Dr. Hardy. Surgeons, Mr. Wilmot, Mr. Colles, Mr. Hamilton, Mr. Fleming, Mr. Symes. Professors: Anatomy and Physiology, Mr. Hamilton; Medicine, Dr. Freke; Surgery, Mr. Colles; Midwifery, Dr. Hardy; Chemistry, Dr. Aldridge, Dr. Cameron. Descriptive Anatomy, Mr. Symes. Demonstrations, Drs Tyner, Swan, and Shortt. Botany, Dr. E. Percival Wright. Medical Jurisprudence, Dr. J. F. Pollock Materia Medica, Dr. Grimshaw. Natural Philosophy, Dr. J. Aldridge. Clinical Lectures by the Physicians and Surgeons. There is accommodation in the Hospital for two Medical and six Surgical Resident Pupils as Dressers. Fee—Winter, six months, £21; Summer, six months, £15 15s. The Sessional Courses of Lectures will commence on the first Monday in November. Fees, each Course—Hospital, £7 7s.; Lectures, £3 3s. Perpetual to both Hospital and School, 75 guineas, payable in two instalments. Two Midwifery Assistantships, salary £30 per annum, are each year awarded by competitive examination.

Further particulars on application to Dr. Tyner, Resident Surgeon, at the Hospital; or to E. Hamilton, M.D., Secretary, 120, Stephen's-green.

THE ADELAIDE HOSPITAL, PETER-STREET, DUBLIN.

Physicians, vacant, not yet filled up, and Dr. H. H. Head. Surgeons, Dr. A. J. Walsh, Mr. J. Morgan, Dr. J. K. Barton, and Mr. B. Wills Richardson.

The Winter Session of this Hospital commences the first Monday in October. It contains 100 beds, of which twenty-four are devoted to the Special Diseases of Infants and Children. There is a detached Fever Hospital for the treatment of Contagious Diseases.

Clinical Instruction.—Two Medical and two Surgical Lectures, including Lectures on the Diseases of the Eye, will be delivered in each week. Practical Demonstrations in the use of the Stethoscope, Laryngoscope, and Microscope, as applied to the Diagnosis of Disease, will be given during the Session. Ophthalmoscopic Demonstrations every Saturday.

There is a numerously-frequented Dispensary attached to the Hospital, which is attended daily by the Physicians and Surgeons.

Fees, for Nine Months' Hospital Attendance, £8 8s.; for Six Months' Hospital Attendance, £6 6s.; for Summer Three Months' Hospital Attendance, £3 3s.; Perpetual Pupils (paid at entrance), £21.

Prizes.—Two Medical and Two Surgical Prizes will be given at the close of the Session. Certificates of Attendance upon this Hospital are fully recognised by all the Licensing Bodies of the United Kingdom.

Further particulars can be obtained from Mr. Richardson, Secretary to the Medical Board, 2, North Frederick-street; or any of the other Physicians or Surgeons.

CARMICHAEL SCHOOL (FORMERLY RICHMOND HOSPITAL SCHOOL) OF ANATOMY, MEDICINE, AND SURGERY, NORTH BRUNSWICK-STREET, DUBLIN.

Anatomy and Physiology, Mr. Curran. Surgery and Operative Surgery, Dr. R. McDonnell and Dr. Stokes, jun. Theory and Practice of Medicine, Dr. Cruise. Midwifery, Dr. Jennings. Materia Medica and Pharmacy, Dr. Frazer. Chemistry, Dr. Davy. Descriptive and Practical Anatomy, Dr. Corley and Dr. O'Grady. Medical Jurisprudence, Dr. O'Reilly. Botany, Dr. Campbell. The Fee for each of the above Courses is £3 3s.

For further information apply to Dr. McDonnell, 14 Lower Pembroke-street; Mr. H. Curran, 70, Eccles-street; or Dr. F. R. Cruise, 37, Westland-row.

LEDWICH SCHOOL OF ANATOMY, MEDICINE, AND SURGERY, PETER-STREET, DUBLIN.

Founded 1810.

Anatomy, Physiology, and Pathology, etc., Mr. E. Ledwich and Mr. T. P. Mason. Theory and Practice of Surgery, Mr. Wharton and Mr. Barton. Surgical and Descriptive Anatomy, Demonstrations and Dissections, Messrs. Bright, Glanville, and O'Leary. Theory and Practice of Medicine, Dr. W. Moore. Midwifery and Diseases of Women and Children, Dr. J. Ringland. Materia Medica and Therapeutics, Dr. H. Minchin. Forensic Medicine and Hygiene, Dr. R. Travers. Theory of Chemistry, Practical Chemistry, and Natural Philosophy, Dr. Cameron. Botany, Dr. C. Asken.

A Course of Operations to be performed by the Student, under the superintendence of the Lecturers (subjects, etc., included), £5 5s.

Fee for each Course of Lectures, £3 3s.

Sec.—Mr. E. Ledwich, 7, Harcourt-street, Dublin.

CITY OF DUBLIN HOSPITAL.

The course of Practical Medical and Surgical Instruction in this Hospital will commence in October. The Clinical Lectures will be delivered on three days in each week during the Session, by Dr. Jacob, Dr. Benson, Mr. Hargrave, Mr. Geoghegan, Mr. Tufnell, and Mr. Croly; and on Diseases peculiar to Women and Children, by Dr. Beatty. Dr. Jacob's Clinical Lectures on Diseases of the Eye, illustrated by the Cases in the Hospital, are open to the Pupils in attendance.

Consulting Physicians: Professor Apjohn and Dr. C. P. Croker.

The certificates of attendance are received as qualification by all the Colleges, Halls, and Boards.

ST. MARK'S OPHTHALMIC HOSPITAL AND DISPENSARY FOR DISEASES OF THE EYE AND EAR, DUBLIN.

Clinique by Sir William Wilde on Tuesdays and Fridays Operations on Wednesdays.

National Vaccine Establishment.—Educational station (under the authority of Government), Tottenham-court-road Chapel.—Mr. Simpson, F.R.C.S., being authorised by the Privy Council to give Certificates of Proficiency in Vaccination, attends as above on Monday and Wednesday, from 1 to 2 o'clock. These Vaccination Certificates are not only required by the College of Surgeons and Apothecaries' Company, but are imperatively necessary for obtaining any Poor-law appointment. Fee for the Course, One Guinea. 18, Gower-street, Bedford-square.

DAYS AND HOURS OF INTRODUCTORY LECTURES

TO BE DELIVERED AT THE DIFFERENT MEDICAL SCHOOLS IN THE METROPOLIS.

	Days and Hours.	
St. Bartholomew's Hospital and Medical College	Oct. 1, 5	Mr Savory.
Charing-cross Hospital and Medical Coll.	,, 1, 3	Mr. Barwell.
St. George's Hospital Medical School ..	,, 1, 2	Dr. John W Ogle
Guy's	,, 1, 2	Rt. Hon Sir Laurence Peel.
King's College Medical Department ..	,, 1, 8	Sir Wm. Fergusson, Bt.
London Hospital Medical College ..	,, 1, 3	Dr. Head.
St. Mary's Hospital Medical School ..	,, 1, 8	Mr. Haynes Walton.
Middlesex Hospital Medical College ..	,, 1, 8	Mr. Hulke.
St. Thomas's Hospital Medical College..	,, 1, 3	Dr. Barker.
University College Faculty of Medicine	,, 1, 3	Dr. Ringer.
Westminster Hospital & Medical School	,, 1, 8	Dr. Fincham.

IN THE PROVINCES.

	Days and Hours.	
Birmingham—Queen's College Medical School	Oct 2, 2	Dr. Nelson.
Birmingham—Sydenham College	,, 2,	
Bristol Medical School	,, 1,	
Hull and East Riding Medical School ..	,, 1,	
Leeds School of Medicine	,, 1, 12	Mr. Hey.
Liverpool Royal Infirmary and School of Medicine	,, 1, 2	Mr. R. Harrison.
Manchester Royal School of Medicine ..	,, 1, 12	Dr. Browne
Newcastle-upon-Tyne College of Medicine..	,, 1, 2	Dr. C. J. Gibb.
Sheffield Medical School	,, 1, 8	

HOSPITALS, ETC., FOR SPECIAL INSTRUCTION.

At Downing College, Cambridge, every alternate year an election to a Fellowship takes place, the holder of which must be engaged in the active pursuit of the studies of Law or Medicine. These Fellowships are of the annual value of £200, and are tenable for twelve years. They are not vacated by marriage, and the Fellows are not required to reside. The next election will take place in 1867. A Foundation Scholarship of £50 per annum (in some cases with rooms and commons) is awarded annually for distinction in natural science, tenable until the B.A. degree, and in case of special merit for three years longer. Minor Scholarships of £40 per annum, tenable for two years, are offered each year for competition before entrance, and in awarding one of these considerable weight is given to proficiency in Natural Science.

Pharmaceutical Society of Great Britain, 17, Bloomsbury-square, W.C.—School of Pharmacy.—Session 1866-67.—The Session will commence on Monday, October 1, and extend to the end of July. Chemistry and Pharmacy, Dr. Redwood; Botany and Materia Medica, Professor Bentley. The first and second parts of this course, extending over the winter months, will be delivered at 17, Bloomsbury-square. The third part of the course, on Systematic Botany, will be delivered at the Royal Botanic Gardens, Regent's-park. Fee: For Registered Apprentices and Associates of the Society, for either of the above courses, One Guinea; for either part separately, Half-a-Guinea. For those not connected with the Society, Two Guineas for either of the above courses; One Guinea for either part separately. Laboratory: The suite of Laboratories for Practical Instruction in General and Pharmaceutical Chemistry will be opened on Monday, October 1, under the direction of Dr Attfield. Fee for the entire Session of ten months, Twenty-five Guineas. The Laboratories are open from half-past nine a.m. till five p.m. Students can enter at any period during the Session. Two Scholarships (the Jacob Bell Memorial Scholarship), of Thirty Pounds a-year each, are open to competition annually in July. The Board of Examiners meet monthly to grant Certificates of Competency. For further information, apply to Mr. Bremridge, Secretary and Registrar, 17, Bloomsbury-square, W.C.

City of London Hospital for Diseases of the Chest, Victoria-park.—Consulting-Physician—Henry Jeaffreson, Esq, M.D. Consulting-Surgeon: John Hilton, Esq., F.R.S. Physicians—Thomas B. Peacock, Esq., M.D., 20, Finsbury-circus; James Risdon Bennett, Esq., M.D, 15, Finsbury-square; Edmund Lloyd Birkett, Esq, M.D., 48, Russell-square; George Nelson Edwards, Esq., M.D., 20, Finsbury-square; Stephen H Ward, Esq, M.D., 28, Finsbury-circus. Assistant-Physicians—James Andrew, Esq, M.D., 59, Russell-square; John C. Thorowgood, Esq., M.D., 15, Queen Anne-street, Cavendish-square; Henry G. Sutton, Esq, M.B, 30, Finsbury-square; Samuel Fenwick, Esq., M.D, 74, Harley-street, Cavendish-square; William S Church, Esq, M.B., 1, Harcourt-buildings, Temple. Junior Assistant-Physician—A Blirke Shepherd, Esq., M.B. Resident Medical Officer—William H. Power, Esq The Hospital affords accommodation for 120 in-patients. During the last year 546 cases were under treatment in the wards, and 11,512 were relieved as out-patients. In-patients admitted since the wards were opened in 1855, 4270; out-patients admitted since the establishment of the Institution in 1848, 123,900. Information respecting Medical instruction at the Hospital may be obtained on application to the Physicians. Offices, 3, Finsbury-circus, E.C.

Hospital for Sick Children, 48 and 49, Great Ormond street, W.C.—Physicians, Dr. West and Dr. Hillier. Assistant Physicians, Dr. Buchanan, Dr. Dickinson, Dr. Sidney Ringer, Dr. Samuel Gee. Surgeon, Mr. Timothy Holmes. Assistant-Surgeon, Mr. Thomas Smith. Surgeon-Dentist, Mr. Samuel Cartwright. 75 beds. In-patients—1865, 739; Out-patients—attending, 11,685. Clinical Lectures on cases attending or in the Hospital are delivered by the Medical Officers before their visit to the patients during the Winter and Summer Sessions. The Lectures are free to Practitioners on presenting their cards, and to Students after their first year by tickets, to be obtained on application, by letter, to the Secretary, at the Hospital. The Practice of the Hospital, in both In- and Out-patient Departments, is open at 9 every morning. Fee for Six Months' Attendance, £3 3s.; Perpetual, £5 5s.

Great Northern Hospital, Caledonian-road, N.—Consulting Physician—Dr. Copland, F.R.S., 5, Old Burlington-street. Consulting Surgeon—Mr. Skey, F.R.S., 24, Mount-street, Berkeley-square. Physicians—Dr. Leared, 12, Old Burlington-street; Dr. Hardinge, 18, Grafton-street, Bond-street; Dr. Cholmeley, 40, Russell-square; Dr. F. C. Webb, 22, Woburn-place, Russell square; Dr. Jephson, 7, Gloucester-terrace, Hyde-park; Dr. Cruckneil, 58, Welbeck street. Surgeons—Mr. Gay, 10, Finsbury-place South; Mr. W. Adams, 5, Henrietta street, Cavendish-square; Mr. Thomas Carr Jackson, 3, Weymouth-street, Portland-place; Mr. Edward C. Hulme, 38, Gower-street; Mr. W. Allingham, 36, Finsbury-square; Mr. Buxton Shillitoe, 34, Finsbury-circus. Obstetric Physician—Dr. Gustavus C. P. Murray, 17, Green-street, Grosvenor-square. Diseases of the Eye—Dr. Lawrence, 22, Connaught-square, Hyde-park. Aural Surgeon—Mr. Harvey, 2, Soho-square. Dentists—Mr. Statham, 60, Wimpole-street; Mr. Charles James Fox, 27, Mortimer-street, Cavendish-square. House-Surgeon—Mr. W. H. Ellis. Operations on Wednesdays at Two o'clock. Medical Practitioners admitted to see the practice of the Hospital on presenting their cards. Cards of admission to the practice of the Hospital will be granted to certified Medical Students on application to the Secretary, at the Hospital.

Royal Orthopædic Hospital, 315, Oxford-street.—Operations, Thursdays, 2 p.m. Lectures are regularly given to Medical Practitioners and Students.

West London Hospital, Hammersmith, W.—Number of beds, 25; average of out-patients, 30,000 annually; in-patients, 200. The performance of the duties of House-Surgeon at this Hospital is recognised by the Royal College of Physicians, London, as Professional study in the fourth year of the curriculum required of Candidates for the College Licence. The Apothecaries' Company receive Certificates of attendance on the Medical Practice of this Hospital for six months of the whole period they require. Gentlemen may enter as Articled Pupils, and also acquire a knowledge of Practical Pharmacy. Fee for the whole period of apprenticeship (five years) 100 guineas.

National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury.—The Hospital contains 60 beds. More than 1200 out-patients are now under treatment. The Physicians attend every Monday, Tuesday, Wednesday, and Friday. Medical Practitioners and students will be admitted on showing their cards. Physicians, Drs. Ramskill, Radcliffe, J. Russell Reynolds, and Sieveking. Assistant-Physicians, Drs. J. Hughlings Jackson, and P. Victor Bazire. Medical Superintendent, Mr. J. N. Radcliffe.

Queen Charlotte's Lying-in Hospital, Marylebone-road—Instituted 1752. Rebuilt 1856.—Consulting-Physician, Dr. Roget. Consulting-Surgeon, Charles Hawkins, Esq. Medical Officers for the In-Patients, Dr. Blakely Brown, Dr. Brodie. Medical Officers for Out-Patients, J. Cholmondely, Esq, Dr. Parsons. Secretary, Mr A. S. Boodle, who attends at the Hospital on Monday from ten to two. Pupils are admitted to reside and board in the Hospital (after having been examined by the Physicians) for periods of not less than six weeks. In 1865, in-patients delivered, 225 (in six months); out-patients delivered, 431; total, 656. Terms on application at the Hospital.

British Lying in Hospital, Endell-street, Long-acre.—Founded 1748.—Medical Officers: B. Brookes, Esq., Consulting-Surgeon; Dr. Graily Hewitt, Dr. G. C. P. Murray, and Dr. Eastlake. About 200 women are delivered annually in this Hospital, and between 500 and 600 at their own houses. Resident male pupils are admitted for periods of two, four, or six months on paying a fee of seven, ten, or twelve guineas, exclusive of board and lodging. Non-resident pupils are now afforded opportunities for attending the Out-door Practice of the Hospital, and will be supplied with cases on payment of a moderate fee. A systematic course of instruction is also given to Midwives and Monthly Nurses by, and under the direction of, the Medical Officers. Matron, Mrs. Firth.

Hospital Ship "Dreadnought," off Greenwich.—Office, 86, King William-street, E.C.—This institution contains 200 beds, and is established for the relief of seamen of all nations Casualties from the shore are also received. Residence is provided on board for Students and others who may be desirous of studying diseases incidental to tropical climates before entering the service or going abroad. Constant opportunities also occur for the performance of Surgical operations.

St. Luke's Hospital for Lunatics, Old-street, E.C.—Resident Medical Superintendent, Dr. James Ellis, who will admit gentlemen to the Medical Practice of the Hospital, and give any information respecting the admission of patients. Fee for the Session of three months, £2 2s.

Queen's College, Liverpool.—The Session will commence on Monday, October 1. The College is in connexion with the University of London, and its classes comprise the subjects required for the Matriculation, B.A, B Sc, and preliminary scientific M.B. examinations of that University. Instruction in Practical Chemistry is given in the College Laboratory by Professor Hamilton. Provincial examinations of the London University are held at Queen's College Fees: Separate classes, £2 2s. to £4 4s. per Session; Practical Chemistry, £5 5s.; course students, £20 per Session.

PRIVATE TEACHERS IN LONDON.

Dr. Barron gives courses of Medical and Surgical tuition adapted to Students for Professional Examination, at his Class-rooms, Millikin's Chambers, Southwark-street, Borough.

Messrs E. and C. Carter prepare gentlemen for the Preliminary Examinations of the Royal College of Surgeons and Apothecaries' Hall, and for other Examinations in Arts. Address, 6, Milner-square, Islington, N.

Dr Robert Coales, LL D, M.A., 10, Trinity-square, Borough, prepares Students for the Matriculation, 1st B.Sc. (Mathematics and Mech Phil.) and B A. Degrees of the University of London, and for the Examination in Arts at the Royal College of Surgeons, Apothecaries' Hall, etc.

Mr. G Hind, F.R C S., gives, daily, Demonstrations and Examinations at 29, Newman-street, Oxford-street. Hours, from 10 to 11½ a.m., and 6 to 8 p m.

Mr. T. P. Lovell prepares gentlemen for the Examinations in Arts at the College of Surgeons and Apothecaries' Hall. Address, 51, Bernard-street, Russell-square, W.C

The Drs Power continue daily their Lectures and Examinations for the Competitive, Primary, and Pass Examinations, at their Lecture-rooms 32, Queen-square, Bloomsbury, W.C.

Dr. Steggall gives instructions to Medical men and Students in all the branches of their studies, at his residence, 2, Southampton-street, Bloomsbury-square.

Mr. Vacher gives instruction in Practical Chemistry at his laboratory, 20, Great Marlborough-street.

Guy's Hospital.—The Medical Session

commences in OCTOBER. The Introductory Address will be given by the President, the Right Hon. Sir Lawrence Peel, on MONDAY, the 1st of OCTOBER, at 2 o'clock.

MEDICAL OFFICERS.

Physicians—G. H. Barlow, M.D.; Owen Rees, M.D., F.R.S.; S. O. Habershon, M.D.
Assistant-Physicians—S. Wilks, M.D.; F. W. Pavy, M.D., F.R.S.; W. Moxon, M.D.
Surgeons—Edward Cock, Esq.; John Hilton, Esq., F.R.S.; John Birkett, Esq.; Alfred Poland, Esq.
Assistant-Surgeons—J. Cooper Forster, Esq; T. Bryant, Esq.; Arthur Durham, Esq.
Obstetric Physician—Henry Oldham, M.D.
Assistant Obstetric Physician—J. Braxton Hicks, M.D., F.R.S.
Surgeon Dentist—J. Salter, Esq., F.R.S.
Surgeon Aurist—J. Hinton, Esq.
Eye Infirmary—John F. France, Esq., Consulting Surgeon; Alfred Poland, Esq., Surgeon; Chas. Bader, Esq., Assistant-Surgeon.

LECTURERS—WINTER SESSION.

Medicine—Owen Rees, M.D., F.R.S.; S. Wilks, M.D.
Surgery—John Birkett, Esq.; Alfred Poland, Esq.
Anatomy—J. Cooper Forster, Esq.; Arthur Durham, Esq.
Physiology—F. W. Pavy, M.D., F.R.S.
Chemistry—Alfred Taylor, M.D., F.R.S.
Experimental Philosophy—C. Hilton Fagge, M.D.
Demonstrations on Anatomy—J. Bankart, Esq.; P. H. Pye-Smith, M.D.; John Phillips, M.B.
Demonstrations on Morbid Anatomy—Walter Moxon, M.D.

LECTURERS—SUMMER SESSION.

Demonstrations on Cutaneous Diseases—S. Wilks, M.D.
Medical Jurisprudence—Alfred Taylor, M.D., F.R.S.
Materia Medica—S. O. Habershon, M.D.
Midwifery—H. Oldham, M.D., and J. Braxton Hicks, M.D., F.R.S.
Ophthalmic Surgery—A. Poland, Esq., and C. Bader, Esq.
Pathology—Walter Moxon, M.D.
Comparative Anatomy—P. H. Pye-Smith, M.D.
Use of the Microscope—Arthur Durham, Esq.
Botany—C. Johnson, Esq.
Practical Chemistry—T. Stevenson, M.D.
Demonstrations on Manipulative and Operative Surgery—T. Bryant, Esq.
Vaccination—J. Braxton Hicks, M.D., F.R.S.

The Hospital contains 600 beds. Special Clinical Instruction given by the Physicians in wards set apart for the most interesting cases.

Clinical Lectures—Medicine, Surgery, and Midwifery—Weekly.

Lying-in Charity—Number of cases attended annually about 2000.

Twenty-six beds for Diseases of Women. Thirty beds for ophthalmic cases.

Museum, of Anatomy, Pathology, and Comparative Anatomy—Curator, W. Moxon, M.D.—contains 10,000 specimens, 4000 drawings and diagrams, an unique collection of Anatomical Models, and a series of 400 Models of Skin Diseases.

Gentlemen desirous of becoming Students must give satisfactory testimony as to their education and conduct. They are required to pay £40 for the first year, £40 for the second, and £10 for every succeeding year of attendance, or £100 in one payment entitles a student to a perpetual ticket.

Dressers, Clinical Clerks, Ward Clerks, Obstetric Residents and Dressers in the Eye wards, are selected from the Students according to merit. A Resident House-Surgeon is appointed every four months from those Students who have obtained the College Diploma.

Six Scholarships, varying in value from £25 to £40 each, will be awarded at the close of each Summer Session for general proficiency.

Two Gold Medals will be given by the Treasurer—one for Medicine, and one for Surgery.

A Voluntary Examination will take place at entrance in Elementary Classics and Mathematics. The three first Candidates will receive respectively £25, £20, and £15.

Several of the Lecturers have vacancies for Resident Private Pupils.

Mr. Stocker, Apothecary to Guy's Hospital, will enter Students, and give any further information required.

Guy's Hospital, August, 1866.

Middlesex Hospital Medical College.

—SESSION 1866-7, commencing OCTOBER 1st. Introductory Lecture by Mr. Hulke, at 8 p.m. The Hospital contains 305 beds. Five Resident Clinical Appointments are open to Students.

Physicians—Dr. Goodfellow, Dr. Thompson, Dr. Murchison, F.R.S.
Obstetric Physician—Dr. J. Hall Davis.
Assistant-Physicians—Dr. Greenhow, Dr. Burdon-Sanderson, Dr. Robert Liveing.
Surgeons—Mr. Shaw, Mr. Campbell De Morgan, F.R.S., Mr. Moore, Mr. Nunn.
Assistant-Surgeons—Mr. Hulke, Mr. Lawson.
Ophthalmic Surgeon—Mr. Hulke.
Dental Surgeon—Mr. Tomes, F.R.S.
Assistant Dental Surgeon—Mr. Smith Turner.
Other Lecturers in the College—Mr. Taylor, Mr. Heisch, Mr. Sibley, Dr. Cayley, Dr. T. Spencer Cobbold, F.R.S., Dr. Woodham Webb.
Medical Tutor.—Dr. Robert Liveing.

Perpetual Fee to Hospital Practice and Lectures £105, payable on entry. Fee for Students who enter for three years—The same sum payable in three annual instalments of £35 each.

Further information forwarded on application to Mr. De Morgan, or Mr. Nunn.

Hospital for Diseases of the Throat,

32, GOLDEN-SQUARE, W.

Consulting Physicians—Archibald Billing, M.D., F.R.S.; William Jenner, M.D., F.R.S.
Consulting Surgeon—Sir Wm. Fergusson, Bart., F.R.S.
Physicians—Patrick Fraser, M.D.; Morell Mackenzie, M.D.
Free Laryngoscopic Demonstrations are given every Thursday, at 2 o'clock, by Morell Mackenzie, M.D.

Fee, for three months' Medical Practice, £3 3s., perpetual £5 5s.

Clinical Assistants appointed from the perpetual students.

GEO. C. WITHERBY, Don. Sec.

St. Bartholomew's Hospital and Medical

COLLEGE. The WINTER SESSION will commence on OCTOBER 1, with an Introductory Address by Mr. Savory, at 5 o'clock p.m.

Consulting Physician—Dr. Burrows.
Physicians—Dr. Farre, Dr. Jeaffreson, Dr. Black, and Dr. Martin.
Consulting Surgeons—Mr. Skey and Mr. Lawrence.
Surgeons—Mr. Wormald, Mr. Paget, Mr. Coote, and Mr. Holden.
Assistant-Physicians—Dr. Edwards, Dr. Harris, Dr. Andrew, and Dr. Southey.
Assistant-Surgeons—Mr. Savory, Mr. Callender, Mr. T. Smith, and Mr. Willett.
Physician-Accoucheur—Dr. Greenhalgh.

LECTURES.

Medicine—Dr. Black.
Clinical Medicine—Dr. Farre, Dr. Black, and Dr. Martin.
Surgery—Mr. Paget and Mr. Coote.
Clinical Surgery—Mr. Skey, Mr. Paget, Mr. Coote, and Mr. Holden.
Descriptive Anatomy—Mr. Holden and Mr. Callender.
Physiology and General Anatomy—Mr. Savory.
Chemistry—Dr. Odling.
Demonstrators of Anatomy—Mr. Smith and Mr. Baker.
Assistant Demonstrators of Anatomy—Mr. Vernon and Mr. Langton.
Demonstrator of Morbid Anatomy—Dr. Andrew.
Tutors—Dr. Duckworth, Mr. Baker, and Mr. Shepard.

SUMMER SESSION, commencing MAY 1st, 1867.

Materia Medica—Dr. Farre.
Botany—Rev. George Henslow.
Forensic Medicine—Dr. Edwards.
Midwifery—Dr. Greenhalgh.
Comparative Anatomy—Dr. Church.
Practical Chemistry—Dr. Odling.
Dental Surgery—Mr. Coleman.
Microscopic Demonstrations—Mr. Savory.
Demonstrators of Microscopic Anatomy—Dr. Southey and Mr. Vernon.
Demonstrators of Operative Surgery—Mr. Smith and Mr. Baker.
Vaccination—Mr. Wood.

The Hospital contains 650 beds—247 Medical and for the Diseases of Women; 322 Surgical and for Diseases of the Eye; and 81 for Syphilitic Cases. The number of patients exceeds 126,000 annually.

Collegiate Establishment.—Students can reside within the Hospital walls, subject to the Collegiate regulations.

Some of the Teachers connected with the Hospital also receive Students to reside with them.

Seven Scholarships, varying in value from £20 to £50, are awarded annually.

The Clinical Clerks, the Midwifery Assistant, and the Clerks to the Assistant-Physicians are appointed from the most diligent Students.

In accordance with the regulations of the College of Surgeons, Students have charge of patients under the supervision of the Assistant-Surgeons.

All Students preparing for their examinations are specially examined by the Teachers of Anatomy or by the Tutors.

Further information may be obtained from Dr. Andrew, Mr. T. Smith, or Mr. Callender, at the Hospital.

St. George's Hospital Medical School.

—SESSION 1866-67.—The WINTER COURSE of INSTRUCTION will commence on MONDAY, OCTOBER 1, with an Introductory Address by Dr. J. W. Ogle, at 2 p.m.

Consulting Physician—Dr. Pitman.
Physicians—Dr. Page, Dr. Fuller, Dr. Barclay, Dr. J. W. Ogle.
Assistant-Physicians—Dr. Wadham, Dr. Dickinson.
Consulting Surgeons—Mr. Cæsar Hawkins, Mr. Cutler.
Surgeons—Mr. Tatum, Mr. Hewett, Mr. Pollock, Mr. Henry Lee.
Assistant-Surgeons—Mr. Holmes, Mr. Brodhurst.

LECTURERS.

Descriptive and Surgical Anatomy—Mr. Holmes and Mr. Rouse.
Physiology and General Anatomy—Dr. Wm. Ogle.
Chemistry—Dr. Noad, F.R.S.
Medicine—Dr. Barclay.
Surgery—Mr. Tatum.
Pathology—Dr. J. W. Ogle and Mr. Henry Lee.
Dental Surgery—Mr. Vasey.

On the payment of £100, a pupil becomes perpetual to the Practice of the Physicians and Surgeons and to all Lectures, may compete for all Prizes, Exhibitions, and for the offices of House-Physician and House-Surgeon, and may become Clinical Clerk and Dresser, for two periods of three months each.

On payment of £40 at the commencement of the first Winter Session, £40 the second Winter Session, and £10 for each subsequent year of attendance, a pupil is admitted to the Hospital Practice and Lectures required by the various Examining Bodies. Dental pupils are admitted to the Hospital Practice and Lectures required for the Diploma of Dental Surgery on payment of £45.

Gentlemen can enter to the Hospital Practice and Lectures separately.

The Hospital contains 350 beds. Clinical lectures are delivered by the Physicians and Surgeons every week.

A Maternity Department, for the delivery of married lying-in women at their own homes, is established at the Hospital, with a Ward for the reception of women suffering under diseases peculiar to the sex.

The William Brown Exhibition, of £40 per annum, tenable for three years, will be "bestowed on the candidate who shall show the best general fitness for the exercise of the Medical Profession, and whose moral conduct shall in all respects be satisfactory."

The following Prizes will be awarded at the termination of the Session:—

Sir Charles Clarke's Prize for Good Conduct.
The Thompson Medal.
Sir Benjamin Brodie's Clinical Prize in Surgery.
The Lewis Powell Clinical Prize in Medicine.
The Henry Charles Johnson Memorial Prize in Anatomy.

A general Examination will be held at the end of the Summer Session, and a certificate of proficiency will be given to each pupil who passes to the satisfaction of the examiners, and the following Prizes to the most distinguished, viz.:—

A Prize of Ten Guineas to pupils in their first year.
A Prize of Ten Guineas to pupils in their second year.
A Prize of Ten Guineas to pupils in their third year.

Further information may be obtained from Dr. Barclay, the Treasurer of the School, from any of the Lecturers or Medical Officers of the Hospital.

ORIGINAL LECTURES.

LECTURES ON SOME MEDICAL SUBJECTS.

By F. C. SKEY, F.R.S.,
Consulting Surgeon to St. Bartholomew's Hospital, etc.

LECTURE V.

HYSTERIA—CASES.

BEFORE I quote cases in illustration of the principles inculcated in the last two lectures, so all-important is the subject in the practice of our Profession, so grave the consequences of false diagnosis, that I briefly restate the question under our consideration. It is a notorious and undisputed fact that any part of the body can be the seat of such local derangement, either of the nerves of sensation or of motion, as shall accurately represent real disease of that part, when no disease, properly so called, really exists, and that the detection of the truth is only made on a closer observation by the Surgeon than is generally awarded to it. The examples of derangement, whether of the nerves of motion or of sensation, are local and general, and are treated both by the Physician and the Surgeon, but more commonly by the latter, when the evidence of local change of structure or disorganisation is absent. As a rule, the malady, with the exception of true neuralgia, comes under the variety of hysteric disease; and the occurrence of such maladies in the persons of the young, and especially of females whose nervous system is more lightly strung and more readily deranged, clears the path to an early diagnosis. Draw the line, as clearly as you are able, between the diseases of the vascular and the nervous systems. Recall to your minds the local consequences of increased action of the blood-vessels, both immediate and remote—local heat, local swelling, local redness, if the structures involved are visible, and, lastly, local pain. This is inflammation, which may either pass off, leaving the tissues unaltered in structure, or may leave behind it evident marks of its activity in the form of deposits, of thickening, of abscess, or of death. Local nervous affections have little in common with such maladies, and are distinguished from them by the absence of those features which characterise diseases of the vascular system. They have neither heat, nor redness, nor swelling, in a measure compared with them; and yet the two maladies are daily confounded. Excessive or undue action of the vascular system more readily involves the nervous than the nervous implicates the vascular.

Cases of real hysteria may be reckoned by hundreds in the practice of any one Surgeon. The more common seats are the female breast, the side of the trunk under the ribs, the whole spinal region from the atlas to the sacrum; any joint, but especially the knee; the stomach, the bladder, and the ovaries; the muscular system of the extremities, indicated by spasm or permanent contraction; and the muscles of the larynx. But no part of the frame has exemption from liability, so far as I am aware.

I will first quote a very simple case of hysteria, the evidence of which is immediate and the attack transient. In some slight forms the patient loses all command over the voice, which suddenly sinks to an almost inaudible whisper, without any other accompanying symptom. I have seen many examples, but that I give occurred under my own observation, as it has probably in some form occurred under that of others, for it is as old as history. The subject was a young lady of about 20, as Sir B. Brodie observes, of pale complexion, and having cold hands and feet. While I was engaged in conversation relative to her health, I somewhat imprudently remarked that a mouse was running about under the table at the end of the room. She uttered an exclamation of alarm, and in an instant so entirely lost the power of audible speech that I was obliged to approach her and to put my ear close, to hear her. The ferocious cause of the mischief having paid the penalty of its intrusion by the loss of all it possessed on earth, the lady in the course of an hour recovered her voice. Had this person been in sound and vigorous health, she would probably have sustained the shock to her nervous system with less derangement of it. The case is interesting as showing the sudden influence of the mind on a particular nerve in the general system. Ammonia, chloric ether, henbane, etc., quickly administered, would probably shorten the attack, and for which agents brandy is a good substitute.

Cases of hysteric affections of the breast occur in young persons from 16 to 20. They are associated with a disturbed condition of the genital system, but not especially with the functions of the uterus itself. Although the catamenia is often deranged and defective, it is not necessarily so. The general system is at fault, indicated by a low circulation—frequently a chlorotic aspect, failing appetite, languor, and indisposition to any form of active bodily or mental effort. In the cases I have seen, the breast has been small and soft. The disease consists of simple pain in the organ, one or both, but more severe in one than the other. It is most active at the catamenial periods. The breast is unaltered in form and substance. The evidence of local inflammation is entirely absent. Leeches, or other form of local depletion, give no relief. Blisters and irritating plasters and ointments answer no useful purpose. The degree of pain varies with the condition of the health. For a period it may almost cease—a period co-existent with a change of air and occupation, or a residence of a month or two at the seaside, but the pain relapses on the return of the subject to the ordinary habits of life. The pain is dull and aching, and very unlike the smarting and shooting pain which accompanies abscess or the more formidable diseases.

With this history who will doubt the constitutional nature of the malady or the efficacy of such remedies as tend to change weakness for strength, to promote appetite, to keep the circulation in action by frequent exercise, taken at least twice daily?

Such exercise should be active—neither strolling nor sauntering out of doors, "to take the air," as ladies term it, nor gardening, nor lounging about—but adopting a good brisk walk, at a pace of at least three miles an hour, *ever stopping short of fatigue*. People will often tell you they "take plenty of exercise about the house, and they are on their legs during many hours of the day." This is fatigue without exercise. What we want for health is exercise without fatigue, for fatigue is exhaustion, and it is to be obtained only on the terms I have mentioned. I do believe there are many maladies, or at least many forms of indisposition, which, with a strong will, may be walked away provided the exercise be taken systematically and rendered a prominent feature in the daily treatment. The distance walked should be increased daily, and a claim made on increasing strength for increasing exertion. I doubt whether horse exercise, however agreeable or however stimulating both to mind and body, is equal in sanitary value to exercise on foot. In the case of horse exercise the muscular exertion to an experienced rider, male or female, is very slight, and though the distance compassed may be great, the muscular exercise, so far as it is an important element of treatment, falls short of the requirements of health. That the effort is comparatively not great is proved by the long distances ridden and the number of hours during which a delicate girl is seated on her saddle. The general concussion or shaking of the muscular frame incidental to this exercise in an unpractised rider subsides on its frequent repetition, and when the rider becomes familiar with the action of the horse so slight an effort is requisite to maintain the equipoise of the person in motion, and so entirely do the movements of the rider respond to those of the animal ridden, that the muscular effort amounts to almost nothing. Horse exercise, therefore, cannot strengthen the muscles, because it does not sufficiently exercise them. It is an agreeable and a useful recreation, but I suspect its influence as a source of health acts more beneficially on the mind than on the body. I do not wish to undervalue exercise on horseback; I only desire to meet the too general belief that horse exercise can supersede exercise on foot as a means to restore health. Although you cannot cure these maladies by local treatment, you can generally mitigate the severity of the pain by the application of opium and other sedatives, but I have the greatest reliance on opium as the most efficient. Do not fall into the error of supposing that a "cooling lotion" which shall contain tincture of opium as a component part can exercise any sedative property on the pain, but resort at once to the extract known under the name of extractum opii fluidum. Spread the pure extract on lint, or dilute it slightly with water, and apply it to the breast; give tonic medicines, especially in the form of bark and iron—such as eight or ten grains of the ferro-citrate of quinine, or two drachms of tincture of bark, with a pill of two or three grains of sulphate of iron, twice daily. Tonics are out of place in the after part of the day, and especially after dinner. If the pulse indicates weakness—and it is highly probable—give wine frequently and in sufficient quantity to produce an impression. It is not the consumption of a single glass or more that will effect the end you have in view. You must meet the very marked tolerance of wine by an equally positive increase in the quantity, and administer it not once, but twice or thrice in the day, so long as weakness of the pulse and the patient are indicated.

Of examples of hysteric pain situated under the ribs, more commonly on the left side, it is needless to quote individual cases—they are so common. From some cause not very apparent, they are, however, seen less frequently at the present day than formerly. I attended, some years ago, a young married lady, the mother of three or four children, the daughter of a Medical man of large experience, by whose direction she had been cupped about fifteen times over the seat of pain. The malady prevailed in her system in its active form during many years, and she was not free from it when I saw her at the age of 30. This treatment, which included the local application of leeches by the hundred, and blisters, the sum of which might be calculated by the square yard, while it gave no permanent relief, has left its mark in more senses than one on the person and constitution of this lady for life. At all events, her excellent parent has the merit of perseverance, if not of discrimination.

Among the cases of the sympathetic or imitative forms of hysteria which I have already quoted, two of these females exhibited the scars of similar local treatment for supposed organic disease under the ribs, and I have seen many others. I need hardly tell you that this is a constitutional and not a local infirmity, and must be treated accordingly, *or not treated at all.* What structure or organ occupying this region on the left side, under the lower ribs, can be supposed the seat of this pain? It is deep-seated, and therefore the abdominal muscles are beyond suspicion. Is it the colon, or the spleen, or the base of the left lung, or the diaphragm? Whichever structure is involved, if any, rely on it the essence of the malady is seated in the nerves, and the nerves only. If it were organic disease, its nature would become in time palpable. There is this important distinction between the two affections—that organic disease has a crisis, and nervous affections for the most part have none.

Spinal hysteric affections are, perhaps, of all hysteric maladies of the most common occurrence—happily they are becoming somewhat notorious. It is in the records of pathology, no doubt, that a young female may be the subject of real spinal disease; but where are the cases to be found? You may pass through life and not see two. And while I state this opinion your minds may possibly revert to some case you have already attended which you think exceptional. Look more closely into it, and you will detect your error. In forming an opinion on any given case on which you may be consulted hereafter, you had better make a starting-point from the knowledge of this fact, that nothing in pathology is more improbable than that a young lady should be the subject of organic disease of the spinal column. Well, a case presents itself for your opinion. A young female, in any class of life, in apparent health, pale or florid in complexion, bearing in her appearance no indication of disease, complains of pain in her back. This pain may be announced without surgical inquiry, or may be detected only on examination. The spine is exposed while the person is placed in bed. Pressure is made by one or more fingers on the spinous processes of the vertebræ, beginning with the atlas. On reaching perhaps the last dorsal or first or second lumbar vertebra, the girl utters an exclamation of pain, and she instantly shrinks from the pressure. The examination is renewed again and again with the same result. Twenty-three vertebræ admit of pressure through their spinous processes without causing suffering. Pressure on the particular one, or perhaps two, causes instant and often severe pain. Who ever heard of real disease attacking one or even two vertebræ only?

I have already told you the probable result of this inquiry, but you, I trust, will not be deluded. Be assured to the extent almost of certainty that there is no organic disease, either of bone or of any other texture. I attended a girl in St. Bartholomew's Hospital of about 20 years of age. She had the appearance of a strong and healthy person, and there was nothing in her aspect to indicate that she was the subject of disease. Before I reached her bedside the House-Surgeon informed me she was the subject of "spinal disease," and I smiled at his credulity. To the students around I said: "If on examining this girl she makes an exclamation of pain and shrinks from the pressure of my hand, rely on it she has no disease whatever, and that her case is one of simple hysteria." On reaching the first and second lumbar vertebræ she uttered an expression of severe pain, and nearly threw herself out of bed. The diagnosis was confirmed, and she was treated for a nervous, not a real disease. Extract of opium dissolved in soap liniment was rubbed on the spine for a few days, and then the opium was omitted, and the back generally rubbed by the hand twice daily with some force of pressure. She was ordered valerian, bark, iron, and a full diet, with wine. Her recovery occupied one month.

I was consulted in the year 1862 on the case of a young lady of about 24 years of age. She had had "spinal disease" for several years, and many surgeons of more or less eminence had been consulted on her "very remarkable case." Her aspect was that of a healthy person. She was inclined to be stout, and exhibited no indication of serious disease, or indeed of disease of any kind. During five years her back had been most liberally cupped, leeched, blistered, and embrocated without benefit. I was informed that the pain had occasionally intermitted, that her condition had improved for a time and then relapsed, and that although nearly the entire five years had been passed in her chamber and in the horizontal posture, yet that occasionally she would join her family and seek relief from the monotony of her life in the gaiety of the ball-room, where she forgot her diseased spine and all its attendant miseries, and danced for hours with life and animation. I examined her back with more than usual care. The pain, always true to its own locality, occupied the second lumbar vertebra, and always returned on the pressure of my finger on that particular spot. Occupying her attention by conversation, I gradually subjected the whole back first to gentle, and then to severe, pressure. With both hands I grasped the trunk, and moved it forcibly in all directions without creating any sensation of pain. I then passed the flat of my hand rapidly down the spine, employing not pointed, but obtuse pressure over the whole surface, and thus satisfied myself that there was no disease. After the interval of a few minutes, pointed pressure on the second lumbar vertebra produced the same symptoms as at first. On examining the surface I observed the mark of a cicatrix of about three inches in length running along the side of the affected vertebra, and on inquiry I learnt that one surgeon whom the family had consulted had deemed it necessary to look within and below the surface under the supposition that there might possibly be a tumour or some morbid growth, the removal of which would be conducive to her recovery! Nothing, however, was found, and the excision of a small portion, I presume of the erector spinæ muscle, afforded no permanent relief—at least no benefit had arisen from the operation at the expiration of many months, when I was requested to see her. It struck me that this was carrying the experiment of operative surgery rather far, but I did not make any remark to that effect at the time. I certainly made an inquiry as to the product of the operation, and the father of the young lady told me that he was shown something, but he was not competent to state exactly what it was. On discussing the nature of the case with the family and the attending surgeon, I expressed my conviction of the hysteric nature of the disease, and that she was capable of exertion could she be induced to attempt it. I saw at once that I had failed to convey my own convictions to the family, that my opinion was not satisfactory, and that in the judgment of the lady's father, a very sensible person, the opinion of one man could not outweigh that of the many, and that the testimony of the many was the safer guide. The patient returned to her couch, on which she may be now reposing for aught I know to the contrary, for I saw her but once. I had, however, the satisfaction to hear the Medical man say as I left the house, "I believe your view of the case is the only true one."

As treatment by means of issues was formerly in great resort, and is yet far from being abandoned as a means of checking the progress of carious disease in the vertebræ, it is worth considering for a moment the principle of its action. To control one disease you make another, which is supposed to act as a drain in carrying off the morbid actions of the original disease by derivation, or counter-irritation as it is termed. An issue is an ulcer, secreting matter, and drawing more or less on the powers of the constitution. An ulcer is a disease. All disease exercises a depressing, not an invigorating, influence on the system. The sum total, then, is increase, not diminution, of the evil. The morbid condition of true spinal affections is *caries* or crumbling of bone, not inflammation. Is it probable that a pair of secreting ulcers can tend to restore bone that is lost? Will the capillaries be more likely to secrete material to be converted into healthy bone within the body because you have made an ulcer outside? The actions going on within are those of deficiency, not of excess. Here comes in again the old doctrine of inflammation. The operation of an issue is equivalent to that of the lancet, and in these days that instrument has become obsolete in the hands of all sensible and thinking men. I acknowledge with all regret, in looking back at the early part of my own professional career, to have frequently committed this error in treatment, and I willingly make retribution to another generation by declaring my conviction of the entire futility of an issue in this description of disease to answer any useful purpose.

While on a visit at the house of a friend in the country, I was requested to see one of his daughters who had been confined to her room for fifteen months in consequence, as I was told, of diseased spine. She was 21 years of age. Her countenance was pale, but not unhealthy. She had been condemned by a court of surgeons to a long confinement to the horizontal position, and she bore the judgment against her with resignation and humility. From the appliances around her, and the general arrangements of the room, it was obvious that the siege was to be long and vigorously maintained. My visit was not a professional one, and I did not propose to myself at the time to discuss the subject of her disease. Accident brought me into contact with her medical attendant, and in the course of conversation with him some features of her case were mentioned, which appeared not very consistent with real disease of the vertebræ. We examined her carefully, and the consultation which ensued terminated in the proposal that his patient should change the horizontal posture for that of an inclined plane. In a week she sat upright in an easy chair, and within a month she joined the family circle, entered into all their pursuits, and could ride any reasonable distance on horseback without fatigue.

I see no advantage in multiplying these painful examples of hysteric disease. They have all general characters in common, and are amenable to the same principles of treatment. And so with cases of supposed injury from railway accidents. Again and again have I heard medical men, physicians, surgeons, and general practitioners come into courts of law and state their opinion that the plaintiff had sustained grievous and probably permanent bodily detriment to the spinal column, on the evidence of pain produced by pressure of the finger on one or more of the spinous processes—evidence far more than counterbalanced by the fact that these deluded persons have walked unaided into court, and have stood or sat in the witness-box for three-quarters of an hour while under examination.

No evidence of their reputed symptoms is obtainable either through the eye or the touch of the surgeon. There is nothing palpable, nothing organic. You take the assertions of your patient on trust, you identify yourself with his case; you place an object before him, and he declares he cannot see it; you refer to an occurrence that happened last week, he declares he does not remember it. He suffers incessant pain in his back; he staggers in his walk, occasionally coming to a harmless fall; he has convulsive twitchings in his leg, occurring chiefly in bed, which he says he cannot control. He passes blood in his urine, which always escapes the notice of others, for it is invariably passed at the water-closet and at no other time; but on inquiry you will find that this afflicted person can walk four or five miles; that as regards his vision his iris acts well, and the ophthalmoscope detects nothing; his appetite for food is sufficient for perfect nutrition. And let me ask you finally whether on these conditions it is more than remotely possible such a person can be the subject of any serious organic disease. But presuming on the possibility of such contradictory evidence occurring in a single and exceptional case of real disease, will your credulity reach so far as to admit of their frequent occurrence? To you such cases will be presented singly and individually, but they are brought into courts of law in multitudes.

One of such cases I will give you as an example:—A man without property or profession brought an action against a railway company for injury to his spine. This statement, on the face of it, is an absurdity. How can a man without property bring an action at law? Well, he applies to a lawyer, who undertakes the case on his behalf, with a certain compact and understanding as to the question of future payment. Thus the lawyer becomes the plaintiff, and the plaintiff the witness in his own case. The man's injury was made out to the entire satisfaction of the jury, and very heavy damages were awarded by them, coupled with severe comments on the negligence of the railway directors.

It was positively known, at the time, by several persons engaged in the action, among whom was a detective officer, that within a few days of the trial the plaintiff, or the witness, whichever you please to term him, *had walked a match* against another man! Yet this man was declared on authority to have sustained a permanent injury of his spinal column!

With respect to hysteric affections of joints, knee cases, etc., they are in truth as common as Sir B. Brodie has declared them to be, and I thoroughly corroborate all he has said on the subject of this most important and interesting disease. Three-fourths of all knee cases in the upper classes of society, says this great authority, are not cases of inflammation, though they appear so. There is no organic disease whatever in the joint. They are cases of local pain, originating in impaired health. They are not amenable to treatment for inflammation and its consequences. Your liability to an error in diagnosis is just in proportion to the supposed infrequency of local nervous, as compared with vascular, derangement. The knee is by far the most frequent seat of these affections, and the cases are found among young women not in the lower class of life—but even this class is not exempt. You will find, on the occasion of your first visit, the patient walking lame. This lameness has existed for several days, probably weeks, before attention has been attracted to it, and has come on very gradually. The joint is stiff—not that it won't bend, but the movement is painful. There may be some increased heat in the joint when compared with that of the opposite limb, but not much in degree. The knee is slightly swollen. If you see the case after treatment has commenced—*i. e.*, after the repeated application of leeches, blisters, and tincture of iodine (the almost universal agent in difficulty)—the swelling will be palpable, and the outline of the joint has undergone a change. As the case progresses, the lameness increases, but the aspect of the joint remains as in the first stage—neither the swelling nor the heat increasing in the same proportion. In this condition the limb may remain for months, or even for years, subject to the same treatment, without improvement. One feature in this case ought to have struck you as worthy of notice—viz., that so many months have passed without organic change; the joint is neither stiffer, larger, nor hotter than it was in the early stage of the treatment. I say it ought to have struck you. Perhaps it has not! The aspect of this lady is that of unhealth. She has become pale, partly from depletion, partly from loss of exercise. Her pulse is weak, her appetite bad, and catamenia, as a rule, defective. You fear to give tonics and alcohol, lest you aggravate the supposed local inflammation.

Having exhausted the negatives in treatment, you now venture on an onward step, and you give bitter infusions, gentian, cascarilla, with ammonia and ether. But you are still behind the necessities of the case; you have adopted from the beginning a false diagnosis, and the difficulty is how to get back to the right groove. There is only one course: begin afresh, and treat your case on a different principle; convince yourselves that nerves may go wrong as well as arteries and capillaries, and as you treat excessive action, rightly or wrongly, in the blood-vessels by local depletion, so apply such remedies as check excessive action of nerves in the form of opium, belladonna, chloroform, etc. Build up the health by increasing the force of the circulation. The agents are a thoroughly nutritious diet, wine frequently in small quantities, tincture of bark, iron, fresh sea air, change of locality and associations, agreeable mental occupation. Assure your patient she has no real disease, but the semblance only. Leave the functions of the alimentary canal to take care of themselves. The constipation incidental to a low innutritious diet and an inactive life will subside under the influence of a nutritious one; improved health will restore its functions. There is no real harm in a day's constipation; it is sometimes a good. At all events leave the bowels alone. With regard to the joint, rub in some blue ointment and extract of opium, in the proportion of one-third of the latter, and roll it firmly with a flannel bandage. Encourage moderate daily exercise on a level ground, on a carpet, or on a lawn. If the case is chronic don't be disappointed if the progress be yet protracted to weeks. The pain and the stiffness may subside very slowly by virtue of their long possession by the joint; but you are in the right path, and rely upon it your patient's recovery will justify the sound principle of your treatment.

In the course of last year I was consulted by the family of a young lady of 18 years of age living at a distance from London relative to an affection of the knee from which she had been suffering for a period of ten months. The joint was stiff and painful; she moved about on crutches; there was no considerable amount of heat, and what alteration existed in the form and outline of the knee was due to the activity of the past treatment; the tissues had lost their natural softness and flexibility; the joint had been repeatedly leeched and blistered, and subjected to the application of liniments in variety of colour and composition; an issue had been made on the inner side of the patella, which, judging from the cicatrix it left behind, had not been a small one, and the curative influence of which had not been discoverable during four months, at the expiration of which nature was allowed to heal it.

I considered this a case of hysteria on the following evidence. The subject was a young lady of an hysteric age. She had sustained no sudden injury to the joint, neither blow, nor fall, nor sprain. The malady was gradual and spontaneous. Had the disease been of the inflammatory class, the remedies would have probably long since cured it. There was no appearance of disorganisation otherwise than integumental. The pain was generally aggravated at the catamenial periods. Bending the joint afforded no evidence of disease within it, no grating or roughness of the cartilaginous surfaces. The pain varied greatly in intensity at different periods. This evidence was sufficient, and, to my judgment, conclusive. I strapped up her joint in an opium plaster. She took bark and iron and wine, and in a fortnight began to walk about without her crutches; but two months had elapsed before her recovery.

Many years ago, when I was less familiar with hysteric affections, I attended the case of a young lady of 19 in conjunction with Mr. Stanley. We both deemed the disease to belong to the class of inflammation, and conjointly adopted the usual remedies so indiscriminately resorted to in all painful affections of joints. Many weeks elapsed without improvement, and I remember that we discussed with some anxiety the probable issue in abscess, destruction of ligaments, absorption of cartilage, and ultimate amputation of the limb!

One day my patient informed me that her sister was going to be married, and that, cost what it might, she had made up her mind to attend the wedding. At this proposal I shuddered. Having expatiated, to no purpose, on the probable consequences of so rash an act, with all the force of language I could command, I determined to give stability to the joint for the occasion, and I strapped it up firmly with adhesive plaster. On the following day I visited her. She told me she had stood throughout the whole ceremony, had joined the party at the breakfast, and had returned home without pain or discomfort in the joint. Within a week her recovery may be said to have been complete.

This case first brought home to my mind the nature and the frequency of hysteric disease.

ORIGINAL COMMUNICATIONS.

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MICROSCOPICAL RESEARCHES ON THE CHOLERA.

By LIONEL S. BEALE, M.B., F.R.S.,
Fellow of the Royal College of Physicians, etc.

No. III.

Dr. Parkes and Dr. Gairdner on the Detachment of Epithelium from the Small Intestine.

In the *Medical Times and Gazette* for August 25 is a communication from Dr. Parkes, in which he endeavours to support the view advanced by him in 1849 that the separation of the intestinal epithelium in cholera is due merely to post-mortem change.

Dr. Parkes directs attention to the following facts:—The stripping off of epithelium occurs where there has been great diarrhœa, as well as where there has been little purging:—The epithelial masses seem to be so spread over the surface of the intestine that they cannot have been subjected to much movement. Dr. Parkes thinks that if such delicate cells were thrown off during life they would be detached from each other, and more or less broken by the constant and violent contractions occurring in the course of the disease; and he infers that if thrown off during life they ought to be found in the discharges in greater quantities than is the case. Then he says that in the case of those who die after reaction has set in the small intestine is found still clothed with epithelium, and urges that maceration in an alkaline fluid *for some hours* after the body is opened would favour the detachment of epithelium, which would be aided by *the mere act of taking out the intestines!*

Now, it seems to me unreasonable to suppose that a patient could live very long after a large quantity of this columnar epithelium had been detached from the villi of a considerable area of intestine. One would therefore expect, as a general rule, to find it after death in the small intestine itself. In many cases, as has been frequently stated, there is very little or no columnar epithelium from the small intestine to be found in the stools; epithelium from the surface of the large bowel and from its follicles, and mucus from the surface, being alone present. In some cases, however, where the detachment is more gradual and partial, it actually does pass off in the stools. With regard to the argument that the epithelial cells would be broken if subjected to the violent movements of the intestine, Dr. Parkes will find that if he shakes these cells up in a bottle with glycerine and water very violently and for some time many will not be broken, and several will still be found attached to one another. If maceration and taking out the intestines give rise to this peculiar appearance, how is it we do not meet with it commonly enough in the post-mortem rooms? As far as my observation goes there is nothing like the appearance which is so common in cholera to be met with in any other disease.

Dr. Parkes refers to Dr. Gairdner in support of the view that the change in question is a post-mortem one. Dr. Gairdner's mode of proving his point appears to me anything but convincing. He says the presence of epithelium in such large quantities in the fluids found in the intestines after death "is the result of purely *mechanical maceration upon a mucous membrane to which, during life, the epithelium remained attached.* That this is so is proved by these *facts*:—1st. That artificial maceration produces a similar *result on a healthy mucous membrane.* 2nd. That the epithelium found in the fluids of each division of the intestines is always that of the particular part where it is found. 3rd. That the true cholera stools *passed during life* contained so little perfect epithelium that it cannot be considered as anything more than an accidental ingredient;"(a) and then Dr. Gairdner expresses much gratification that his conclusions are supported by Dr. Parkes.

Now, it will be observed that Dr. Gairdner asserts that the presence of epithelium in the intestine is due to *mechanical maceration after death.* Then he asserts that the epithelium remained attached to the mucous membrane *during life!* But it is needless to say he adduces no facts whatever in proof of this last dictum. He says the first assertion is proved by the three facts above enumerated. With reference to the first fact, I can only say that I have never seen such an appearance result from artificial maceration as he affirms is the case, and I therefore hope he will state exactly how he performed the operation of artificial maceration to which he refers. The second fact adduced by him does not accord with my experience, since I have found columnar epithelium from the small intestine in the large bowel, and I would also inquire how Dr. Gairdner is enabled to identify the epithelium from *each particular part of the intestine.* With reference to the third fact, it is sufficient to remark that in some cases the stools passed during life *do* contain perfect epithelium, and that although Dr. Gairdner considers this to be an accidental ingredient, the facts advanced by him by no means render a different opinion untenable. If columnar epithelium had been found in the stools in only very few cases, it would, I think, be more probable that they were cast off in others, although there was not time for them before death occurred to pass so far as the large bowel, than that in these few cases the detachment was a mere accident, having nothing to do with the disease. On the other hand, Dr. Parkes and Dr. Gairdner have to show why the appearances seen in almost every case of cholera are not met with in other diseases, and cannot, as far as I am aware, be produced by artificial maceration. There may, however, be some special methods by which the appearances in question may be produced with which I am not acquainted.

But further, neither Dr. Parkes nor Dr. Gairdner appears to think much of the fact that the epithelial cells are detached from *many other mucous surfaces* of the body, as well as that of the small intestine. If *post-mortem mechanical maceration* determines this striking change in several mucous membranes in cholera alone of all the diseases we are acquainted with, surely the fact is one well worthy of careful investigation. Is the state of the mucous membrane of the gall-bladder and gall-ducts, urinary bladder, ureters, and some other mucous surfaces, peculiar, as far as I know, to cholera, also to be explained by mechanical maceration? I hope other observers will publish their views on this matter, for it is of far greater importance than it appears at first sight. I may be permitted to state here that in future papers I think I shall be able to adduce much new evidence against this doctrine that the detachment of epithelium in cholera is the result merely of post-mortem mechanical maceration.

(a) "Clinical Medicine," 1862, p. 218.

DETACHMENT OF THE RETINA — THE CAUSES AND THE TREATMENT.(a)

By HAYNES WALTON,

Surgeon to St. Mary's Hospital and to the Central London Ophthalmic Hospital.

Detachment of the retina from the choroid may be the result of an accident—for instance, blows on the eyeball or about the orbit—but for the most part it cannot be traced to an injury, nor is it generally palpably associated with any. It is the physical effect of fluid effusions of various natures, chiefly however serous, or of firm solid deposits, or malignant diseases.

It is to the class of cases only produced by the pouring out of serum—dropsy under the retina—that I intend to consider.

This separation of the ocular tunics by fluid is a common occurrence, and one of the greatest changes, mechanically and pathologically, that occur in the interior of the eye. It is one without any external or objective symptoms, except under certain conditions to a well-practised observer; when generally in a young person with a fully-dilated pupil, a bluish shred may be seen moving deep in the eye. Nor are there definite and unmistakable subjective symptoms for the several stages of the affection, although to express those which are most common, avoiding detail, they are hemiopia, or loss of a portion of the field of vision, corresponding in extent to that of the retina which is damaged; and in the case of limited eccentric detachment and good central vision, occasional interruption to sight by the detached piece floating, and more or less eclipsing the pupil. Yet it is only to ophthalmoscopic investigation that we can trust. In all cases of impaired vision, of which the pathology is not at once manifest, we ought to look into the eye for the cause, and there learn what may have happened as best we can. Even then a detached retina may not always be detected, because of haziness of the vitreous body.

The appearances of detached retinæ are not so well known to the general body of the Profession as to render some account of them unacceptable, and a short description will help me in handling my subject. Therefore I will tell them, and as concisely as possible.

Supposing, then, the eye under examination, should the separated portion be large enough and happen to cross the line of the pupil when the fundus is focussed, it might be supposed for the moment that cataract is present, but the first movement of the eyeball whisks the membrane aside, and then it is seen to undulate in fields or swell out in a tense form. The colour varies from a light bluish or greyish tint to a dead white, which is the last change. A retina detached, but not yet in folds, looks œdematous and swollen. The recognition of the retinal vessels and their arrangement removes any doubt in the diagnosis. They are apparent or hidden, according as they are over the floating folds or between them, now appearing in high relief, now vanishing out of focus, and they even vary in colour. Then there is a sudden bending of the vessels at the line of the separation. This is one of the ophthalmoscopic objects that cannot be well delineated.

The displacement may be limited or the whole retina detached in a funnel-shaped form, in which case the optic nerve is more or less hidden by its folds. It is but of slight practical moment as to which part of the retina is most frequently or originally detached, but the extent to which the loss of connexion takes place is of the highest importance as regards vision. A fair amount of sight is retained as long as that around the macula lutea is sound, and this even when the optic disc is encroached on by any bulging part.

As any degree of detached retina is very likely to be followed by an amount of separation that will produce blindness, or inflame and so spoil the function of that undetached, and as it is seldom that we meet with a case in which the eye is not already spoiled, it is evident that a worse class of cases does not occur. There is not, it would seem from the peculiarity of the lesion, any natural cure—no opportunity for the natural reparative power. When the seeing property of that which is separated is not quite lost, it is always very materially deadened, and in the end quite annihilated. At times, but very rarely indeed, by an accidental mechanical process, the tearing or bursting of the retina and the escape of the effused fluid into the vitreous humour, there seems to be, according to some observers, an arrest of the process of separation. Notwithstanding this apparently hopeless state of things, it is my conviction that there is scope for treatment and opportunity for some success. I entertain more hope of conferring benefit than others seem to possess who have been trying remedial measures. But then I employ general as well as local measures, and regard the former as perhaps the more powerful, but think the two should be combined.

I think, too, that the degree of success depends on the time the treatment is commenced; that except it be early and during the acuteness of the attack, nothing can be expected; yet I speak with diffidence on a subject beset with difficulties, and respecting which so much remains to be worked out. It is obvious, then, that I do not regard an example of this affection merely as a case for an operation that might be performed at any time, and that after the discharge of the fluid the work is done. I rather look into the pathology of the affection, and try to find the cause of the effusion, or, at any rate, seek to discover what are the associated processes that occur in the eye, the order in which all the symptoms appear, their extent, severity, and duration; the conditions of the persons it occurs in, age, etc.

It cannot be that the effusion of serum is a disease *per se*—no. It is merely the consequence of other actions in which many tissues are involved, and, as I think, of an inflammatory nature, and when idiopathic mostly asthenic in form. It is not simple mechanical dropsy. I cannot see any objection to this hypothesis. The retina and the choroid have but the slightest connexion, and an exudation between them is an easy and likely morbid effect of inflammation in the eye. Then this slight mechanical resistance favours extravasation, and however small the source of the exudation, the fullest damage may accrue as to the detachment. The separation of the retina when it occurs after an external injury to the eye may, I think, be explained in the same way. First, the inflammation, however slight, then the effusion between the retina and the choroid. One cannot tell why this effusion occurs so rarely, when the eyeball is so often the subject of inflammation. Parallel puzzles are to be found in the diseases of other organs.

I will relate a case which, as far as it goes, appears to me to support my pathological remarks, and certainly strengthens what I have suggested about treatment.

A gentleman about sixty years old was led into my room, for he could not see his way. Two years before he lost one eye after about ten days of increasingly impaired sight. A fortnight before applying to me the other eye began to fail like the first, objects looked in a mist, then very large motes floated before him, vision became worse, and in a few days he could not see his way about. The eyes looked healthy enough externally, but an ophthalmoscopic examination showed these states. In that which was quite blind the greater portion of the retina was detached. In the other, in which there was not any useful sight, for he could but just discern a hand when held at six inches from his face, the vitreous humour was so hazy that there was but enough reflected light to enable exudation, in the form of floating patches and shreds, to be seen in it. Some, of course, only of them. Yet with all this internal disturbance there was no apparent disease of the outer parts. The iris seemed healthy, and the pupil was fully affected by atropine. This was just the kind of case I had been looking for, and as it possessed so much interest, I showed it to my colleague, Mr. Taylor, and others. In the one eye certain conditions had been developed that left as one at least of its effects a separated retina; in the other was to be seen that intensity of action which in all probability was the parallel of what took place in the other, and would more than likely leave the same result. I could not detect any evidences of bad general health. I operated on the eye with the detached retina, evacuating the serous fluid, all of which, a surprisingly large amount, escaped externally in the sub-conjunctival tissue, making a very large chemosis. It was rapidly absorbed.

(a) Read at the Harveian Society.

Afterwards I directed my treatment to the other eye for inflammation of the internal ocular tunics, relying chiefly on very small doses of hyd. c. cretâ and hyoscyamus, and pot. iodid. Amelioration quickly followed in the clearing of the vitreous humour and in the quality of sight. At last the fundus of the eye was seen, and then detachment of the retina at its upper and front parts was clearly made out, and the accompanying disturbance to vision was accurately noted down. It was recently detached, as the slight haziness of it showed, and it bulged rather than waved. I now evacuated the fluid from this eye. Very marked result ensued: the retina fell back, the vitreous humour cleared still more, and the effect on sight was marked, for soon my patient could read several lines from an article in the *Times*. I avoid giving a minute and detailed account of the several tests I subjected the eye to. My method of operating, however, I ought to explain. Having satisfied myself of the exact position of the detachment, I punctured the eyeball from without with a straight cataract needle, broader than usual, at a point of the sclerotica corresponding to it, avoided the rectus muscle, and took care not to wound the lens. I usually make a second puncture if the fluid does not run out quickly and sufficiently. It is my opinion that it is better to operate in this way than to endeavour to make an aperture in the retina, either by cutting or tearing, with the view of allowing an exit for the fluid into the vitreous humour, because the making of such aperture is a very uncertain proceeding at all times, and almost impossible when the retina is detached rather posteriorly. Then there is risk of increasing the separation in the attempt, and I certainly think that in a retina already so much damaged, the less the violence inflicted on it, and the less it is cut, the better. Besides, an aperture so made is, I suspect, as likely to close as to remain open, and it is on its patency that the advocates of it rely for the advantage.

I still continued the general treatment. The vitreous humour cleared more, and but few of the floating particles were to be seen in it. Sight also improved in all respects, and smaller type could be read. My patient returned to me after the interval of a fortnight because he now saw something moving before his eye, and which interrupted his sight. I found the retina again pushed forwards by fluid, but to a less extent than before, and now it moved more. The tapping was repeated. Two punctures were made, serum escaped externally. The retina, however, was unintentionally transfixed, and the vitreous humour immediately became too hazy for the eye to be illuminated, and it was a fortnight before it cleared. At this period, a month from the operation, the retina is apparently in contact with the choroid, and the power of seeing is as good as after the first operation. The pot. iodid. was ordered for a fortnight.

Although the full value of treatment can only be judged of by the lapse of time, I cannot doubt that it has dissipated the active disease, stayed the detachment of the retina, and therefore possibly saved the eye from destruction. I do not wish the case to be taken for more than it is worth; indeed, I regard it as yet imperfect, and only as an encouragement for future treatment and observation in this class of disease, in which even an arrest of some portion of the retina from loss of its functions is worth working for.

The example, too, will induce me to regard with anxious watchfulness all those conditions of internal disease of the eye in which detachment of the retina is likely to occur. I shall therefore look with suspicion on all instances of inflammation of the vitreous humour. I mean those changes in this humour apart from extravasations of blood from the retina, or the choroid, producing opacity with floating fibres and shreds. The time will not allow me to say more on this head.

The treatment, then, for detached retina, according to my views, must be chiefly and primarily of a general nature, and secondarily operative.

The tapping cannot be applied to all cases, simply because some cannot be reached by it, the affected part being too posterior. Besides, it is not always easy to make out the extent of the detachment. Indeed, to examine the several varieties of this lesion critically, to note well the defective state of sight, and afterwards to register correctly any improvement or disimprovement that may ensue, demands that amount of special knowledge and accuracy of observation that only careful study and much practice can give.

As I have treated many cases of detached retina according to the system I have advocated, I will make a general statement of the results. The mass of the patients have been seen by me many months and years after the eye disturbance had set in, when, in fact, the existing changes were only the traces of past disease, and in such I could not satisfy myself of having conferred benefit. Some were wont to think they had improved, but they were only deceiving themselves for a time. In two cases I believe the detachment was stayed and the eyes were so far saved. I will describe one of them:—

Three years ago I was called to the country to see an elderly gentleman with impaired sight. It was supposed that cataract was the disease—so, indeed, he had been told by Medical men. I soon discovered that a great mistake had been made, as revealed by the ophthalmoscope. In the one eye the retina was detached on the upper and outer part. Sight was very defective, and the central vision was rather worse than the state of the eye accounted for. These subjective symptoms were increasing. In the other eye there were changes in the choroid, chiefly indicated in the condition of the pigment, which result from inflammation of that tissue, and the retina was highly injected. Here, too, vision was very defective, and was getting more impaired. There was reason to believe that the duration of the disease was not of longer standing than a few months. I tapped the worse eye and evacuated a large quantity of yellow serum from behind the retina, and then commenced the constitutional treatment. I resorted to a second tapping. I have occasionally seen my patient up to the date of my writing this; I saw him yesterday. Although I cannot find any decided improvement of vision in this eye, it is satisfactory not to discover any further deterioration. Detachment of the retina there still is, but there is not the separation of any more of it. That part of it not detached has not lost its functions.

The other eye is in an improved state, and type can be read that at first was almost invisible. The interior of the eye showed a signal improvement in the condition that admitted of it. I do not think it unreasonable to suppose that the treatment prevented detachment here, when the former state of the eye is considered, together with the known liability there is for the affection to be symmetrical. The sketchy style of my communication, and the brief and meagre manner in which many of the topics have been treated, were necessary, in a paper intended merely to be suggestive, to be short, and to provoke discussion.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

LIMEHOUSE DISTRICT CHOLERA HOSPITAL.

TWO CASES OF CHOLERA—SALINE INJECTION INTO VEINS—RECOVERY OF ONE OF THE PATIENTS.

(Under the care of Dr. WOODMAN and Mr. HECKFORD.)

We have great pleasure in placing on record a case of recovery after what appears to be a rational method of treatment. On the whole, however, we believe the injection treatment has not been successful. The first six patients treated in this way at the London Hospital died, but lately a good many recoveries have followed the plan.

A lad, aged 17, of spare habit, had suffered from diarrhœa for upwards of ten days, and also, by all accounts, from symptoms of cholera for some time previous to admission. A partial remission taking place, he went about the streets and otherwise neglected himself. This caused an immediate and aggravated relapse, vomiting, "rice-water" stools, cramps, and rigors being the prominent symptoms reported.

When admitted on September 1, at noon, his condition was as follows:—In a state of collapse; face pale and features shrunken; pulse could not be counted, but merely a weak fluttering felt at the wrist; semi-unconscious and hardly able to speak; respirations thirty per minute; extremities cold; temperature in axilla 98°. (This comparatively high temperature was noticed in other cases of severe collapse, some being moribund at the time—for example, the case reported by us in the *Medical Times and Gazette* of September 8.)

Without loss of time, six pints of water at 102°, holding in solution three drachms of common salt and two scruples of carbonate of soda, were injected into a vein of the arm. An immediate improvement in all respects resulted, especially as regards the pulse. During the operation a little brandy was offered the patient, which he strenuously refused, saying, "I have had it before, and I know it does me harm." This probably sagacious determination on his part—all our cases treated by alcoholic stimulants alone having done badly—led us later in the day to indulge a fancy of his for the milder potation, beer.

We have now only to record an uninterrupted recovery without the slightest unfavourable symptom, excepting a headache for the first twenty-four hours, and with an absence of anything approaching the usual stage of reaction. On the following day he had a bile-coloured stool and voided urine freely, the stomach retaining eggs, beer, milk, etc. The urine contained albumen with kidney and bladder epithelium. The wound in the arm healed rapidly, and on the tenth day he was well enough to be sent to the Home for Convalescents at Ascot. It may be as well to mention that no drug treatment was adopted.

The following is a record of his pulse, temperature, and respirations for the first week :—

	Pulse.	Temperature.	Respiration.
Sept. 1	—	98°	30
,, 2	130	97·6°	20
,, 3	120	98°	26
,, 4	80	98°	20
,, 5	80	98·2°	20
,, 6	80	98°	20
,, 7	76	99°	16
,, 8	80	98°	16

Case 2.—A half-starved girl, six years old, who had suffered from a neglected diarrhœa of a week's duration, was taken with symptoms of cholera at 1 p.m. on September 6. Admitted about 5 p.m., being then pulseless, blue cold, and almost unconscious ; she had also frequent vomiting and the inelastic skin characteristic of cholera ; the purging, however, was slight ; temperature in axilla 93°. Eighty ounces of a saline solution similar to that mentioned above were injected immediately. The child was now able to speak, and a marked change for the better was soon apparent. The pulse (120) could be distinctly counted, but the beats were feeble. This at the time caused a discussion whether a larger quantity of fluid should be injected or not. On the one hand, the thready pulse might be considered due to a diminished fluidity of the blood, and on the other to a feeble action of the heart, to the presence of clots retarding its progress, or to its stagnation in the capillaries of the lungs. A stethoscopic examination demonstrated an œdematous condition of the latter, so that a further introduction of fluid was contra-indicated (for the time at least). Half an hour afterwards the pulse was 132, temperature 94° ; and as about this time two distinct rigors occurred, she was packed in a hot wet sheet. From about 7 p.m. she had a number of epileptiform seizures, which continued with scarcely any intermission until death at 10 p.m. Shortly before death the temperature was 103°.

Post-mortem Appearances.—Veins of the meninges of the brain much congested ; considerable subarachnoid effusion ; brain substance pale and soppy ; right side of heart full ; left contracted and empty ; a pale fibrinous clot in right auricle ; left lung anæmic ; right rather congested ; liver gorged with thick blood ; spleen moderately full ; left kidney normal, pyramids of right congested ; bladder empty ; gall-bladder full. Intestines contained rice-water fluid, some of it being gelatinous ; it was full of epithelium, casts of villi, etc. The congestion of the organs on the right side can perhaps be explained by the fact of the patient having lain on that side for several hours.

The practical deductions from the above are—1st. Judging from the anæmia of the lungs and the density of the blood generally, either enough fluid could not have been injected, or the sweating induced by the wet-sheet treatment had abstracted the necessary watery element. Under both suppositions it is evident that a repetition of the operation might have been very beneficial. The brain symptoms which deterred us from any active interference, were perhaps owing to a diminished vascular supply, and possibly remediable. 2nd. The fibrinous clot in the right heart certainly accelerated death, and although the precise period of its formation is unknown, yet this tendency to coagulation teaches us the danger of undue delay.

GUY'S HOSPITAL.

CASES OF ADDISON'S DISEASE

One of the following cases occurred in private practice (under Dr. Rootes, of Ross) ; but as it was the subject of remark by Dr. Wilks at Guy's Hospital, and as the case is, taken in connexion with Dr. Rees' case, one of considerable interest, we venture to give particulars of it here.

A CASE OF ADDISON'S DISEASE—DEATH—AUTOPSY.

(Under the care of Dr. G. O. REES.)

John B., aged 36, admitted into Guy's Hospital April 18, died 23rd, 1866 (Stephen Ward). The following history was obtained from his wife :—He is a carman to a leather-dresser. He had been married nine years. She had always regarded him as delicate, but he had never complained until about six months ago, when he began to grow very feeble, and he complained of pain in his back, in his limbs, and of occasional sickness. On April 4, he was so weak that he was obliged to give up his work and take to his bed. He remained in bed for the greater part of the time until his admission into the Hospital on April 18. He had been during the time constantly sick, bringing up almost everything. He had often had a cough, and this becoming worse, his wife thought he was in a consumption. She had never observed any change in the colour of his complexion. Dr. Wilks' attention was drawn to him by the sister, as being very ill. It was observed that he was expectorating some purulent matter, and on listening to his chest, over the right apex, crepitation was heard, denoting an early phthisical condition. But there was not apparently enough in the state of his chest to account for his great prostration ; for although he was able to converse and answer questions, his pulse at the wrist could scarcely be felt. The heart's action was exceedingly feeble. His intellect was clear, but he was restlessly moving his head about. Dr. Wilks remarked that the condition of the patient was very much like what is seen in Addison's disease. On examination of the body no discoloration was seen, but on the inside of the lower lip a small patch of pigment was found.

It is moreover stated that when he was admitted he was in a state of great prostration and almost pulseless, yet able to converse, and that his intellect was clear. Whilst he was in the Hospital he frequently vomited.

Autopsy by Dr. Moxon.—Body well built, high cheek bone, and aquiline nose. Long features, a slight brownish or tawny tinge of surface (not very striking), a dark patch within the mouth and lips. Face looks sunken, especially the eyes. Abdomen retracted, pretty well nourished, and has about the average covering of fat. Pleura.—Old adhesions about the apices. Lungs.—Slight induration of the apices, with a few small groups of recent tubercle in the left lung. Two small cavities, the larger at the apex ; one cavity seemed of older date than the other. Right lung.—All the small bronchi full of pus, but no trace of this condition in the left bronchi. Heart very small, soft, and flaccid ; clot on the right side large and black. Microscope showed no fat granules in the fibres. Intestines.—Solitary glands prominent in both small and large intestine ; Peyer's patches well marked. Liver, 54 ounces, apparently quite healthy. Spleen, 7 ounces, dark. Supra-renal capsules.—Right, shrunken, and converted into a cheesy-looking mass. There were, however, two colours—one, a light fawn colour, the other whiter ; scarcely any softening. Left, large, and almost everywhere softened into a semi-tenacious material like pus in colour. In one corner of the organ a small piece, which yet showed a little of the structure of the organ, and was somewhat like the right capsule in appearance and consistency. The covering of the organ was generally, although slightly, thickened and compressed. The fatty bed in which it lies was by far the most unchanged. Kidneys weighed 13 ounces ; large, very deep colour, evidently highly engorged. Bladder and testicles quite healthy.

A CASE OF ADDISON'S DISEASE—DEATH—AUTOPSY.

The particulars of the following case were handed to us by Dr. Wilks :—

Miss Y., a single woman, aged 57. She was a woman slightly above the average height, and of rather spare figure. She casually asked Dr. Rootes' advice in September, 1865.

At that time she complained of loss of appetite and of general weakness. She attributed her weakness to an habitual looseness of the bowels, which had troubled her much. She looked anæmic. Dr. Rootes observes—"I did not see her again until February 13, 1866, when she called on me. On entering my study I was at once struck by the change in her complexion. She still looked anæmic, and her eyes were glassy-looking, and conjunctiva very pale, and that, together with her pallid lips, presented a marked contrast to her dark swarthy forehead and neck. Her hands and wrists were very dark, and of just such a tint as may be seen on the skin of Anglo-Bengalese. The change in the complexion had been noticed by herself, and also by a female friend who accompanied her to my house. The discoloration had been noticed for some weeks past. My attention at the same time was drawn to several dark, almost black, lines which extended in a longitudinal direction, and some dark patches inside the cheeks. She complained of great weakness, of occasional fits of giddiness, of swimming in the head, of breathlessness, of palpitation, and of total loss of appetite. She moreover said that she felt "such a sinking" at the pit of the stomach, and so weary and incapable of making any effort either mental or bodily. Her skin felt cold and clammy, and she suffered with habitual looseness of the bowels. She also states that she passes more urine than she has been in the habit of doing—from three to five pints. On examining the urine I found it pale, specific gravity 1010, free from deposit, and no trace of albumen or of sugar. I carefully examined her various organs, but did not discover any evidence of disease. The chest was well-formed and expanded. Percussion note everywhere clear, but her breathing was quick, and the respiratory sounds were feeble. The impulse and sounds of the heart were feeble. Pulse small and thready, 76. She expressed great fear of being consumptive, and said she belonged to a very consumptive family; that her father, mother, and two brothers had died of that disease, but on careful inquiry I found that they had not died before the age of 45 to 50 years, and in no instance could I ascertain that the cause of death had been verified by post-mortem examination. I expressed an opinion that she was not suffering from consumption, but from 'Addison's disease.' At different times cod-liver oil, mineral acids, and iron were prescribed, and as liberal a diet as she could take." Dr. Rootes then goes on to say—"I saw her two or three times during the following month; but on the evening of March 24 she sent for me to her house. I then found her in every respect much worse, and, although still sitting up and getting about indoors, she appeared much weaker and much darker in face; her hands and wrists especially appeared to have got darker. Her skin was very cold and clammy. Her pulse was very small and weak, 96. With difficulty she can take any food, and everything she does take makes her sick or causes looseness of the bowels. She was desired to go to bed, and to have warm applications and mustard poultices to the abdomen. I administered some brandy with water, and prescribed an opiate. During the following days she got worse and worse; she vomited everything. She did not complain of any pain. Her face was cadaverous. Her intelligence seemed unclouded, and she earnestly begged for some means of renewing her strength. At 1 a.m. of the 24th she became insensible, and died at 5 p.m. of the same day, in a state of profound coma."

Autopsy on the 25th conducted by Dr. Rootes.—Cadaveric rigidity still very marked; body not emaciated; skin of face, neck, and upper part of the chest is of a dark swarthy hue; this discoloration terminates just below the clavicle; the same dark discoloration of the skin was noticed at the umbilicus, in the pubic and inguinal regions; the hands and wrists are of a very dark colour, as dark as the hands delineated in the coloured print of Addison's disease published by the New Sydenham Society. On opening the body a layer of subcutaneous fat was seen about half an inch in thickness over the thorax and abdomen. No adhesion between the pleuræ; lungs appeared healthy, except at the extreme apex of the left lung; here the apex was puckered and felt hard; on section the part was seen to contain a chalky-looking mass of about the size of an ordinary horsebean; also the appearance usually considered to be due to hypostatic congestion. The blood in vessels of the lungs was fluid and very thin, looking like claret and water; the heart was firmly contracted, and its cavities entirely empty; the muscular substance very friable; the liver appeared larger than normal, and congested; spleen also congested. The mucous membrane of the stomach was soft, and of a slate-grey colour, otherwise healthy; intestinal canal healthy throughout; the bladder contained a few ounces of urine, otherwise healthy; kidneys healthy.

Description of the Supra-renal Capsules by Dr. Wilks.—The diseased organs were somewhat above the size of the healthy organ, one weighing 322 grs. and the other 268 grs. The section showed that every trace of the original tissue was gone and replaced by a mass of yellow amorphous material; this was composed of two parts, a greyish translucent substance in which were embedded yellow cheesy nodules; the latter constituted the greater bulk of the whole organ. On microscopic examination this was found to consist of ill-formed cells and fatty granules, whilst the translucent matter was firmer, and contained some nucleated fibre. In one or two places the yellow substance had softened into a cream-like fluid. The appearances which the organs present correspond in every particular with what has been observed in all other cases of Addison's disease; and I could, before hearing the history of the symptoms, confidently speak of the true character of the affection.

These two cases are very good examples of Addison's disease. We have all the leading features of the disease such as described by Dr. Addison—"The anæmia, general languor and debility, remarkable feebleness of the heart's action, irritability of the stomach, and a peculiar change of colour in the skin, occurring in connexion with a diseased condition of the supra-renal capsules." The above cases well illustrate two important indications of this affection. The discoloration of the skin in Dr. Rootes' case was the most prominent and the most striking sign. In Dr. Rees' case there was scarcely any discoloration of the skin, and the most prominent symptom was the marked asthenia. The fact that undoubted cases of Addison's disease have been observed without any discoloration of the skin distinctly shows that such discoloration is not the most constant sign or the most characteristic evidence of the disease. It would appear, however, that in the minds of many discoloration of the skin is the most prominent symptom; and it is undoubtedly the one most commonly looked for or inquired after. It cannot, therefore, be too strongly impressed on every one that discoloration of the skin, although a striking feature of the complaint, was not the symptom most insisted upon by Dr. Addison. The skin is discoloured in by far the majority of the cases—in fact, it is quite the exception not to find the face, neck, and often the hands and chest, discoloured. And as it is the most striking evidence of the disease, so it is the one the least likely to be overlooked. It is so evident that even the friends of the patient, in some cases, have been, as in Dr. Rootes' case, the first to notice it. But, as Dr. Wilks has observed (see *Guy's Hospital Reports*, 1859), "A sufficient number of cases have now been observed to prove that the change in the skin depends on the chronicity of the disease. This was Dr. Addison's opinion, and the fact has been verified by Mr. Hutchinson." Therefore it may be said that in the acute form of the disease no discoloration of the skin may be expected, but merely symptoms due to asthenia. There is also an error prevailing as to the arrangement of the discoloration. It is by some believed to occur in patches; whereas experience has shown that the whole surface is uniformly affected, and moreover shown that there is a great similarity in hue of the colour. In the mucous membrane, however, the discoloration, as in the cases just recorded, does occur in patches, but not so on the skin. The colour itself is not one abnormal to the human body, but it is as if a European were being converted into a mulatto. Addison himself was in the habit of observing that he only regarded those cases as characteristic where the surface of the body was seen gradually approaching in colour that of an inhabitant of some southern nation. The discoloration is due, not to a deposit of colouring matter in abnormal situations, but in such a position as we under ordinary circumstances are liable to find pigment—for instance, around the nipples and scrotum and in the axillæ, and in parts that are liable to exposure to the sun, as the face, neck, hands, wrists, and even the chest. Hence in some cases the discoloration has been much less marked where the skin had been covered; and although the microscope does undoubtedly show a difference in appearance between the skin of a negro and the discoloured skin in Addison's disease, yet it is apparently a difference in the amount of, rather than in kind of, pigmentation.

We have many times heard Dr. Wilks observe that the most characteristic sign of Addison's disease is not the discoloration of the skin, but the remarkable asthenic condition of the patient, the great prostration and loss of muscular power, the dimness of sight, the great feebleness of the heart and of the pulse, the frequent recurring sickness and vomiting—all this without any apparent disease to account for it. The most careful examination does not reveal any abdominal disease, or any chest disease, or the latter is so slight that it by no means sufficiently accounts for the great prostration. It is the muscular prostration of fever, with a cold skin and clear intellect. In some cases this want of muscular power has been present more or less for months, and then increases so much that at last the patient is compelled to take to his bed. The patient has become so feeble that he cannot turn himself over in bed, and the faintness is so great that he cannot sit upright in bed and does not even care to speak, and, as in Dr. Rees' case, the eyes are sunken, the conjunctivæ are white; the head is restlessly tossed from side to side, and he has all the expression of a man extremely exhausted. He is almost pulseless. His skin is cold and clammy. He gradually becomes unconscious and dies. In other cases there has been muscular debility more or less for some years; but every now and then it has increased to such a degree that the patient has been compelled to lie up, but under the influence of rest, good diet, and tonic medicines he has again rallied and been able to resume his occupation, and at last died of undoubted Addison's disease. We may allude very briefly to a case reported in *Guy's Hospital Reports* by Dr. Wilks. A man, aged 23, was first admitted into the Hospital October 10, 1856, under Dr. Habershon. He had previously been under that gentleman's care for five months as an out-patient. He stated his skin had become of a darker hue; he had sought Medical advice for liver disease. On admission he resembled a mulatto, and was almost black on the scrotum. His lips and gums were also discoloured. Heart and pulse feeble; chest healthy. His eyesight was dim. He suffered from faintness after the least exertion. He left the Hospital better, and was able to follow his employment until three weeks before July 2, 1858, when he was readmitted under the care of Dr. Addison. On second admission he was scarcely able to stand. He had dizziness and failure of vision on attempting to walk. He got still weaker, and died unexpectedly on July 5. The autopsy showed the characteristic changes in the capsules. He had been under observation for more than two years. A second case of this kind had been several times in Guy's Hospital. Each time he improved, but at last died there of this disease. In connexion with this asthenia is one important fact—that is, with such great debility there is not great loss of flesh. It was the case in Dr. Rees' patient, and we have frequently heard Dr. Wilks remark that such is his experience. There is a certain amount of wasting, but there is generally a superficial layer of fat, and the body looks very different to what it does in phthisis or cancer.

There is another important fact—the most careful examination fails to discover any organic disease to account for this great asthenia. When, therefore, we have marked asthenia, this extreme prostration, extremely feeble circulation, the frequent attacks of vomiting, and the absence of great loss of flesh and of any evidence of disease elsewhere, and especially if there is discoloration of the skin as well, there then can be very little if any doubt but what we have to deal with a case of Addison's disease.

On referring to Dr. Wilks's report on the condition of the supra-renal capsules, it will be noticed that he states that the morbid appearance of the organs exactly corresponded with what has been observed in all other cases of this disease; and he even goes further, and states:—"I could confidently speak of the true character of this affection before hearing the history of the symptoms." And all experience tends to show that in cases in which symptoms of Addison's disease have been present the capsules have not only been diseased, but have presented the well-known characteristic appearances we have mentioned.

We are therefore compelled to admit that not only is this disease characterised by a peculiar and unique class of symptoms, but further characterised by a specific morbid anatomy of the capsules. The symptoms and morbid appearance of the capsules always go together. A number of cases have been recorded, and every day more cases are coming to light, all of which go to establish the same fact. It appears to us, therefore, that all the evidence goes to show that Addison's disease is a specific disease—a disease "sui generis"—and to refute M. Martineau's conclusion, that it is not a "pathological identity."

Knowing this, we should be fully prepared to recognise what Dr. Wilks has been teaching for years—that Addison's disease is not only a disease of the supra-renal capsules, but a disease of those organs of a specific kind. It is disease of the supra-renal capsules, but only disease of one particular kind; and Dr. Wilks has long since pointed out, what experience has undoubtedly shown, that a person may have disease of those organs without the characteristic symptoms of Addison's disease. Yet one argument urged against Dr. Addison's views is based on the misunderstanding of this very fact. It is said a patient may have disease of the supra-renal organs, and yet have none of the symptoms of Addison's disease; and experience has beyond a doubt proved it. Cases of cancer of the capsules have been brought forward, in which there were no such symptoms. See Pathological *Transactions*, year 1865, vol. xvi., case recorded by Dr. Cayley; also a case brought before the same Society by Dr. Ogle, in which a cyst occupied about a quarter of one of the supra-renal organs. This patient died in consequence of injury to the back, fractured costal cartilage, etc. It is stated that there was no unnatural appearance of the skin. Another case is recorded by Dr. Risdon Bennett of hydatid cyst occupying the left supra-renal capsule. This patient died of chronic disorganisation of the lung, resulting from broncho-pleuro-pneumonia. It is stated that he presented no symptoms indicative of Addison's disease. (See Pathological *Transactions*, vol. xv., p. 224.) Other cases might be brought forward to show a similar experience, so that there cannot be a doubt but what a person may have one, and very likely even both, capsules affected without any of the symptoms of Addison's disease being present.

We would here beg to mention that we have many times heard Dr. Wilks observe that Addison himself was somewhat the originator of the error we have just alluded to by introducing into his work a case of cancer of the capsule in which there was a patchy discoloration of the skin. Dr. Wilks pointed out to Dr. Addison his mistake, and Addison fully recognised his error, and, had he been spared, would no doubt have left out the case, and then his work would have been complete.

There is another argument against Addison's views to which we will very briefly refer. If the symptoms and mode of death in Addison's disease are due to the presence of disease in the supra-renal capsules, ought we not to have such symptoms present whenever the capsules are affected or destroyed—no matter whether by cancer, by the morbid material seen in Addison's disease, or by hæmorrhagic effusion, by hydatid or any diseased product? If the lung, the liver, or kidneys were greatly affected by no matter what new material, should we not certainly have symptoms much alike, if not altogether alike? Therefore, ought we not, arguing by analogy, to have similar symptoms when the capsules are changed in different ways? Undoubtedly we ought, if the capsules are vital organs, as the lungs, liver, and kidneys are. But all evidence goes to show that they are not. Addison himself recognised that fact. He clearly saw that the morbid change that had gone on in the capsules must have taken months, and even years, to reach the stage it had reached. He saw clear proof in the cretaceous condition and destruction of the capsules, that if the capsules were vital organs the patient must have died long before he did. The capsules had long been destroyed, and yet the patient had lived; therefore, the capsules could not be organs essential to life. Vivisection proved the same thing, but it did not require such proof, because the fact was clearly demonstrable before without the aid of vivisection.

Dr. Wilks states that Addison did not fail to appreciate this difficulty, and also states that Addison never stated that the capsules were vital organs, but that in all probability the symptoms of the disease were due to the implication of the adjacent organic nerves, and that there is every reason to believe that his opinion is correct. Further, he says, "He felt the difficulty of describing such organs as vital in the same sense as those viscera in the body whose destruction would inevitably lead to death." "If, however, it be true, as Addison surmises, that the symptoms are due to the implication of adjacent parts, we can understand how prolonged may be the period of the disease, and why it may sometimes be met with accidentally, and how also, indeed, the organs may be removed from living animals with impunity." There is one more objection that we would briefly allude to. In a few cases of this disease tubercles have been found in lungs, and the morbid material in the capsules has been termed scrofulous, for no other reason, as far as we can see, than that it happens to be yellowish and cheesy-looking—evidence of a degenerative change, and no more. On this subject Dr. Wilks says he has not, in cases of general tuberculosis, met with an instance where the supra-renal organs have been affected in the manner described by Addison. Moreover, Dr. Greenhow has collected a large number of undoubted cases of Addison's disease, and has shown how inconsiderable is the proportion in which tubercles are found in the lungs. We all know how common it is to find more or less tubercle-like matter in the lungs, no matter what the disease or cause of death. It would appear, therefore, that the presence of tubercle in the lungs in Addison's disease is accidental, and not essential.

All we yet know goes to show that Addison was endeavouring to find a cause for idiopathic anæmia. He searched the bodies of those who had died of the latter disease, and, while doing so, accidentally came across the disease in the capsules. Bright knew that in cases of dropsy albumen had been observed in the urine by Dr. Blackall. Bright then searched the bodies of those dying of dropsy to find out the source of the albumen, and he soon found that the kidneys were diseased. He then went further: he noticed that the granular kidneys were not usually associated with dropsy, but the large white was generally associated with dropsy. Yet both had albuminous urine, although not in an equal degree. He associated the conditions as cause and effect—the dropsy, the albumen in the urine, and disease in the kidneys. Addison did the same with the discoloration of the skin, the asthenic symptoms, and the supra-renal disease. Bright never determined what was the primary disease in the granular disease of the kidney—whether it was in the connective tissue or in the minute capillaries, or in the epithelial cells of the kidney—whether the primary cause was in the blood or in the nervous centres. Nor did Addison in Addison's disease. It has yet to be determined whether the anæmia is the first thing. That it is not simply due to anæmia is shown by absence of any change in the supra-renal organs in cases of death from pure anæmia. Whether the exciting cause is in the nervous centres setting up disease in the capsules, and the latter organs reacting on the solar plexus and semilunar ganglia—why the pigment fails to be deposited in ordinary cases of anæmia in such a way as is seen in Addison's disease—are questions which remain to be solved. But that Addison was the first to recognise and point out a connexion between disease of the supra-renal capsules and pigmentation, and the remarkable asthenic symptoms, and that he was the first to express an opinion that they were associated and were connected with one another, cannot be denied, all experience, so far, confirming his views; and we cannot, therefore, refuse to him the same award as to Bright, Graves, and Duchenne. They all observed the co-existence of certain things. They connected these things as cause and effect. Neither one nor the other attempted to explain what is the primary condition or cause—that is to say, what is the first abnormal condition of the system which leads to the diseases they described; and we fear until physiology has made us more acquainted with our minute machinery and its workings, no man will be able to do what they have left undone.

Those interested in this subject we would refer to Dr. Wilks' papers in the *Guy's Hospital Reports* embodying his observations, extending over some years, and to the recent researches of Dr. Greenhow.

Refusing Admittance to a Cholera Patient at Hackney Workhouse.—A serious charge of inhumanity was made on Friday before Mr. Humphreys, the coroner, against the Hackney Workhouse officials. A poor boy attacked with cholera was taken to the workhouse, and, although armed with an order of admission, was kept waiting for half an hour, and at length refused admittance. He was then taken to the German Hospital, where he died; there being, in the opinion of the Medical men, at least a presumption that if he had been admitted at first, and treated without delay, his life might have been spared. At the conclusion of the inquest on Monday, the jury returned a verdict to the effect that Thomas Nichols, aged seven years, died of cholera, but that his death was accelerated by his detention in the gateway of Hackney Workhouse, "through an error in judgment of the master."

Cholera in Scotland. — The deaths attributed to cholera were fourteen in number, the same as during the month of July; while in August of last year the fatal cases of cholera amounted to 25. Of these fourteen deaths, however, only two are certified as caused by Asiatic cholera, of which one occurred in Glasgow, and the other in Aberdeen.—*Scottish Registrar-General's Return, August*, 1866.

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Medical Times and Gazette.

SATURDAY, SEPTEMBER 22.

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THE LONDON MEDICAL OFFICERS OF HEALTH ON THE WATER SUPPLY OF THEIR DISTRICTS.

Following out the principle upon which in the beginning of the cholera visitation the Registrar-General appears to have determined, he has given the public, week by week, the results of such investigations as he has conducted with a view to throw as much light as possible upon the circumstances attending the career of the epidemic.

The silence of the East London Water Company relative to the very grave implications affecting them is significant, and, for the present at least, judgment must go against them by default. We have placed our readers *au courant* with all that has yet transpired regarding the presumed influence of the water supply of the districts which have borne the brunt of the epidemic upon the origin of the disease, and we apprehend that for the present the evidence may be considered as closed; the verdict of science upon the facts observed involves the consideration of so many diverse pathological views as to preclude the hope of a speedy deliverance. The exact nature of the specific poison which breeds cholera is yet undetermined, and thus the primary factor in the analysis has to be discovered. The paltry sum placed at the disposal of the Medical Officer of the Privy Council for the purposes of systematic inquiry into the origin, nature, and treatment of a disease which anon sweeps away great numbers of human lives, indicates, by comparison with the thousands spent upon the Cattle Plague Commission, the respective values of the lives of man and beast in the eyes of the keepers of the national purse. The idea of relative importance assigned by the Divine economy to the "beasts which perish" and to that higher part of creation made "in the image and likeness of God," has evidently influenced Christendom too long, and its reversal by her Majesty's Government no doubt is in conformity with the general tendency towards equality of all kinds. Happily, however, there are to be found men whose devotion to science is superior to all pecuniary considerations, and the Medical Profession has always possessed a full share of these pioneers of progress; so that whatever be the smallness of the hire, though it be weighed to the last ducat with niggardly exactness, we may rest assured that in time the public will be told all that independent observation, directed with the highest scientific skill and precision, can determine as to the pathology and therapeutics of cholera.

Meanwhile, we go on gathering up thread by thread every little particular which is brought to light to add to the field of induction. To solicit the co-operation of the Metropolitan Medical Officers of Health in the elucidation of certain specific points within their experience was an excellent idea of the Registrar-General, and it shows that the labours of a zealous and most useful body of observers are appreciated as they ought to be. In the supplement to the Return for last week the replies of the Medical officers to the Registrar-General's inquiries about the water supply and special causes of cholera mortality in their several districts are printed in detail. We cannot, of course, find space sufficient for a verbatim reprint of these replies, which are exceedingly valuable, and throw additional light on the connexion between bad water and disease; but we propose to select such remarks as bear upon the character of the water supply, its frequency, and sufficiency, as well as represent the concurrent testimony of independent judges upon the effects of the water of the superficial wells of the Metropolis on health.

There are three very significant omissions in the list of replies—namely, from the districts of Bethnal-green, St. George-in-the-East, and Mile-end Old Town; were it not for these, the series would be complete, and we venture to hope that the Medical Officers of Health for those three districts will yet dismiss the fear of parochial authorities from before their eyes and comply with the courteous requests of the Registrar-General. So much has been already ascertained and made public concerning the bad sanitary condition of the Eastern districts, that we can scarcely conceive it possible that worse disclosures have yet to follow; so the vestrymen of the three districts may as well give their Medical officers *carte blanche* to publish whatever they please.

Dr. Sanderson (*Paddington*) gives the analyses of certain waters from six spring wells, accessible to the public, although on private property, and one of these—a pump in Burwood-mews—contained no less than 122·17 grains of solid matter (of which 30·4 grains consisted of organic and other volatile matter) in 100,000 parts. This water contained 17·74 grains of chloride of sodium, and two samples taken from the premises of the General Omnibus Company in Market-street contained respectively 20·76 and 16·68 grains of the same chloride in 100,000 grains. The presence of nitrites was indicated in five out of the six wells, the exception being a pump in Charles-mews, which appears to be comparatively free from impurity. The polluted wells have now been closed.

From *Kensington* Mr. F. Godrich reports a more ample supply of water since June, and that there is now a supply twice daily to the poorer localities, and once on Sunday.

Mr. F. J. Burge (*Fulham*) says:—

"I have from time to time, though not very recently, made many examinations of the water of the surface wells of the district, and find them to abound in organic impurity, the total impurity ranging from 60 to 100 grs. per gallon, and the organic from 5 to 12 or 14 grs. It may not be out of place, probably, here to express my opinion that the water supplied by the various companies to London is not derived from proper sources, neither do I think the present mode of filtration effective in removing its impurities. I believe, however, that much of the odium thrown on the water supply is also due to the very defective manner in which, as a rule, it is stored for domestic service by the consumer, and I would suggest to the water companies generally the propriety of employing water-tank inspectors, so as to insure and enforce the periodical cleansing and repair of these receptacles in private houses—a plan which I think would materially diminish the present frequent bad results from drinking impure water, and to a great extent protect those bodies from complaints which frequently lie at the consumers' own doors."

Dr. Barclay (*Chelsea*) reports that a Sunday supply of water has been obtained from the Chelsea Company.

Dr. Druitt (*Hanover-square* and *Mayfair*) states:—

"There are three pumps in Mount-street and its vicinity which are still used by the owners and the neighbours, although the evidence of their contamination by sewage is complete. Remonstrances urged in person have been vain. No case of disease, however, has been traced to the use of this well water."

Dr. Aldis (*Belgrave*) says:—

"I have lately received complaints of no water supply in two streets in South Belgravia on Sundays. Generally the water supply is very good, the water being distributed among the poorer classes twice daily and once on Sundays. It will be supplied in future throughout the Belgrave sub-district on Sundays."

Mr. Lionel J. Beale (*St. Martin-in-the-Fields*) is the only one of the Health Officers who has a good word to say for the surface wells, which are unequivocally condemned by nearly all his colleagues:—

"I have never observed any ill effects of pump or spring water on health. Our spring water contains about 50 grains of solid matter per gallon, of which 6 to 7 grains is destroyed by combustion. We have only two public pumps of spring water, both of which have, for the present at least, had the handles removed. There are many private pumps, the water of which is consumed by private families. The water of three which I have examined is very similar to that of the public pumps. I have never heard of any evil to have resulted from the use of it. I have myself drunk the water of the pump in Covent-garden Market for 40 years, and never less than a pint daily. I know many who have done the same, and never heard of the slightest ill effect. I am averse to contend against the authority of the late Dr. Dundas Thomson, of Dr. Letheby, and of nearly the whole of my colleagues the Medical Officers of Health, but I cannot yet feel convinced that the water of our superficial wells is injurious to health. I know of no proofs against any but those of Broad-street and West Ham, and in both these instances sewage matter was traced direct into the wells. Seeing that our London water is good enough for all purposes but those of drinking and cooking, I think our wells should not *all* be condemned without further inquiry. For example, if there were wells in the centre of our large squares,—say, for example, Lincoln's Inn Fields, and half a dozen pumps in the circumference just outside the railings—might not the water so obtained be fit for drinking and cooking purposes? Chemistry is certainly opposed to the use of London pump water, but the anticipated results are not confirmed by practical experience."

No doubt, if sewage *could* be prevented from getting into the wells, their water would be fit for use, but there is the difficulty. The general conclusion is, that percolation of deleterious matters cannot be avoided, and even if no death or disease can as yet be specifically traced to an origin of well-water, it is better to be wise in time.

Dr. Whitmore (*Marylebone*) may be congratulated on the state of things in his district.

"The average supply to each person is about 30 gallons. I know of no houses without water supply; in some few small courts and places, to the extent probably of about 100 houses, there are water tanks, in which one tank furnishes a supply for all the houses in the court or place; but these tanks are generally sufficiently capacious, and tolerably clean; in these cases there is a separate water tank for the closets. All other houses in the parish have a separate supply, the water receptacles in many of the small houses being altogether unsuited to the purpose, and improperly placed. Every week-day a fresh supply is given to every house, and during the last three or four weeks, at the request of the vestry, the West Middlesex Company have given an additional supply on Sunday mornings to the poorer districts."

Dr. Ballard's (*Islington*) remarks show how extremely difficult it is to insure a pure service of water to filthy people, and in the remedy which he suggests lies almost the only hope of sanitary reformers—constant service.

"The general quality of the New River supply is excellent. What I complain of is, that it is damaged by storage after delivery from the Company's mains. This damage arises from the use of old and rotten butts, from the improper places where butts, and cisterns more especially, are commonly fixed, and from the gross neglect of householders to cleanse these receptacles. The storage in *butts* is mostly limited to old tenement houses occupied by the lower classes; and in making an inspection of such premises it is the rule to find the butts decaying and leaky, from the neglect of painting outside and of proper pitching inside. It is the rule throughout the district to find the cistern placed over the water-closet, with an *untrapped* waste-pipe communicating with the house-drains. The houses are very few indeed where the house and closet supplies are separated. In mews I generally find the butt or cistern placed *in the stable*, where the water is most likely to gather vaporous and other impurities, in addition to what comes from the drains through the waste-pipe. In some small houses I have found them placed in some corner, where they regularly receive the drippings from the roof or leaky gutters of the house, or else side by side with the dust-bin and privy. An odd corner, if convenient, seems to be considered fit for the placing of the cistern. Sometimes it is so placed (as *under the flooring of a sleeping-room*, or over the portico of the house) as to be out of reach of cleansing, except at the cost of removing boards or obtaining a ladder to reach it from outside. The neglect of cleansing is almost universal. In small tenement houses the children amuse themselves by casting filth and rubbish of all kinds into the butt. I have myself taken filthy cloths, old hats, etc., out of a common cistern in a court. Even in most respectable houses, where the cistern is uncovered, the neglect of cleansing is often observed. Years are sometimes permitted to pass without any attention being paid to the cistern, and I have known bucketsful of filth removed when an outbreak of disease has at last opened the eyes of the occupants of a house. Unfortunately, although the law enables local authorities to enforce a supply of water to every house, no control is given over the mode of storage. I firmly believe that no remedy for this sad state of affairs exists but the total abolition of the intermittent system of supply, and the adoption of a constant supply at high pressure universally."

Dr. Tripe (*Hackney*) shows that the water supply of his district was less than usual until a pressure was put upon the water companies.

The very pertinent observations of Dr. Conway Evans (*Strand*) upon the present inequitable mode of charge for water supply, whereby users of water are made to pay for the losses caused by its abusers, deserve to be studied and acted upon. In the reforms which are promised *de futuro*, it is to be hoped this will not be forgotten.

"The consideration of the whole question of the water supply of London is one which cannot with safety to the public be much longer postponed, for, speaking generally, the quality of the water is not what it should be, and there cannot be two opinions as to the expediency of getting rid of water receptacles altogether, and having a continuous supply. The water companies, the New River Company at least, express both their readiness and willingness to afford a constant supply (as indeed they are under certain circumstances compelled by their Acts to do), provided such means be adopted by the owners and occupiers of houses as shall prevent all *unreasonable waste* of the water; but these means, it is affirmed (and all persons practically acquainted with the subject concur, I believe, in greater or less degree, in the accuracy of this statement), do not at present exist. From considerable experience, the conclusion at which I have long ago arrived in this matter is, that the entire system of water supply must, in a *financial* point of view, be completely altered, that water receptacles must be wholly abolished, and that the mains and service pipes must be continuously charged; but that in order to effect these objects successfully *water must be paid for, just as gas is paid for, namely, in accordance with the quantity consumed.* No one hears of a gas company complaining of the waste of *gas* by the consumer; nor would any similar complaint ever be made of the waste of *water* if the latter were paid for by the landlord or tenant at so much per hundred or thousand gallons.

"The present mode in which water is paid for is both unsatisfactory and unjust, the water rate being a charge of six or seven per cent. upon the rental of the house supplied; and the effect of this arrangement is practically to compel the tenant of a large house, in which, from a variety of circumstances, but little water is consumed, to pay for the great quantity of water wasted in less costly and poorer localities. It may be right that the richer neighbourhoods should be taxed more highly than they already are for the support and maintenance of the poorer; but it cannot be right that they should be obliged in this indirect, and in many instances unsuspected manner, to provide in a great measure the more lowly rated localities with water. Good and pure water is a necessity of existence, and its supply ought to be the duty and property of the municipality, and not those of any private companies whatever."

Dr. Gibbon's (*Holborn*) report gives some striking examples of the effects of polluted water:—

"This district is wholly supplied by the New River Company, who, since 1862, have most liberally complied with the request of this Board to give an extra supply to all the poorer localities on Saturday evenings. The quality of their water is, I believe, excellent. An additional supply is provided by eight wells which were sunk by the local authorities about twenty-five years since. With one exception—viz., the well on the west side of Middle-row, Holborn, which has long been irremediably contaminated with sewage—these wells yield an abundant supply of drinkable water. I have frequently examined the water from these wells, both chemically and microscopically. Although the solid constituents are great as compared with the Companies' water—viz., from 40 to 100 grains per gallon, as well as the organic and volatile matters—viz., from 5 to 12 grains, and there are abundant nitrates in nearly all of them, I have failed, however, to detect any nitrites or animalcules in any of them. The quantity of ammonia found has never been great; often only a trace. The same and even less favourable results have been obtained in the examination of the water from private pumps, of which there are 4 in Gray's-inn, 1 in Lincoln's-inn, 1 in Staple's-inn, 1 in Red Lion-square, and 1 in Queen's-square. Most of these pumps are open to the public, and the water is largely drunk on account of its cool and sparkling character; in two instances it is, I am told, actually sold to the public, who often send considerable distances for it. However, I have no evidence to indicate that the water from these public and private wells has caused injury to health.

"I may add, that I have found the water drawn from *underground cisterns* more dangerous to health than that from wells. On August 20, just at a time when we had an unusual amount of rain, Asiatic cholera, of a severe type, attacked all the inmates of a house in Great Ormond-yard, fifteen persons in all; three fled in terror. I found that the house No. 10 was one which last spring I advised the Board to order to be improved. Unable to trace the cholera to any palpable cause, I instituted a chemical and microscopical examination of the drinking water which is stored in a tank under the yard. To the naked eye this water had a dull opalescent appearance, and under the microscope it was seen to contain myriads of animalcules, some vegetable fibre, etc. I unhesitatingly attributed the disease to the fact of the inmates having drunk of the water of this tank, which was so imperfectly covered that the heavy rain had caused the surface water of this ill-drained and worse paved yard to flow into it, filled as this yard is with dung-heaps, stables, cow-stalls, and slaughter-houses. I need not describe the nature of that surface water. In former years—viz., in August, 1856—I traced fifteen attacks and four deaths from cholera at No. 10, Great Ormond-yard, to drinking polluted water from such a cistern. In August, 1858, a whitesmith, aged 30 years, died in Black Bull-yard, after six hours' illness, from this same disease, probably induced by the same cause. Again, an ostler in Lamb-yard, Lambs' Conduit-street, in 1862, died, after a few hours' illness, from the same cause. These cisterns were all situated in stable-yards."

Dr. Griffith (*Clerkenwell*) speaks of the objectionable practice of storing water in underground tanks; but his advice that these be replaced by aboveground cisterns is not attended to, and the penalty which is sure to follow in such case may certainly be looked for, sooner or later, by the inhabitants.

The following extracts from Dr. Letheby's valuable Report on the City Pumps, clearly establish the fact that appearance and taste are not to be relied on where water is the substance under judgment:—

"Altogether, there are 35 pumps in the City from which the public are in the daily habit of drawing water for drinking purposes, and as you will perceive from the accompanying table the quantity of saline and organic matter in the gallon ranges from 26·63 grains to 129·73—that of the New River during the last month being but 17·16 grains, and of the East London 18·18. Only 6 of the City wells yield water with less than 50 grains of solid matter in the gallon, and there are but two others with less than 70 grains. Ten of them contain from 70 to 80 grains per gallon, nine have from 80 to 90 grains, two have from 90 to 100 grains, and there are five wells in the City—namely, those in Aldgate High-street, in Bishopsgate-street, by Dunning's-alley in Leadenhall-market, in Milton-street, Cripplegate, and in St. Nicholas Olave Churchyard, the water of which contains from 100 to 130 grains of solid matter per gallon. In most cases, too, the constituents are remarkably indicative of the source and nature of the pollution. The wells of the public meat markets, for example, as those of Newgate, Aldgate, and Leadenhall, are charged with the peculiar filth of those localities; indeed, the water furnished by the well in Leadenhall-market contains nearly 40 grains of common salt per gallon, besides a large quantity of nitre and organic matter, all of which is derived from the stinking serosity which runs from the hides, exposed for sale and salted upon the public way. The wells of the City churchyards and their neighbourhood are also strongly tainted with saltpetre and ammonia, the former to the extent of from 20 to nearly 30 grains in the gallon, and doubtless it is the final product of the decay of the animal matter buried in the neighbouring graveyards. Others of the public wells show the presence of the more or less oxidised products of substances which have escaped from adjoining drains and sewers; and nearly all of them are so largely impregnated with compounds which have percolated through the foul soil of the city that they are entirely unfit for domestic use. Where the soil is well protected and the pump is away from any special source of pollution, as is the case with the two pumps at Guildhall, the water is but moderately tainted with impurities, but even there it is dangerous to use the water for drinking purposes, for there is no saying how soon it may become foul from a neighbouring sewer or cesspool. I have already reported that as most of these waters are bright and sparkling, and have a cool and agreeable taste, they are much sought after for drinking purposes; but the coolness of the beverage, and the briskness of its appearance, are dangerous fascinations, for they are both derived from organic decay. In fact, the dead and decomposing matters accumulated in the soil, are partially changed by a wonderful power of oxidation, and thus converted into carbonic acid and nitre. These give to the water the agreeable qualities which are so deceptive; and although they are so frequently drunk without any apparent manifestation of injury to health, yet it cannot be that the products of such corruption can be admitted into the human body without danger of insidious mischief; and at the present time there is the still greater danger of the impurities of the soil passing unchanged into the water, and being a source of quick and certain injury."

Dr. Lidal (*Whitechapel*) has about twenty courts, inhabited by 2000 persons, in his district supplied with water direct from the main without the intervention of cisterns or butts. The water from two pumps recently became so foul that its further use was prevented. The inhabitants of Norton Folgate, however, who had probably acquired a liking for the flavour, requested the authorities to cleanse the well, and allow the public to get the water as usual. "At present (says Dr. Lidal) the Board has not complied with the request, and it is to be hoped that, for the safety of the public, not only will these two pumps be kept closed, but that all pumps in the district will be removed."

Mr. T. Orton (*Limehouse*) speaks plainly and with a boldness which is worthy of imitation:—

"The water supply is grossly defective, and demands immediate change. The complaints among the poor on this head are incessant; it is seldom let on for more than ten minutes, and then there is often a contention for this limited quantity with the inmates of a dwelling."

Dr. Woodforde (*Bow*) affords testimony that the difficulties in the way of a constant supply are not insuperable, as in nearly all the houses recently built, especially in North Bow, the inhabitants have a constant supply from the East London Company's mains.

Mr. S. K. Ellison (*Poplar*) says briefly that the water is supplied to every house for about fifteen minutes every day except Sundays, and suggests that the constant supply system ought to be the rule.

Dr. Vinen (*St. Olave*) speaks of numerous complaints within the last few weeks of a deficiency in the quantity of water supplied by the Southwark Company.

Dr. Parker (*Bermondsey*) tells the same tale of deficiency in the case of the same Company just referred to. He remarks:—

"The water is supplied to Bermondsey by the Southwark and Vauxhall and the Lambeth Water Companies. The former supplies the greater part of this parish. Since June last the quality has been good and more carefully filtered than in times gone by, but the quantity has been seriously deficient. In every part of this Company's district there is a general complaint of scarcity of water. The officers of the Vestry are in constant correspondence with the Company, the result of which is an occasional squabble about fittings with the landlords, the Company's officers most inconsistently showing their ability to give the necessary supply by flooding the yards of the complainants in my presence. It would seem that the supply is systematically withheld on account of the waste caused by the objectionable fittings and receptacles. The question of water supply to the parish is becoming a very serious one indeed. The Lambeth Company supplies a very small part of Bermondsey. The complaints are so few that I only happen to know officially that they do supply this very small district, in which there has not been any cholera and no more diarrhœa than elsewhere. The mains of the Lambeth Company do not go near the part of Bermondsey where cholera has as yet prevailed. I have found the humble jug or jar of the poor more wholesome than the dirty open butts, or more pretentious cistern. The former often rotten, standing over the drain, and seldom cleaned out, the latter too often ventilating the sewer or closet by means of an open waste pipe. The purest water in England would be poisoned by the present system of storage. I have long been an advocate for a constant supply."

Dr. Bateson (*St. George, Southwark*) notices a pump situated over a well seventeen feet deep, in the centre of a catgut factory, "from which the water is fetched far and near, owing to its coolness and deliciousness." We commend Dr. Letheby's observations thereanent to the drinkers of this water, which may turn out eventually too "delicious" to be taken neat.

Dr. Iliff (Newington) confirms the complaint of deficient supply by the Southwark Company:—

"Our parish is supplied by two companies, the Lambeth and the Southwark and Vauxhall, and we have had so little cholera that no comparison can be drawn between the two with respect to mortality; the latter company's arrangements as regards sufficiency of supply are defective, and scarcely a week has passed for a long period without complaints being received; the water supplied is not thoroughly filtered, and at times there is a great deal of earthy (?) matter diffused through it, and I have detected by the microscope living organisms as well. We have not received one complaint for a long time against the Lambeth Company."

Mr. R. H. Whiteman (*Putney*) gives an analysis of well water, which ought to cause the immediate cessation of its use:—

"Within the last six weeks I have examined nearly all the remaining well waters in the parish, and, with very few exceptions, find them to contain dangerous amounts of organic impurity. Even some water taken from a well on Putney Heath, always considered to be of excellent quality, gave, in a recent analysis—

	Grains per gallon.
"Total impurities	56·0
"Organic matter	17·5

"Other well waters within the town have also been lately examined and found to be equally impure. In one instance, where percolation from a neighbouring privy was but too evident, the water under the microscope was found to abound in infusorial life."

Dr. Murdock (*Rotherhithe*) has also to speak of deficient supply by the Southwark Company. He instances the effect of water upon health by the case of part of his own district.

"In the year 1849, all the lower or Eastern portion of Rotherhithe had no water supply from any company. The inhabitants either dipped their water from the muddy Thames, from dirty tidal wells, or procured it from pumps connected with springs, many of which contained salts of lime and iron in solution, and were strongly impregnated with organic matter. There was at that time no drainage in the district, except a few superficial channels, which carried the surface water into the Thames. The cholera came (1849), and about 200 persons died in a locality certainly not containing 3000 souls; whole streets were decimated by the disease—to wit, Silver-street, Charlotte-row, Ram-alley, etc. No place in London of the same size and same amount of population was so unhealthy. The authorities, alarmed at the frightful mortality, caused a sewer to be constructed, and good water to be supplied from the Kent Water Company. The results were as follows :—When the cholera revisited us (1854) the lower part of Rotherhithe remained almost entirely free from the disease ; not five deaths took place in it, and it became and still remains one of the healthiest localities in London, and during this present epidemic has scarcely suffered at all."

Dr. King (*Eltham*) thus reports the results of analysis of water from three wells :—

Foreign Matters present.		Pump Water in Well Hall-lane. grains.	Pump Water at the corner of the Courtyard. grains.	Mr. Jackson's Well, top of Town, 250 feet deep. grains.
Organic matter	per gal.	7·78	6·48	4·72
Inorganic matter	,,	59·82	61·38	27·04
Total of impurities	,,	67·60	67·86	31·76

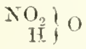
This completes the view which we contemplated for the illustration of a most important scientific issue. If polluted water be an element in generating and propagating disease, as we firmly believe it to be, even when its effects are not precisely traceable, we cannot have too large a body of witnesses in support of our demand for prompt and effective measures for giving the millions of this city a plentiful supply of water free from organic impurity, at a charge fair to the consumer as well as to the providers, and on a system which will admit of the present ineffective and dangerous apparatus for storage being utterly swept away.

DOCTRINES OF MODERN CHEMISTRY.

No. VIII.

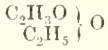
Many of our readers must have heard of Gerhardt's chemical types, and have chanced to come across formulæ shaped like these,—

Nitric Acid.



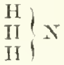
$$\left.\begin{array}{r}NO_2\\H\end{array}\right\}O$$

Acetic Ether.



$$\left.\begin{array}{r}C_2H_3O\\C_2H_5\end{array}\right\}O$$

Ammonia.



$$\left.\begin{array}{r}H\\H\\H\end{array}\right\}N$$

And if they have, perhaps have turned from them with a certain degree of dissatisfaction. The source of this feeling was undoubtedly that they saw in them a new system of notation, without feeling convinced of the insufficiency of the one hitherto in use. And yet expressions such as these, by suggesting many more important analogies of bodies to each other than formulæ previously in use can do, and indicating also much more extensively than these, the various modes of formation of bodies, and of others from them, are of the greatest value in chemistry, and have proved themselves such by the rapid progress which the science has made under their use. They have also another recommendation in their favour, as compared with the formulæ of Berzelius, and that is, they express only those points in the chemical relations of bodies which have been *proved*, or which, at least, can be *put to the test ;* while most of the old formulæ are meant to express matters impossible to test and difficult even to conceive—namely, the *arrangement* of the constituent atoms of a body. For instance, the formula KO,SO_3 indicates that an atom each of potassium and of oxygen are closely adherent, that three other atoms of oxygen and an atom of sulphur are similarly adherent, and further that these groups are stuck together, though less firmly—as indicated by the interposition of a comma between them.

Still, setting aside these grossly mechanical notions of chemical phenomena, the old formulæ can represent, the true nature of a formula being understood, many of the chemical properties of bodies ; but then Gerhardt's formulæ can represent very many more. And here we must say just a word or two about what formulæ do or can represent, and what they cannot, before proceeding to describe the nature of Gerhardt's theory.

There seems to be a rather general opinion that the formulæ of the old system are good enough for practical purposes, and that therefore any change in them is inexpedient. This is a great mistake, and one easy of refutation. What are chemical formulæ used for ? We know that many regard them as abbreviated names for bodies and use them as such. But to speak of ten grains of CO_2 is as meaningless as it would be to speak of the same quantity of the *nature of a rose or of its relations to other plants.* The symbol CO_2 does not stand for carbonic acid gas, nor do C and O stand for carbon and oxygen ! The first expresses by symbols the proportion in which carbonic acid combines with other bodies ; it expresses that $\frac{6}{22}$ of the weight of any quantity of it can form carbon or can be formed from it, the remainder being oxygen ; it expresses again that the quantity of oxygen thus associated with the carbon is twice as great as that in some chemical combinations of these two bodies ; besides many other facts. The symbol CO_2 is an abbreviation the value of which can hardly be overstated, but it is not an abbreviation for carbonic acid itself, or rather its name, but for the chemical (and even physical) *history and relations* of carbonic acid. The question, therefore, being decided affirmatively as to whether a knowledge of the chemical properties and relations of bodies is of importance or not to the student and Practitioner, it is at once evident that the best mode of expressing these properties and relations by symbols should be adopted—that is, the one which gives the most information with the least liability to error.

When we write sulphate of potash in the old-fashioned way —KO,SO_3, it cannot be to express that we know that there are little particles of the metal potassium in it, or of oxygen or sulphur, because, as we remarked on a former occasion, we know no such thing ; nor still less to express that we know that a particle of oxygen is arranged on one side of the potassium, and sulphur and other particles of oxygen on another side. We know nothing of such things, and can know nothing. What we do express by this formula is that potassium, oxygen, and sulphur can be obtained, and in certain proportions, by the transformation of sulphate of potash, or that from these it can be formed by transformation ; further, that it can be formed from, or changed into oxide of potassium and anhydrous sulphuric acid, or that in reaction with other bodies it decomposes into these bodies, either or both of which enter into other combinations, or that it is formed from these bodies in some reactions. Thus, $KO,SO_3 + PbO,NO_5 = KO,NO_5 + PbO,SO_3$ indicates (truly or not) that KO separates from SO_3 and combines with NO_5, and that SO_3 combines with PbO, and the formula KO,SO_3 indicates the power in sulphate of potash of so decomposing in certain cases. Such things as these are what formulæ serve to indicate. Of the modes of formation and decomposition of bodies, those effected by the reactions of other bodies are by far the most usual, and of chemical reactions those long known as *double decompositions* constitute the vast majority. A double decomposition, as our readers are aware, is a reaction between two compound bodies in which they transform into two others, each containing some constituents of both the original bodies. Thus, in the reaction between sulphate of potash and nitrate of lead just given, two new bodies are formed in place of these ; the one, sulphate of lead, from the lead or oxide of lead derived from the nitrate of lead and the SO_3 or SO_4 derived from the sulphate of potash ; and the other, nitrate of potash, from the residues of the nitrate of lead and sulphate of potash. As generally explained, both bodies decompose into two parts, either part of one uniting with one of the parts of the other, so as to form two new compounds.

That *double decomposition* is by far the most common and most readily effected of reactions is undoubted. When acids act on bases, or either of these on salts, alcohols, compound ethers, etc., they do so with few exceptions according to this mode of reaction ; and nearly every chemical process in the Pharmacopœia is an example of it. This mode of reaction being, therefore, so general, a formula indicating how a body usually behaves will, as a rule, express most of its reactions.

This argument recommends to some extent the formulæ long in use, but not at all to the extent that it does Gerhardt's typical formulæ.

Now we come to the consideration of Gerhardt's theory of chemical types. It is that bodies formulated so as to express their modes of *double decomposition* have formulæ the parts of which are comparable to those of the formulæ of a few bodies of well-known and well-developed properties. Four of these type formulæ were introduced by Gerhardt, one of which has since been replaced by another by later writers. As they stand they are—HCl, H_2O, H_3N, H_4C—the formulæ for hydrochloric acid, water, ammonia, and marsh gas respectively. Our readers will notice that they are all hydrides of (that is, compounds of hydrogen with) the four bodies chlorine, oxygen, nitrogen, and carbon. They are more generally represented with the symbols for each atom of hydrogen distinct; thus :—(a)

$$\begin{array}{cccc} \text{Hydrochloric acid.} & \text{Water.} & \text{Ammonia.} & \text{Marsh gas.} \\ HCl & \left.\begin{matrix}H\\H\end{matrix}\right\}O & \left.\begin{matrix}H\\H\\H\end{matrix}\right\}N & \left.\begin{matrix}H\\H\\H\\H\end{matrix}\right\}C \end{array}$$

The hydrogen symbols, however, may, for convenience, be placed in a line with that of the other element ; thus :—$HHHHC$. But the bracketed formulæ express better the fact that all the atoms of hydrogen are equally related to the other element in the formation or decomposition of the compound, and the fact also that *such a number* of hydrogen (or corresponding) atoms group together in combining, because of the chemical requirements of the chlorine, oxygen, nitrogen, or carbon (or corresponding) atoms.

The formula for hydrochloric acid, HCl, expresses that the quantity of this body that enters into a reaction is formed of but one atom of hydrogen to one of chlorine. This is decided to be the case, because in any reaction the whole of the hydrogen forms one member of the reaction, and the whole of the chlorine another. On the other hand, the formula for water, H_2O, expresses that the quantity of this body which enters into a reaction is formed of two atoms of hydrogen to one of oxygen. This is decided to be the case, because though in a few reactions the whole of the hydrogen forms one member of the reaction, in most reactions the hydrogen halving itself enters into two members of the reaction while the whole of the oxygen combined with it functions but as one. For a similar purpose, and on similar grounds, the formula for ammonia is H_3N. Thus compare the action of potassium on the three bodies having these typical formulæ—

$$K + HCl = KCl + H, \quad K + H_2O = KHO + H$$
$$K + H_3N = KH_2N + H.$$

In the first reaction, as the formula expresses, but one quantity of hydrogen to one of chlorine reacts ; in the second, two quantities of hydrogen to one of oxygen react—viz., that which becomes free and that which unites with the potassium ; while in the third, hydrogen reacts in two quantities to one of nitrogen, but these are, one a third, the other two-thirds of the whole, hydrogen indicating (what other experiments establish) that the hydrogen of ammonia reacts in three quantities to one of nitrogen.

Bodies are of the type HCl when they are combinations of two bodies having similar functions in chemical reactions to hydrogen and chlorine—that is, behave like them. On the same principle other bodies are of the type H_2O, H_3N or H_4C. For instance, what is the type of common salt, iodide of potassium, sulphide of silver, hypochlorite of soda, alcohol, acetic acid, chloroform? Salt belongs to the type HCl ; for the chlorine is an element of the type-substance, and sodium functions in reaction like hydrogen—that is, the whole of it in combination with chlorine, when separated from it, does not divide in the reaction. Iodide of potassium belongs to the same type, for the iodine and potassium function as the chlorine and hydrogen of hydrochloric acid. Sulphide of silver is of the type H_2O, for the sulphur functions like the oxygen, and the silver functions like the hydrogen—that is, the silver in a reaction may separate into two parts, which the sulphur combined with it never does. Hypochlorite of soda, $NaClO$, belongs to the water type, because the oxygen is of the type substance, and the sodium and the chlorine each function as one of the hydrogen atoms of the type. Hydrosulphate of potassium, KHS, is of the same type, for the hydrogen is one of the hydrogen atoms of the type, the potassium functions as the other, while the sulphur functions as the oxygen of the type. Alcohol, C_2H_6O, and acetic acid, $C_2H_4O_2$, are also of the same type; for in either of these bodies one of the atoms of oxygen and one of the atoms of hydrogen function respectively as the oxygen and one of the hydrogen atoms of the type, water ; while in alcohol the compound group C_2H_5 (ethyl), and in acetic acid, the group C_2H_3O (othyl of Williamson) function as the second hydrogen atom of the type. Thus :—

$$\begin{array}{ccc} \text{Water.} & \text{Alcohol.} & \text{Acetic acid.} \\ \left.\begin{matrix}H\\H\end{matrix}\right\}O & \left.\begin{matrix}H\\C_2H_5\end{matrix}\right\}O & \left.\begin{matrix}H\\C_2H_3O\end{matrix}\right\}O \end{array}$$

Lastly, chloroform, HCl_3C, is of the type marsh gas, its carbon and hydrogen functioning as the carbon and one of the hydrogen atoms of the type, and the chlorine as the other three hydrogen atoms ; thus :—

$$\text{Marsh gas}\ \left.\begin{matrix}H\\H\\H\\H\end{matrix}\right\}C \qquad \left.\begin{matrix}H\\Cl\\Cl\\Cl\end{matrix}\right\}C\ \ \text{Chloroform.}$$

(a) O standing for 16 parts of oxygen ; C for 12 of carbon.

PURE WATER THE BEST GIFT.

The cholera still lingers in London, and the Eastern districts still maintain their bad pre-eminence. In round numbers as many persons die there of cholera as in all the rest of the metropolis. Thanks to the Registrar-General, the cause of this exceptional mortality has been clearly established. It is pure water and plenty of it which is the remedy. Even of such water, good or bad, as they get, the poor of East London have not enough for purposes of cleanliness. Hence practical men, from the beginning of the epidemic, have loudly demanded that the poor shall be able to get water freely, at least as pure as it comes from the companies' mains, and that they shall not be compelled to drink from the filthy receptacles attached to their dwellings. They further asked for gifts of soap, for a brigade of scavengers, an army of house-cleaners, and cheap means of disinfection. All this might have been obtained by a fraction of the money now expended in the relief of orphans.

The Metropolitan Sanitary Association—a body which promised at the outset not only to discuss, but to do things—took this subject into consideration at a crowded meeting on Wednesday, the 12th, with the Bishop of London in the chair. But *proh pudor!* they thought that cure is better than prevention ; they refused to recommend that one mite devoted to the aid of cholera victims should be expended in sanitary measures ; and whereas pure water would probably extinguish the epidemic, they allow the epidemic to go on, and propose to ask for a Royal Commission of Inquiry when the mischief shall have been done.

Meanwhile the two following gems, representing the state of certain cholera districts in the eleventh week of the epidemic, are worth preserving :—

"The Cholera in the East-end.

"*To the Editor of the Times.*

"Sir,—I think it doubtful whether you will admit into your columns the statement which I subjoin of the sanitary conditions under which the inhabitants of ——— place in my parish (I suppress the name, because it is that of the owner) have been living during the past week. That severe illness is found among them is not so much a wonder as it is that any of the houses should be free from it, and the vestry authorities, after the failure of milder measures, have *now interfered with all the powers given them by law for the protection of health and life!!!*

“ ——— place consists of 14 houses, lying back from a poor street of the ordinary East-end type. It looks rather pleasant to the passer-by, for there is a large and flourishing tree at the entrance, and all the houses have strips of garden in front, divided by wooden palings such as you see in the country. But under the tree there is at this moment a very severe case of choleraic diarrhœa, and, as all the houses are exactly alike, a description of this No. 1 will serve for all. It consists of two small rooms, one above the other, with a staircase in the corner. There is no passage, no back door, nor any office or closet of any kind. The bedroom is low, the sash window not opening at the top, and the ventilation such as might be expected in consequence.

“ The closet accommodation for these 14 houses consists of two small garden privies at the end of the enclosure opposite the street entrance. These are without any water supply or means of flushing, and they empty into a cesspool under the entrance. The rain of the week had filled the cesspool, and when the surveyor of the vestry came with me to the spot yesterday, there lay a pool of sewage water across the entrance, through which the foul gas was coming up in large patches of bubbles, and in which the people had laid a brick, to enable them to cross without walking through the pool.

“ There is another cesspool in the place into which the house-washings go by outside drains. This cesspool is under the window of No. 4, in which house the father, mother, and grown-up daughter have all been seriously ill with diarrhœa, the two latter suffering severely now.

“ The water supply has already been improved, and a stand-pipe on the main provides all that is wanted for use in the houses, having recently replaced a common water-butt of the sort so deservedly condemned in your columns.

“ But I see no way of making houses such as these at all fit for habitation in London, and while tenants can be found for them, I fear the chances of their destruction, to make way for more decent dwellings, are but small.

“ I am, Sir, your obedient servant,
“ September 15.” “ A London Incumbent.

“ The Cholera Haunts of the East-end.

“ On Friday evening, Mr. Humphreys, coroner, held an inquiry at the Camden Head, Bethnal-green-road, relative to the death of James Hubbard, aged 44 years. The deceased was a labourer, living in a filthy house at No. 5, Holybush-place, Bethnal-green. He used to sleep in a miserable room on the ground floor, close to the closet, from which foul emanations were perpetually exhaling, and in the yard close by was the only receptacle for water—the half of a butter-firkin—which did duty as a water-butt, and from which deceased drank immediately before his rapidly fatal attack of cholera. The jury returned a verdict—‘That the deceased was found dying, and did immediately die, of the mortal effects of cholera, and his said death was accelerated by great want of sanitary arrangements, especially want of sufficient water, and receptacles wherein to keep it, defective privy, and accumulations of vegetable and other matter.’ ”

THE WEEK.

A STEP IN THE RIGHT DIRECTION.

Whilst all the Metropolitan Boards of Guardians are being blamed for apathy in regard to the care of their sick poor, it is pleasant to find exceptional cases in which they are at least endeavouring to improve. The Guardians of the St. Saviour's Union, at their meeting on the 2nd inst., unanimously confirmed a previous resolution which they had evidently adopted with the view of meeting the suggestions of the Select Committee of the House of Commons and the views of the Poor-law Board upon the subject. We have reason to believe that the Guardians have been principally moved in the matter by the representations of Mr. Bianchi, the Workhouse Medical officer.

“Resolved,—That a Dispensary be established at or contiguous to the Workhouse, from which all drugs and medicines shall be compounded and supplied to the sick poor both in and out of the Workhouse on the prescriptions of the Medical officers of the Union. That the services of a properly qualified person shall be secured, who shall be resident at the Dispensary and shall dispense the medicines ordered by the Medical officers, at such a salary, with such allowances, and under such regulations, as may be approved from time to time by the Poor-law Board. That the salary of the Medical officer of the Workhouse be £100 per annum, which, as he is to be relieved from the supply of drugs costing £50 per annum, and from the dispensing of them, will be equivalent to an increase of more than that amount per annum. That the salary of each of the district Medical officers be £80 per annum, with the usual extra fees as heretofore.”

With respect to the appointment of additional nurses in the sick wards, it was, after conference with the Workhouse Medical officer,

“ Resolved,—That four additional paid nurses be appointed to aid the head nurse in the duties of attending the sick—viz., two for day and two for night service—together with such further assistance as may be requisite from the inmates of the Workhouse as may be capable of discharging such duties, such extra assistant nurses to be *selected or approved of by the Medical officer*.”

THE CHARGE AGAINST DR. PART.

A full report of the evidence given at the adjourned inquiry into the circumstances which attended the death of Mr. Golding not having reached us at the time of going to press, we reserve any lengthened comment on the attack which has been made on the character of Dr. James Part, a well-known and highly respected Medical Practitioner, together with his defence of his conduct, until next week. In the meantime we may state that in our opinion, and we believe it will be shared by most unprejudiced persons, the evidence of Mr. Nicholas Wehnert, the solicitor who prepared Mr. Golding's will, read it to him, and heard his observations thereon—proving as it incontrovertibly does the testamentary capacity of the deceased, and his perfect acquaintance with the document that he signed—is a sufficient answer to all the allegations against Dr. Part. The most that can be urged against him is that he did not evince the highest degree of worldly foresight in some of the minor details of the affair; but it is perfectly clear that he in no instance overstepped the duties of an executor. We have just heard that the Coroner's jury have returned the following verdict, which, it will be seen, fully exculpates Dr. Part as far as the mode of death of Mr. Golding is concerned:—“ That on the 28th day of December, in the year 1865, Richard Golding was found dying and did die at 17, Stebbington-street, in the parish of St. Pancras, from the mortal effects of bronchitis; and the said jurors further say that, although a small quantity of morphia and arsenic were found in the stomach of the deceased, the said death arose from natural causes.” We shall return to the subject next week.

RECOGNITION OF THE SERVICES OF THE ARMY MEDICAL DEPARTMENT IN NEW ZEALAND.

New Zealand wars present few points of pleasurable recollection either for the philanthropist or the taxpayer. Besides the courage displayed by the individual soldier on which John Bull can fall back for comfort in all his disasters, the self-devotion of the Doctors ought to be a never-failing source of satisfaction. The history of past wars, however, proves that brilliancy of success or profundity of blundering on the part of the Executive have generally so completely filled the public eye as to throw into shadow the quiet courage and endurance which are never wanting in the Medical Department. We are happy to believe, however, that a new era is dawning. At least, it is clear that the merits of the two gentlemen whose names appear with so much credit in the following General Order have not been overlooked. Both of them are Companions of the Bath, and one is decorated with the proud badge of the Victoria Cross. We trust that they may long live to enjoy their well-earned rewards, and to reflect honour alike on the Profession to which they belong and the service in which they are engaged.

(*From Friday's Gazette.*)

"General Order.—No. 890.

"Dated, Horse Guards, S.W., September 14.

"His Royal Highness the Field-Marshal Commanding in Chief notifies to the army that Her Majesty has approved the promotion of Staff-Surgeon Anthony Dickson Home, C.B., V.C., and Surgeon William Alexander Mackinnon, C.B., 57th Regiment, to the rank of Surgeon-Major, for the ability and zeal displayed by these officers during the late operations in New Zealand.—By command of His Royal Highness the Field-Marshal Commanding-in-Chief.

"William Paulet, Adjutant-General."

THE CASE OF ALLEGED CRIMINAL ABORTION AT MELBOURNE.

(*From a Correspondent.*)

Williamstown, Victoria, July 26.

Amid the conflicting accounts of that important drama in which Dr. Beaney recently appeared as principal, mine presents this claim on the attention of your subscribers, that being a perfect stranger to all parties intimately connected with it, and having no colonial associations or interests, the love of truth alone inspires the narrative.

On May 16, in the current year, James George Beaney was indicted for the wilful murder of Mary Lewis, inasmuch as, while engaged, illegally, in effecting abortion, he produced certain injuries of her womb, which resulted in death.

The plea of the Crown was advanced—First, on the consideration of the immoral character of the deceased, she having been a mother on two previous occasions, in each of which there was an effort to conceal the pregnancy, and a correspondent secret delivery.

Secondly, from the acknowledged fact of the cessation of her menses and her own hypothesis as to its cause.

Thirdly, the evidence of certain Medical men, who deposed to her having consulted them with the view of undergoing abortion.

Fourthly, testimony that in a condition of comparative vigour she applied to Dr. Beaney on March 2, and died under his Professional supervision three days subsequently; during which period he had four interviews with his patient, in which interviews it was alleged that all witnesses were excluded.

Fifthly, that a post-mortem examination revealed a healthy condition of the viscera of the cranial, thoracic, and abdominal cavities; the uterus enlarged to the dimensions of the fifth month of gestation, open at the os sufficiently to admit three fingers, torn and perforated throughout the breadth of the fundus, the laceration being five inches long and extending through the uterine parenchyma and peritoneal investment into the abdominal cavity, and a second laceration appearing in the utero-rectal *cul de sac.*

The points elicited on cross-examination of the witnesses on the prosecution tending to exculpate the prisoner were—That the health of the girl had been very precarious for many months antecedently to her death. That no apparent motive for the commission of the crime existed in Beaney's mind, the deceased being nearly destitute, and the strictest inquiries of the detectives failing to prove that any large sum was disbursed at the colonial banks to Dr. Beaney in honouring any cheque issued by any party with whom Lewis could have been associated; that having made an appointment with deceased, Dr. Beaney actually forgot the address and all particulars of the case; that his conduct was illustrative of cruel neglect, he requiring frequent solicitation to pay each visit, rather than that assiduous attention which might have been expected from a man who, according to the theory of the Crown, had introduced sponge-tents to induce labour, and could not therefore be cognisant of the moment when uterine contractions supervening would have expelled the fœtus—revealing his crime, if absent, to the tenants of the house or to any Surgeon casually called in; that on interrogation as to cause of death he not only asserted his ignorance, giving a certificate on surmise, but requested a post-mortem, calling on a second Medical man to assist him therein; that thirty-seven hours after death the body, in inversion of the general rule, was found far advanced in decomposition; that the texture of the uterus at the point of rupture was preternaturally thin; that the edges of laceration were neither inverted, everted, or retracted, but coming regularly into apposition when approximated; that while the evidence of the attendants proved that the quantity of blood which escaped externally during life was unimportant, no accumulation of blood was discovered in the abdominal cavity after death; that though the patient was supposed to have received the injuries causing death twenty-four hours previous to the event, she was proved to have sat perpendicularly on the chamber utensil many times on the last night of her existence, and yet that the intestines were not extruded into the uterus or vagina through the lacerations; that, though Drs. Pugh and Rudall affirmed her pregnancy, neither fœtus nor placental attachment were discovered; that the injection of the uterine arteries failed to exhibit the congeries of blood-vessels always perceptible where the latter exists; that there was no distinct decidua exhibited, and that what those gentlemen asserted to be portions of that membrane adherent was pronounced by others to be merely the villous lining of the organ itself. There was one source of information on this subject to which no reference was made by the prosecution, the organs which should have furnished it having apparently been removed without special examination at the first post-mortem; at least, when the body was exhumed and subjected to a second post-mortem, on the application of the defence, the ovaries were not found, and they were not produced by the prosecution. Had a corpus luteum existed, that circumstance would not have established the fact of her pregnancy, but the converse of the proposition certainly holds good—viz. that the absence of the corpus luteum would prove that conception had not taken place. The second examination proved, however, that the first had been of a somewhat cursory character, as the liver and some other organs had apparently not been removed *e situ* for scrutiny of their tissues. I have noticed these particulars as having a tendency to cast a doubt on the validity of the accusation rather than possessing an absolute power to nullify it. I now advert to arguments demonstrative of the improbability of the occurrence of the death of Lewis on the *rationale* of the Crown.

The resistive power of the human uterus at the fifth month where labour is not initiated naturally is so great that no hand by a single effort could dilate it, and any violent attempt to effect its aperture would detach the whole organ from its lateral peritoneal connexions and carry it free up to the diaphragm.

The os and cervix at the fifth month being adapted in their expansive capacity for the expulsion of a fœtus whose broadest cranial diameter is only three-fourths of an inch, the hand could not be introduced without lacerating the organ in its longitudinal axis from os to fundus. Granting the possibility of the passage of the os and cervix, the area of the uterine cavity at that period was not sufficiently extensive to contain the hand.

The removal of the fœtus and placenta—the supposed object of the prisoner—did not necessitate any violence likely to result in such perforation.

From the very mobile and frail connexion of the uterus in the abdomen, the ligamenta lata would have been torn asunder ere the rupture at the fundus could have ensued.

Lastly, so far from the patient surviving such injury for twenty-four hours, eating, drinking, talking, and sitting up, the effusion of blood into the cavity of the peritoneum and through the vagina would have been so great that death would have occurred almost instantaneously.

In the face of these difficulties and of the great facts that the girl's pregnancy had not been clearly established; that no fœtus had been discovered; that the performance of any violent and painful operation by Dr. Beaney was shown to be in the highest degree improbable by the evidence of the people of the house, who deposed that no cries were heard during his visits; and that a theory of uterine disease and ill-health would account for her symptoms; that the post-mortem examination was faulty; and that there was no motive adequate to prompt such a crime, the jury acquitted the prisoner. I may add that their verdict has given great satisfaction here.

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

(Continued from page 262.)

SPECIAL REPORTS.

In the Physiological Section, two special reports bearing on Medicine were presented, read, and discussed.

REPORT ON THE NATURE OF MUSCULAR IRRITABILITY AND THE RELATIONS BETWEEN MUSCLE, NERVE, AND BLOOD.

By Richard Norris, M.D. (Birmingham).

Dr. Norris's report was an admirable contribution to physiology, and the several propositions were each inductively sustained. The subject was discussed under the following propositions:—

1st. That the property of irritability in muscle is capable of a high degree of exaltation above the normal standard, and that the highest degree of susceptibility is attained in cold bloods long after death, or under conditions tantamount to death.

2nd. That the forces of nerve and muscle, the neurility of the former and the irritability of the latter, are not only independent of each other for their existence and maintenance, but actually possess an antagonistic relation—that is to say, nerve tissue, instead of producing, is, when in action, constantly concerned in maintaining a condition of things which diminishes muscular irritability, and that not simply when it is engaged in the production of motion.

3rd. Conversely, that muscular tissue, relieved from the operation or influence of nerve tissue, gradually acquires exalted contractile powers either in the presence or absence of the blood.

4th. That the blood, or the *nutritional plasma* derived therefrom, not only furnishes the materials by which muscular irritability is maintained, but is likewise the determining cause of that polar arrangement of the muscular molecules which maintains or restores the elongated or relaxed state.

These propositions were sustained by constant reference to experiment, much consideration being devoted to the proof that the principle of volition, when in operation, exhausted the muscular and nervous forces, and produced the condition which in common parlance is recognised as fatigue; and that in the absence of volition—or, what amounted to the same, nerve in action—the forces of the system were considerably increased; hence the use of sleep was obvious. The nervous system was not only concerned in exhausting the muscular during the production of motion, but constantly while maintaining the normal position of the animal.

Dr. Norris said that profound ætherisation, sleep, fainting, and death were different degrees of what might be called functional neural paralysis in contradistinction to purely muscular, a form in which the special life of muscle was diminished or destroyed.

The best condition for the exaltation of the peculiar life of muscle was the absence of nerve, as then the forces were not expended as fast as the chemical reactions between the muscular tissue and the blood led to their generation.

In support of the final proposition many experiments were adduced which clearly showed that the relaxed or elongated condition of the muscles was maintained by the blood, and that the blood under all circumstances opposed the state of contraction which it was the special function of nerve to bring about.

The various affections of muscular fibre, as they had been observed in the author's experiments, were then described. 1. A muscle may exist in the elongated or uncontracted state with all its dynamical powers perfect; this is its normal condition in the absence of volitional effort. 2. It may exist in this state when deprived of all dynamics, or, in other words, in the absence of irritability. Both these conditions of relaxation may be associated with softness or flaccidity of the muscular structure, the former necessarily so, the latter not, as the fixity of rigor may prevail. Again, a muscle may exist in a state of complete contraction both in the presence and absence of its dynamics; in a state of softness, or in a hard coagulated state. As with the state of elongation, so with that of contraction, the truly dynamical state is one of softness. Properly speaking, irritability is no more the tendency which a muscle exhibits to contract than the disposition it exhibits to elongate subsequently to contraction; in fact, a comprehensive definition must include both these conditions; neither are either of these states to be considered, as far as muscle alone is concerned, as conditions of rest, for they are both active states as long as the muscle is a vital structure, and both inactive when the dynamics of muscle are absent. The attractive state of the muscular molecules which represents contraction is the condition in which force is exhausted by the apposition of unlike polarities, while, the state of elongation being that in which every molecule is opposed to every other, force may be accumulated. In proportion to the amount of force accumulated in the molecules will be the intensity of their contractive or elongative energy, and also in the ratio of their charge will be their proclivity to disturbance, or, in other words, susceptibility to stimuli.

The author combated the view of Dr. Radcliff, who regarded the contraction of a muscle as taking place simply on the withdrawal of some elongated force, and showed by an analysis of the various conditions under which muscle existed that no theory met the case so well as that of Du Bois Reymond, in which the molecules of muscle were regarded as centres of electro-motor action, arranged in a dipolar series.

In a word, one fluid, two forces or poles—the repulsive polar attitude maintained by the blood, and the attractive inducible by nerve and external stimuli.

REPORT ON THE PHYSIOLOGICAL ACTION OF CERTAIN COMPOUNDS OF THE AMYL AND ETYHL SERIES.

By Dr. Richardson, M.A., M.D. (London).

These we hope to lay before our readers in an extended form.

LETTER COMMUNICATING RESULT OF APPLICATION TO THE GENERAL MEDICAL COUNCIL AS TO A GRANT FOR INVESTIGATING THE PHYSIOLOGICAL ACTION OF REMEDIES.

By Dr. Acland, M.D., F.R.S. (Oxford).

There was an unanimous opinion on the part of the Section that the failure of the application was much to be regretted, but that Dr. Acland should pursue the same course until pressure from without led to a more satisfactory and scientific decision on the part of the Medical Council.

ON THE ENTOZOA OF THE DOG.

By Dr. Cobbold, M.D., F.R.S. (London).

Dr. Cobbold read a paper "On the Entozoa of the Dog in relation to Public Health." He gave a full account of the parasites to which the dog is subject, stating in the course of his paper that in eating trichine pork about ten millions of these creatures would not do a man serious harm, fifteen millions would make him feel very uncomfortable, and twenty millions would probably destroy life.

The Section then adjourned till Monday.

Dr. Cobbold also read a paper "On the so-called Cattle Plague Entozoa," and a "Supplementary Report of Experiments with Entozoa." These communications were made to the Biological Section and the Physiological Subsection (D).

ON THE COLOUR OF MAN.

By John Davy, M.D., F.R.S. (Ambleside).

Dr. Davy first enumerated the various shades of complexion and the position in which they were found, and then went into the subject of causation. The warmer the climate the less the difference in the venous and arterial blood. The Esquimaux were neither fair nor dark brown, but intermediate. The long continuous solar effect for one-half the year associated them with the inhabitants of the tropics, whilst their living underground the other half assimilated them with inhabitants of the fairer countries. He continued these remarks so as to show that a colder climate promoted fairness of the skin. With regard to the Chinese he ventured the conjecture that their colour might be owing to the imperfect development of blood to bile. The hereditary colour might pass in course of time into that distinctive of the climate. Of this he gave a variety of instances, and invited discussion in a subject of no ordinary interest in regard to health and beauty.

Dr. Davy also read a paper on the question—Is the carbonate of lime in the eggshells of birds in a crystalline or amorphous state?

(Both papers were read in the Physiological Department.)

ON SOME OF THE BEARINGS OF ARCHÆOLOGY UPON CERTAIN ETHNOLOGICAL PROBLEMS AND RESEARCHES.

By Robert Dunn, F.R.C.S. (London).

[*Section E. — Geography and Ethnology.*]

Mr. Dunn dwelt on man's great antiquity, remarking that the men of the Drift shared the possession of the forest-clad valleys and plains of Europe with the mammoth, the cave bear, and the woolly-haired rhinoceros, when the British Isles were alike united to one another and to the Continent of Europe, and he referred to M. Lartel's exploration of the cave of Auvignac, in the Pyrenees, as not only proving the high antiquity of man, but as tracing back the sacred rights of burial, and still more the important belief in a future state of existence, to times long anterior to history and tradition. To the cave men of those days, and to the Endi tribe in the Valley of the Somme, with their rude flint implements, he found a parallel among existing savages and the Esquimaux tribes of the present day. Human palæontology, however, had made plain to us that in the Celtic times there existed in Europe as primitive peoples — both a brachycephalic and a dolichocephalic race.

ON A PECULIAR CHANGE OF COLOUR IN A MULATTO.

By Balthazar Foster, M.D. (Birmingham).

[*Section D.—Physiology.*]

Dr. Foster exhibited some beautiful photographs of a mulatto whose skin was undergoing change of colour—changing, in fact, from dark to white. The man was in moderate health, but rather feeble. Where the white skin had been blistered there had been return of black pigment.

ON THE ACTION OF CARBONIC OXIDE ON THE BLOOD.

By Arthur Gamgee, M.D. (Edinburgh).

[*Section D.—Physiology.*]

When carbonic oxide is passed through venous blood it acquires a persistently florid colour, which was first pointed out by Claude Bernard, and the colouring matter, although it possesses a spectrum identical with that of ordinary blood, is distinguished from it by not yielding, when treated with reducing agents, the spectrum first described by Stokes as that of reduced or purple cruorine. This property of carbonic oxide blood was first pointed out by Hoppe. As a result of his own investigations, Dr. Gamgee has found:—First, that the peculiar compound of carbonic oxide and blood-colouring matter is formed even when the latter has been reduced, and is still in the presence of a large excess of a reducing solution. Secondly, that when the compound of carbonic oxide and colouring matter is treated with acetic acid, whilst hæmatine is formed, carbonic oxide is disengaged. Thirdly, that carbonic oxide, besides modifying the optical properties of the colouring matter of blood, affects in a remarkable manner the point at which it coagulates, so that, under its influence, an almost perfect separation of hæmatoglobulin (using the term to express the normal colouring matter of the blood) from the albumen may be effected. Normal ox's blood, when diluted with nine times its volume of water, becomes turbid at 145° Fahr., and when the temperature has reached 172° Fahr. its colour is completely destroyed. If such a blood solution have been treated with carbonic oxide, whilst, when the temperature has been raised to 172°, the albumen has separated in flakes, the blood-colouring matter remains wholly unchanged. It is only when the temperature is raised to about 185° that the colouring matter commences to coagulate. The coagulum which is obtained on further heating is of a reddish colour, unlike that of normal blood. Fourthly, if blood be saturated with CO, and evaporated to dryness at a temperature below that at which the colouring matter coagulates, the dry residue yields its colouring matter to water, and the solution presents all the optical properties of carbonic oxide blood. When this solution is boiled, the compound with the colouring matter yields carbonic oxide gas. Fifthly, poisoning by pure carbonic oxide, or by the fumes of charcoal, invariably leads, before death occurs, to those changes which are characteristic of carbonic oxide blood; becoming quite irreducible. Sorby's micro-spectroscope answers admirably for these investigations; and the solution which Dr. Gamgee recommends for this special process is one containing tin, in preference either to sulphide of ammonium or protoxide of iron. Sixthly, whilst it results from Dr. Gamgee's researches that no gas or poisonous agent exerts the peculiar action on blood-colouring matter which is produced by CO, it is specially to be noticed that prussic acid and laughing gas, which have the power of rendering blood florid, do not prevent its being reduced. Thus, the question which Claude Bernard suggested some years ago, as to whether prussic acid exerts on blood a similar action to that of carbonic oxide, is answered in the negative.

VARIATIONS IN THE GREAT ARTERIAL BLOOD-VESSELS.

By George D. Gibb, M.D. (London).

[*Section D.*]

Deviations in the origin of the great vessels from the aorta were seldom or never recognised during life, and did not necessarily constitute a condition of morbidity any more than transposition of the viscera. Whether they exerted any liability or disposition to morbid action he thought extremely improbable, and they occurred in persons without any external manifestation of abnormity.

In the first of his examples the aorta gave off four branches, instead of the usual three. These were the left carotid and subclavian, arising in the usual manner, and the right carotid and subclavian, each arising direct from the arch of the aorta by a distinct and separate trunk, there being an absence of the innominata. The two vessels on the right side were larger than on the left; the left carotid was the smallest vessel of the four. The course of these vessels was the usual one, but the laryngeal branch of the superior thyroid artery of the left side perforated the thyroid cartilage, instead of passing inwards through the thyro-hyoid membrane in the usual manner. On the right side this vessel did perforate that membrane. This peculiarity has been described and figured by Mr. Quain in his great work on the arteries. Both femoral arteries varied in their division; that on the right side divided into two branches at Poupart's ligament, whilst that on the left side divided into three branches—some might call it four—from the internal circumflex, originating near the origin of the profunda. The left great ischiatic nerve divided into two branches on emerging from the great ischiatic foramen, but not the right. In the individual the subject of these, life ended at 60 from phthisis, but all the arterial trunks of the extremities were in a state of firm calcification, noticed during life.

In his second instance, the main trunk or ascending portion of the arch of the aorta divided into two great branches, the first of which subdivided into the innominata and left carotid, the latter crossing the trachea obliquely upwards to the left side; the innominata divided into the two usual branches of right subclavian and carotid. The other subdivision of the arch was into the left subclavian and descending aorta, both vessels taking their usual course. If his interpretation of this peculiarity were correct, he considered it a unique instance of division of the aorta into two branches, which, in their subdivision, gave off the proper trunks. No similar example had been found, even in Mr. Quain's great work, and the inference was that it was unique. Differing from the first case, there were no peculiarities noticed in other parts of the body.

Mr. Quain gives three examples of reduction of the primary branches to two, as in Figures 6, 7, and 8 of his 6th Plate; the nearest approach to the case of the author is his Fig. 6, but a comparison of the two figures shows them to be completely different. The division of the aorta in Dr. Gibb's example was not dissimilar to that of the division of the abdominal trunk into the two iliacs.

ON THE CHEMICAL ACTION OF MEDICINES.

By Bence Jones, M.D., F.R.S. (London).

See the *Medical Times and Gazette*, September 8, 1866.

ON THE MUSCULAR FORCE OF ANIMALS.

By Dr. Lyon Playfair, F.R.S. (Edinburgh).

[*Section B.—Chemical.*]

The author explained very clearly the different views of the subject laid down by Franklin and Baron Liebig. He gave the results of experiments which had been tried with feeding rats and dogs for a considerable time on meat totally free from fat, showing that nitrogenous substances could be made into muscular force. With regard to the amount of nitrogenous matter naturally consumed in food, it appeared that in the fare of soldiers of all countries the amount was 4·2 oz. for each man. The ordinary amount of work that a soldier performed might be estimated as raising 48,000 kilometres to the height of a metre. There had been much more done by the soldier, more especially during the late Prussian war and the forced marches of Sherman. The author of the paper then proceeded to describe the course of training pursued by the Cambridge, Oxford, and Hull boat-racing crews.

(DISCUSSION.)

In the discussion that followed, Dr. Edward Smith contended—1. That there was no *primâ facie* ground for the division of foods by Liebig into heat-formers and flesh-formers, since the latter contain carbon and hydrogen like the former, which must be available for the production of heat. 2. That his experiments, as well as those of Voit, had proved conclusively that the emission of nitrogen was no measure of muscular waste, since with the most severe exertion the excretion of urea scarcely at all increased. 3. That the emission of carbonic acid is the true measure of muscular action, since he had proved in 1860 that the finger could not be kept in motion without increasing the emission of that product, and the emission increased as the exertion increased. He had in the same year called attention to this as the true measure of muscular action, and was the first to do so. 3. That whilst the experiments quoted by Professor Frankland to show that the consumption of carbon and hydrogen was the source of muscular power—those of Fick and Wislicenus—were inconclusive, there was much reason to believe that the conclusions were not far wrong. They were inconclusive because the experimenters had taken the period of emission of urea to represent that of its formation; because the emission is at all times dependent upon the excretion of water by the kidneys, and must in these experiments have been lessened during exertion by the fact of much of the fluid passing out by the skin and so much less by the kidneys; because no accurate basis of comparison was obtained; and because the duration of the whole inquiry was too short.

(To be continued.)

REVIEWS.

Die Krankheiten der Ovarien; ihre Diagnose und Behandlung. Von T. SPENCER WELLS, F.R.C.S. Uebersetzt von Dr. F. Küchenmeister. Erster Band, Leipzig, 1866. 8vo, pp. 416.

Diseases of the Ovaries; their Diagnosis and Treatment. By T. SPENCER WELLS. Translated by Dr. F. Küchenmeister. Leipsic, 1866. Vol. I., 8vo, pp. 416.

THE translator of Mr. Spencer Wells's first volume is Dr. Küchenmeister, so well known in this country as the author of the work on Parasites, which was translated many years ago for the Sydenham Society by Dr. Risdon Bennett. In his preface he says:—

"I now appear for the first time before the Medical public as translator of a foreign book, and I originally undertook this translation solely for my own instruction, and in order that I might become thoroughly acquainted with the contents of this valuable work."

He states that he has closely followed the original, except that he makes his author speak in the third person in the translation, whereas in the original he speaks in the first person. He does not give his reasons for this curious alteration, which must have added very much to his trouble, and often gives an awkward turn to a paragraph. His own additions to the volume consist of occasional foot-notes, and a very elaborate table, in which the 114 cases of completed ovariotomy in the work, and thirty-six others, the records of which have been communicated to him by Mr. Wells, represent the particulars of 150 cases. He also gives a detailed account of the mode of performing ovariotomy, and makes some very minute observations as to the effect of the length of the incision upon the mortality in the 150 cases of Mr. Wells's completed operations. In the 150 operations, there were 103 recoveries and 47 deaths—a mortality of 31 per cent; but the mortality increases with the length of the incision. For instance, there are 42 operations with an incision of 4 inches, and 42 with an incision of 5 inches; in the first 42 there were only 10 deaths, in the second 42, 15 deaths—a difference of 10 per cent. in the mortality in favour of the shorter incision. The translator says:—

In 3-inch incisions we have 75 per cent. recoveries and 25 per cent. deaths.

In 4-inch incisions we have 76·1 per cent. recoveries and 23·9 per cent. deaths.

In 5-inch incisions we have 64·3 per cent. recoveries and 35·7 per cent. deaths.

In 6-inch incisions we have 70·6 per cent. recoveries and 29·4 per cent. deaths.

He adds that the number of cases when the incision was longer than six inches is too small for any reliable inference to be drawn, but that the general result is in favour of short over long incisions, and of the rule to make an opening *about* four inches long, and only enlarge it when obliged to do so. Many valuable observations are made upon other steps of the operation, and one case of completed ovariotomy, and one in which extensive adhesions prevented the completion of the operation, in the practice of the translator, are fully detailed. Some modifications, of no great importance, are suggested in the clamp and trochar, and the galvano-caustic wire, instead of the knife, is advised for the separation of the cyst. Dr. Küchenmeister is also desirous that operators should try whether transfusion of a few ounces of blood might not be useful in cases where the shock of the operation has been excessive. A very interesting section on pelvic hæmatocele completes the additions of the translator.

We have only to add that the volume is a handsome one, extremely well printed, and with all the woodcuts of the original. We congratulate the author on the fact of his work having been translated by so distinguished and enthusiastic a German *confrère*, and we join in the translator's expressed desire that the second volume, which has long been anxiously expected, may be published without any unavoidable delay.

On Wakefulness. With an Introductory Chapter on the Physiology of Sleep. By WILLIAM A. HAMMOND, M.D. Philadelphia: J. B. Lippincott and Co. 1866.

THE basis of this *brochure* of Dr. Hammond's "On Wakefulness" is an essay published last year in the *New York Medical Journal*. In its present state it is comprised in four chapters, extending over ninety pages, but there is no evidence in it of any filling out by the incorporation of irrelevant matter. From the chapter on the treatment of wakefulness and from the details of cases given throughout the book, the author seems to have little confidence in mere drugging with "soporifics." Bromide of potassium is almost the sole medicine to which he resorts in these cases, but the use even of this is only called for in certain instances. Opium he very seldom employs. Hyoscyamus is more generally admissible, but it does not seem to possess any advantage over, or even to be equal to, bromide of potassium. Valerian, assafœtida, and other *anti-spasmodics* are not commended. Tonics, however, are almost always useful. Hygienic measures are the remedies Dr. Hammond trusts to. But before attempting to indicate these, we had better say something as to the author's views on the pathology of wakefulness.

Wakefulness is due to congestion of the brain, or more accurately, in the author's own words, to an increase in the quantity of blood circulating in the brain. But this is either absolute or relative: *absolute* when there is an increase beyond the quantity normal to the brain; *relative* when there is an increase beyond the quantity to which the individual has become accustomed during a reduced state of the system, but one not beyond the normal amount. Cases having the former character constitute what the author calls those of active insomnia; those having the latter character, passive insomnia. To return now to treatment. The indication for this is to diminish the amount of blood in the brain. Among drugs, bromide of potassium does this, and hence its efficacy in causing sleep in these cases. That this salt does reduce the amount of blood in the brain is shown, firstly, by the author's experiments upon animals, and notably those upon dogs having the brain exposed by trephining and placed under the influence of the drug, in which the brain was always found to contain less blood circulating through it; secondly, by the effects of the salt upon the human subject, in whom a flushed face, throbbing of the carotids and temporals, suffusion of the eyes, feeling of fulness in the head, all disappear as if by magic under its use. Opium, too, lessens the amount of blood in the brain, when given in the appropriate dose.

We are glad to see the author adduce experiments with this drug to prove the distinction between its sleep-producing effects in a moderate dose, and its stupefying or coma-producing effects in a large dose; for these experiments bear upon the essential difference between the therapeutic and the toxic effects of this and other members of the class narcotics, now becoming more widely recognised. But for these experiments we must refer to the work itself.

The hygienic measures mainly adopted in the author's treatment are the removal, when practicable, of the exciting causes of wakefulness; the administration of good food, including nutritious suppers, avoiding only the overloading the stomach, itself a material cause of this complaint; alcoholic stimulants in the passive cases; coffee in certain cases, especially of females of languid circulation; moderate but regular physical exercise; the warm bath and cold water to the scalp; lastly, an avoidance for the time of the horizontal position in composing for sleep, as one favouring congestion.

The introductory chapter on the Physiology of Sleep is very interesting, but in parts decidedly open to criticism. For instance, there is a great lack of philosophy in the statement, as to the cause of sleep, that we sleep because we want to do so, and that the brain reasons independently of the owner's cognisance. Yet hear our author (p. 10)—"The exciting cause of natural and periodic sleep is undoubtedly to be found in the fact that the brain at stated times feels the necessity for repose, and for replacing the substance which has been destroyed by the active discharge of its functions." If sleep, as it probably is, is the circumstance under which the nutrition of the brain is effected, we, of course, understand the *use* of sleep. We all know, too, that we feel to want sleep at stated periods, and that we do sleep; but to tell us this is not to tell us the *cause* of sleep. And can our brains be supposed to *feel* what we do not—whether it be the necessity for replacing its destroyed substance, or anything else? The occurrence of sentences like this—mere words without practical meaning—in scientific writings, more particularly on Medicine, is unfortunately too common, being as it is a serious bar to scientific progress; hence the attention we give it. A few pages further on we are told that "the brain of yesterday is not the brain of to-day." Again—"In sleep the mind is active; in stupor it is as it were dead." Ought these assertions, we ask, unqualified as they are by the context, to occur in a scientific essay?

But in spite of these blemishes we must decidedly commend the work to our readers as containing, in the physiological chapter, the account of some most interesting experiments of the author, which show that in sleep the amount of blood circulating through the brain is naturally diminished; and as being altogether an exceedingly readable production for a spare hour.

GENERAL CORRESPONDENCE.

SIR H. HOLLAND'S ANTICIPATION OF THE MODERN DOCTRINE OF CONTAGION.

Letter from Dr. Lionel S. Beale.

[To the Editor of the Medical Times and Gazette.]

Sir,—The writer of the article with the above heading in the *Medical Times and Gazette* of September 8 is evidently under the impression that my conclusions concerning the nature of the poison of contagious diseases support in some measure the opinions of those who have long attributed these diseases to the influence of low animal or vegetable organisms. This is, however, a mistake.

The conclusions which I have ventured to publish result from many considerations arrived at in the course of minute anatomical inquiry, prosecuted during the last five years, and almost necessarily follow if certain positions I have been led to take up are proved to rest upon a secure foundation. If, however, in anything I have written, it should appear that I have not given due credit to those who have thought and worked before me, I should like at once to have an opportunity of making amends. The arguments advanced by me will be found in papers published in the *Medical Times and Gazette*, and in my report upon the cattle plague.(a) I shall not ask for space to recapitulate what I have there stated, but I may be permitted to say—

1. That I have advanced facts and arguments which seem to me opposed to the view that the contagious matter consists either of insects, of animalcules, or any kind of vegetable organism.

2. I think that it consists of living matter formed in the organism of man or animals—the particles being exceedingly minute, and capable of retaining their vitality for a long time, and under various conditions, although separated from the body.

3. That these living particles bear somewhat the same relation to the germinal matter of normal cells that pus corpuscles or cancer cells do, and therefore that the contagious germs have been derived by continuous descent from the normal germinal matter of the organism. They may have descended from a lymph or white blood corpuscle, or from the germinal matter of an epithelial cell; but I will not enter into this further now.

4. If this be so, the living contagious particle is not, therefore, of the nature of a *parasite*, nor can it be regarded zoologically as a species, nor has it originated in the external world and grafted itself upon man, but it has originated in his organism, and is, indeed, degraded living matter descended from what was once normal living matter of the body itself.

September 10. Lionel S. Beale.

(a) This will be shortly republished in a separate form.

OBITUARY.

THE LATE MR. FULLER, OF PICCADILLY.

We announced three weeks ago the decease of the well-known and estimable Mr. Fuller, of Piccadilly. He was the son of a general Practitioner at the West-end of London, and born in 1785. When he was three years old, his father removed to No. 111, Piccadilly, which the firm has occupied ever since, and at the proper age began to give his son a careful education in the groundwork of the Profession. He was a pupil at the Windmill-street School of Medicine at the time when Dr. Cook and Dr. Roget lectured on Medicine; Mr. Wilson, on Surgery; Mr. Brand, on Chemistry; and Mr., afterwards Sir, Benjamin Brodie was just commencing the duties of Demonstrator in Anatomy.

Mr. Fuller obtained his Diploma at the Royal College of Surgeons in the year 1813, and was shortly afterwards admitted to a share of his father's practice. In the year 1818, in consequence of the failure of his father's health, he was joined in partnership with Mr. Thos. Hammerton, who up to that time had been Resident Apothecary at St. George's Hospital, and who cordially co-operated with Mr. Fuller till he retired in the year 1859, and still continues the active duties of his Profession. From the earliest period of his Professional life Mr. Fuller was led by his father to feel the warmest interest in St. George's Hospital, and was elected a governor of that Institution on September 19, 1817, from which time he devoted himself on all occasions to advance its prosperity. In the year 1819 he succeeded his father in the post of "Visiting Apothecary" to the Hospital, in which office the extraordinary knowledge he possessed respecting the nature and purity of drugs, in many instances, proved of essential service to the Institution. At that time everybody felt that St. George's Hospital ought to be rebuilt; but the Board of Governors were afraid that they should fail in obtaining the necessary funds. Then Mr. Fuller took up the matter single-handed, and very soon raised £20,000 among his patients and friends, so that the governors took courage to proceed with the work he had so well begun, and in honour of the real founder of the new Hospital caused one of the wards to be named "Fuller Ward." Now that he has departed from the scene of his labours, we hope that another permanent memorial will be provided in the shape of a bust, portrait, and a Fuller Scholarship.

Throughout life he was always willing to lend a helping hand to any one who needed it, and was a liberal subscriber to various charitable institutions, especially those connected with his Profession; amongst others he supported most warmly the Society for the Relief of the Widows and Orphans of Medical Men and the Royal Medical Benevolent College. He was always partial to scientific pursuits, and in almost all subjects which are now included in the term "sanitary medicine" he was far in advance of his age.

He was one of the number who caused the first inquiries to be made into the health of towns, and it was owing to him that a Committee of the House of Commons thirty years ago investigated the whole subject of drainage and sewerage and the application of liquid manure to the land. The only results of the Committee's deliberations were a thick Blue Book and resolutions to the effect that the then existing system was utterly bad, and that the subject was too vast to be taken in hand at that time. At a later period he endeavoured to form a public company to utilise the sewage of London—a plan which now appears likely to be realised.

It is well known now why that company failed. They unfortunately took the sewage of that district of London which is of the least value, and proposed to sell it to the occupiers of just that part of the environs of London where the land needs sewage the least and other manure is the cheapest. Far different, we may hope, the results will be of the application of sewage to barren land on the north bank of the Thames.

From having been a pupil of Sir Benjamin C. Brodie, he became one of his warmest admirers and friends, and was Chairman of the Brodie Testimonial Committee. His practice throughout life was exceedingly large, and was principally among people of rank and influence at the West-end of London. His capabilities for work were excessive, as an instance of which it may be mentioned that during the epidemic of influenza in the year 1831 he saw and prescribed for, on one day, no fewer than 184 patients, and that for more than a fortnight his daily list contained over 150 names.

At this time his extraordinary energy and pluck stood him in good service. He was very ill himself with inflammation of the eyes; but he drove about incessantly from house to house, saw his patients, returned to his carriage, where he lay back, and applied a bladder of ice to his eyes, and meanwhile dictated his prescriptions to a younger Practitioner who accompanied him. So soon as the prescriptions had accumulated sufficiently, they were sent home, by a servant who followed in a cab, to be dispensed and sent out.

In the year 1819 he married, and had a family of eight children—four sons and four daughters. Of his sons, two are clergymen in the Church of England; one is Physician to St. George's Hospital, and the other is his successor in his practice.

Up to his latest day Mr. Fuller never failed in the work of doing good. Shortly after retiring from practice he helped in doing for the National Schools of his neighbourhood what he had done long before for St. George's Hospital, and assisted materially in collecting subscriptions in a neighbourhood where the inhabitants are all supposed to be so rich that they think nobody need give.

On retiring from practice he amused himself, like the ancient model, in experiments on agriculture and the value of different manures.

He was in some respects fortunately situated, for he lived in a good situation in the best thoroughfare of the West-end, close to an increasing and aristocratic neighbourhood, and at a time ere Belgravia was he had patients at every house in Grosvenor-place. Yet it is impossible that any one could have acquired and maintained the confidence of so large a number of patients of the acutest and most sensitive class without practical skill and sagacity of a high order, which would have insured him success in any other department of active life as well as in Medicine. Nor did his self-possession ever desert him. In his last illness, when he was seized with symptoms of obstruction of the bowels, he discussed every point of diagnosis and treatment with his Medical attendants, recounted all the similar cases which he had attended, estimated the chances of relief from Medical treatment, and said that if not soon relieved he should die, and that sooner than they might think. He died at his residence, Sarratt-hall, Rickmansworth, Herts, on August 28, 1866, in his 82nd year.

MEDICAL NEWS.

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Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to practise on Thursday, September 6 and 13, 1866:—

Owen Tudor Gronow, Carlton-villas, Slough; Robert Robinson, Avenham-place, Preston; Thomas Leah, Lock Hospital, Harrow-road; John Astley Bloxam, Bedford-place, Russell-square; William Dyson Wood, Westgate, Wakefield; James Riley Greenway, Sandy, Beds; Robert Elphinstone, Oakfield House, Streatham; George Sampson Elliston, Ipswich, Suffolk.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Bellamy, Edward, M.R C.S., has been appointed Demonstrator of Anatomy to the Charing-cross Hospital Medical School.

Brighouse, J., M.R.C.S.E., has been appointed Surgeon to the St. Marylebone Dispensary.

Carter, R. B, M.R.C.S., has been appointed Resident Medical Officer to the Bath United Hospital.

Harries, Gwynnb, M.D. Lond., has been appointed extra Medical Officer in charge of the Pembroke Dock District of the Pembroke Union.

Mackenzie, Morell, M.D., has been elected Assistant-Physician to the London Hospital.

Maxwell, E. C., M.R.C.S.E, has been appointed Assistant House-Surgeon to the West London Hospital, Hammersmith.

Moore, Robert H., F.R.C.S.I., has been appointed Dentist in Ordinary to His Excellency the Lord Lieutenant of Ireland.

Oglesby, R. P., M.R C.S.E., has been appointed Assistant Demonstrator of Anatomy to the Leeds School of Medicine.

Read, A. W., M.R.C.S.E., has been appointed House-Surgeon to the West London Hospital, Hammersmith.

Sykes, W. J., M.B., C.M, has been appointed House-Surgeon to the Clayton Hospital and Wakefield General Dispensary.

Wright, C. J., M R.C S.E., has been appointed Assistant-Demonstrator of Anatomy to the Leeds School of Medicine.

BIRTHS.

Ambler.—On the 12th inst., at Hemel Hempstead, the wife of E. H. Ambler, F.R.C.S.E., of a daughter.

Bacot.—On the 24th inst., at Bryanston-street, Portman square, the wife of Surgeon-Major Bacot, of a daughter.

Barker.—On the 6th inst., at 14, Eaton-place, Brighton, the wife of S. Barker, M.D, of a son.

Craven.—On the 9th inst., at 14, Albton-street, Hull, the wife of M. Craven, M.R.C S.E., of a daughter.

Cunningham.—On the 7th inst., at the Curragh, the wife of Dr. J. O. Cunningham, 60th Royal Rifles, of a son.

Graves.—On the 2nd inst., the wife of R. W. Graves, M.R C.S.E., of Gloucester, of a son.

Jones.—On the 17th inst., at 22, Clapham-rise, the wife of Sydney Jones, M B., of St. Thomas's-street, of a son.

Latham.—On the 14th inst., at 15, Sidney-street, Cambridge, the wife of P. W. Latham, M.D., of a daughter.

Roth.—On the 7th inst., at 16a, Old Cavendish-street, the wife of M. Roth, M.D., of a son.

Sercombe.—On the 8th inst., at 49, Brook-street, Hanover-square, the wife of E. Sercombe, M.R.C.S.E., of a son.

Smith.—On the 17th inst., at Cobham, Surrey, the wife of Rowland Smith, M.R.C.S.E., of a daughter.

Winter.—On the 5th inst., at Brighton, the wife of J. N. Winter, M.R.C.S.E., of a daughter.

MARRIAGES.

Croker—Smith.—On the 5th inst, at the parish church, Llysfaln, Carnarvenshire, Arthur Croker, Staff Assistant-Surgeon, to Frances, third daughter of Henry Smith, Esq., of Adelaide-road.

Furse—Rowed.—On the 13th inst., at St. James's, Notting-hill, E Furse, M.R C.S.E., of South Molton, Devon, to Emily Clara, only child of the late Henry Rowed, Esq.

Noott—Patten.—On the 6th inst., at St. Jude's Church, Southsea, William Francis Noott, M.D., to Mary Margaret, only child of the Rev. F. Murray Patten.

Nottingham—Worthington.—On the 5th inst., at the Chapel of the Charterhouse, John Nottingham, M D., of Liverpool, to Sarah, youngest daughter of the late Stephen S. Worthington, Esq., of Liverpool.

Tarrant—Nantes.—On the 5th inst, at Stonehouse, Devon, T. Tarrant, M.D., Surgeon Cape Mounted Rifles, to Ellen Christina, second daughter of the Rev. W. H. Nantes, vicar of Stonehouse.

White—Cross.—On the 5th inst., at Upper Clapton Congregational Church, S. S. White, M.R.C.S.E., to Sarah, only child of J. H. Cross, Esq., Upper Clapton.

DEATHS.

Bennett, F., M.R.C.S.E., J. P., of Gateshead, on the 24th inst., aged 59.

Greville, C., M.D. Edin., at 8, Loraine-road, Holloway, on the 13th inst.

Lee, M. J., L.R C.S. Edin, at Blarney, Co. Cork, on the 2nd inst.

Leonard, C., M.R.C.S.E., of Old Kent-road, on the 28th inst., aged 64.

Skey, Dr. Joseph, at 41, Baker-street (late Physician to the Forces, and Inspector-General of Hospitals), on the 18th inst., in his 94th year.

Smith, Peter, M.D. (Pennsylvania), of 29, Wimpole-street, at Bath, on the 29th inst., aged 48.

Thompson, George Septimus, M.R.C.S.E., at Burnopfield, Gateshead, on the 15th inst., aged 28.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Easingwold Union.—Mr. J. C. Robinson has resigned the Coxwold District; area 13,499; population 1824; salary £26 per annum.

Poplar Union.—Dr. Woodforde has resigned the North District; population 9306; salary £75 per annum.

Wells (Somerset) Union.—The Third District is vacant; area, 14,846; population 5233; salary £70 per annum.

Battle Union.—Mr. H. B. Smith has resigned the Seventh District; area 4320; population 661; salary £25 per annum.

East Ward Union.—The Kirkley Stephen District is vacant; area 15,700; population 2709; salary £17 per annum. The Ravenstonedale District is vacant; area 23,200; population 2331; salary £17 per annum. The Workhouse is vacant; salary £20 per annum.

Knighton Union.—The Knighton District is vacant; population 6263; salary £49 per annum. Also the Workhouse; salary £20 per annum.

Langport Union.—Mr. J. Prankerd has resigned the No. 1 A District; area 13,430; population, 4304; salary £66 8s. 4d. per annum.

Newport (Monmouth) Union.—The Western District is vacant; area 29,856; population 22,536; salary £56 per annum.

APPOINTMENTS.

Axminster Union.—John S. Snook, M.R.C.S. Eng., L.S.A., to the Shute District.

Croydon Union.—Robert Warrener, L.F.P. and S. Glas., L.M., L.S.A., to the Fifth District.

Dartford Union.—Wm. P. Fisher, M.R.C.S.E , L.S.A., to the Workhouse.

Fulham Union.—Francis Egan, L. K. and Q. Coll. Irel., L.S.A., L.M., to the First District.

Luton Union.—Charles C. Hicks, M.D. St. And., M.R.C.S.E., L.S.A , to the Dunstable District.

Bootle Union.—Henry W. Bromley, M.R.C.S.E., L.S.A., to the Ravenglass District.

Selby Union.—James F. Milner, M.R.C.S.E., L.S.A., to the Cawood and part of the Riccall District.

Yeovil Union.—Walter A. Harvey, L.R.C.P. Lond., M.R.C.S. Eng., to the Fifth District.

THE *Illustrated London News* of September 15 contains an engraving of the testimonial presented to Mr. Griffin by the Poor-law Medical Officers.

NEW COUNTY MAGISTRATE.—Charles Price Symonds, Esq., M.R.C.S. Eng., of Ormskirk, has been placed upon the commission of the peace for the county of Lancaster, and has duly qualified.—*Ormskirk Advertiser*, September 6.

ST. BARTHOLOMEW'S HOSPITAL, CHATHAM.—Four wards have been opened in this Hospital, containing twenty beds, for the treatment of ophthalmic patients.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—At a meeting of the Medico-Chirurgical Society, held in the Hall of the Faculty of Physicians and Surgeons, St. Vincent-street, on Tuesday, September 4, the following gentlemen were elected office-bearers, viz.:—President—Dr. Allen Thomson. Vice-Presidents—Dr. Robert Paterson, Dr. Coats. Council—Dr. Naismith (Hamilton), Dr. W. T. Gairdner, Dr. Yeaman, Mr. Robertson (Renfrew), Dr. Dewar, Dr. Tindal, Dr. G. H. B. Macleod, Dr. A. R. Simpson. Secretaries—Dr. James Adams, Dr. Robert Perry. Treasurer—Dr. H. R. Howatt.

INFECTION FROM DEAD BODIES.—On September 13 the Health Committee of the Liverpool Corporation resolved, in accordance with the recommendation of the Medical Officer of Health, to establish mortuary chapels for the reception of those who have died from infectious diseases.

HOLLOWAY'S OINTMENT.—Yesterday, a man named Reddy was in the act of placing the lid over a copper of boiling ointment at Holloway's, the quack medicine vendor in the Strand, when it suddenly exploded, killing the unfortunate man on the spot.

A PHYSICIAN KILLED IN AN ASYLUM.—Dr. Greenup, formerly of Salisbury, for the last fourteen years superintendent of the Parramatta (New South Wales) Lunatic Asylum, holding also the offices of Medical adviser to the Government and examiner of Sydney University, has been stabbed by one of the patients in the Asylum, and died in two days after much suffering. His last words were, "No one is to blame for it." He fell a victim to his humane disposition, which led him to be too trustful even of men confined in the criminal division of the Asylum.—*Sydney Morning Herald.*

LONDON SEWAGE.—The Reclamation Company, now actively engaged on the north side of the Thames, has already tested the value of the metropolitan sewage, and contemplates its regular and systematic utilisation on a farm which the company is about to purchase. Early in April last a plot of waste land at Barking Creek, devoid of surface soil, was covered with common sand, brought from Mappling, near Shoeburyness, to the extent of two feet thick, on which was sown grass seed. The surface was then well irrigated with ordinary London sewage from the northern outfall. This has been repeated once or twice. The effects of this manufacture of green meat—for such, indeed, it may be most justly considered—has been the production of three crops; one cut in June and July, at the rate of sixteen tons per acre; a second, of eight tons; and a third now growing, and almost ready for the scythe.—*Sunday Gazette.*

CRICHTON INSTITUTION.—PRESENTATION TO DR. STEWART.—On the evening of Friday last a farewell entertainment, consisting of a concert and dramatic representation, was given on the occasion of Dr. Stewart leaving the Institution to assume the Medical superintendence of the Newcastle Borough Asylum. After the concert, a testimonial, consisting of a silver claret jug and salver, subscribed for by the officers, inmates, attendants, and servants of the Crichton Royal Institution and Southern Counties' Asylum, was presented to Dr. Stewart as a mark of their esteem and regard for him, and their regret at his leaving the Instititution after the long and successful incumbency of nine years. The long residence of Dr. Stewart, and the efficient manner in which he has performed his duties, have well entitled him to this mark of their esteem. His services in the Crichton Institution have been handsomely acknowledged by the directors, who at their meeting on Friday unanimously voted to him a donation of one hundred guineas, as a mark of their approval of his conduct while an officer of the Institution.—*Dumfries and Galloway Courier*, September 11.

THE Sanitary Reformers who met on Thursday, at Adam-street, Adelphi, under the presidency of the Bishop of London, found themselves in a very unpleasant fix. The drawing-room in which they assembled, overlooking the Thames embankment, was crowded to excess by Medical men and clergymen. They had not long settled down to business until a cry of "Air, air!" arose from some M.D. in distress. It was found that the windows were so well fastened that they successfully resisted all efforts to open them. A suggestion was made to break them, but the presence of the right reverend prelate perhaps saved the panes of glass from making acquaintance with some sticks, which looked threatening when the suggestion was made, and so for two long hours the Bishop and the Doctors, Medical and clerical, considered sanitary matters in a room which required ventilation and fresh air as badly as any in London.—*Sunday Gazette.*

CHOLERA AND IMPURE WATER.—Yesterday Mr. Humphreys resumed, at Poplar, an inquiry relative to the death, through alleged impurity of water, of John Davis, aged 20 years. The deceased was mate of the barge *Medway*, which on Thursday, the 6th inst., entered Bow-creek. The deceased went on shore, and got a bucket of water from a pump. Later he got a second bucketful from the same pump, and then a man told him that the water would poison him. Some of the water was boiled for the breakfast of himself and the captain of the barge. He also drank some of the unboiled water from the bucket. At 3 o'clock he was seized with violent cramps. He was taken to a Doctor and treated, but next day he died after great suffering. When he entered Bow-creek he was a very healthy, robust young man. Some of the water from the pump was sent, by order of the Coroner, to Dr. Letheby, for analysation. The following is the Professor's Report:—"The water contained 61·5 grains of saline matter per imperial gallon, besides 2·8 grains of organic matter, and much ammonia. The saline matter, as well as the organic, are chiefly derived from surface drainage, and the presence of ammonia indicates percolation from a sewer or cesspool. The water is quite unfit for drinking purposes, and, from the nature of the pollution, is very likely to have occasioned choleraic disease, especially if drunk without previous boiling." Mr. M. Brownfield said that deceased died of cholera, without doubt, arising from impurity of the water. The Bow-creek was the very worst part of the River Lea, and, being a tidal stream, its flow affected the surface wells of the district. Witness knew a house into the cellar of which the tidal waters percolated, and from which it had to be regularly pumped out. The Coroner having summed up, the jury returned a verdict, "That the deceased died from choleraic disease, occasioned by drinking polluted water drawn from a certain pump," and they recommended that the attention of the proper authorities should be drawn to the danger of leaving such a dangerous source of disease accessible to the public.—*Express.*

CHOLERA AT MERTHYR-TYDVIL.—According to the report of Dr. Dyke, "the fourth outbreak of epidemic cholera in this parish commenced on August 23. Cases of the most malignant character occurred almost simultaneously at Abercannaid, at Caedraw, in Merthyr, and at Cae Harris, Dowlais. The first-named place is two miles south-west of Merthyr; the last-named place two miles north-east. Abercannaid is about 500 feet above the sea, on the west bank of the river Taff. Cae Harris, 1100 feet above the sea, and no water-course near. On August 24 cases equally malignant occurred in Quarry-row, Tramroad North, George-town, and Penyard Penydarran, places, as you are aware, widely separate. No communication had taken place between any of the three first afflicted with each other, or with any other town or place in which cholera had been. But in the neighbourhood of the residence of each of the persons first attacked, I believe I shall, on a future occasion, be able to show that the cause which gave rise to the epidemics of typhus fever in 1864 and 1865, has given rise also to cholera in 1866; I mean putrefying human filth. The weather from the 19th to the 26th August was marked by an average temperature at night of 54 degrees. There was a very slight fall of rain, stillness in the air from the absence of winds, and from the 21st a very evident blue mist in the valley. It is not to be supposed that this mist has anything to do in causing the disease, for it may be seen in these valleys whenever, after much rain, a high temperature and a still atmosphere follow; but it is in such a condition of air that vegetable and insect life most rapidly grow. The house-inspection has revealed a crowd of reeking pestilent spots in the back premises of thousands of houses. The marvel is how poor human bodies could so well resist the foul smells that pollute the air day and night. I send an analysis of the state of Caedraw, by which it will be seen on detail that of 297 houses 161 were without thorough ventilation, 161 without privies, 29 had privies overflowing; but happily, thanks to your provisions, every house had an abundance of water." Appended to this report was a statement of the cases of cholera which have occurred, showing a total of 657 cholera and diarrhœa attacks and 29 deaths.

It is generally recognised that the healthiest children are those weaned at nine months complete. Prolonged nursing hurts both child and mother; in the child, causing a tendency to brain disease—probably through disordered digestion and nutrition—in the mother, causing a strong tendency to deafness and blindness. It is a very singular fact, to which it is desirable that attention were paid, that in those districts of Scotland, viz., the highland and insular, where the mothers suckle their infants from fourteen to eighteen months, deaf-dumbness and blindness prevail to a very much larger extent among the people than in districts where nine and ten months is the usual limit of the nursing period.—*Dr. William Farr on the Mortality of Children.*

THE following are the last week's Cattle Plague Returns.

—	1. Attacked.			Back cases reported in the week ended Sept. 8, 1866.	2. Result of reported Cases from the Commencement of the disease.				
	Week ended Aug. 25.	Week ended Sept. 1.	Week ended Sept. 8.		Attacked.	Killed.	Died.	Recovered.	Unaccounted for.
Great Britain .	148	99	69	2	253395	84784	124290	33327	10994

This Return shows that 69 attacks were reported to have occurred during the week ended September 8, being a decrease of 30 on the previous week.

Fresh outbreaks took place in 22 farms or places where cattle are kept; the number of such outbreaks in the previous week being 17. The number of healthy cattle slaughtered, to prevent the disease extending to them, was 45 during the week.

Since the commencement of the disease 51 in every 1000 of the estimated ordinary stock of cattle in Great Britain are reported as having been attacked.

77 cases are reported during the week as occurring among sheep, making the total to the date of this return 6708.

Note.—One inspector in the county of Chester, who reported 18 cases last week, has not reported in time for this return.

NOTES, QUERIES, AND REPLIES.

He that queſtioneth much ſhall learn much.—*Bacon.*

R. D.—A Doctor of Medicine of St. Andrews. We can say no more.

Dr. G. K. Poole, India.—Your note with enclosure has been received.

The Disputed Point of Medical Etiquette at Elgin.—Such cases were better kept from the public eye, as they only injure the Profession. It would be very difficult to show in what respect Dr. W. acted wrongly. It is not said that he intruded himself unasked; but being asked to see a patient, he did see her, as he had a perfect legal right to do. It is only suggested that Dr. W., as an older Practitioner, ought to have declined to attend Miss A. without consultation with Dr. F., and ought to have informed Dr. F. of the fact of his having been called in. Certainly it would have been a more courteous act; but all courtesy is not matter of obligation; and Dr. W., in his discretion, was quite at liberty either to do so or not, as he saw fit. Besides, it was scarcely courteous in Dr. F., who began a correspondence, to return Dr. W.'s second note unopened! We think Dr. F. threw the first stone when he accused Dr. W. of "interfering" with his patients, and will only say further that the sooner any such imputation is retracted, and the parties are made to shake hands, the better it will be.

PULMONARY CANCER.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In connexion with the very interesting discussion on pulmonary cancer which was reported in your last number, I will very briefly give some particulars of a case which I saw not long since, where lung cancer preceded cancer of the breast. A woman, aged 56, with previous tendency to bronchitis (?), was, for the first time, confined to her bed by what was thought to be an unusually severe attack, early in December, 1866. Soon after this, copious discharges of blood, purulent matter, and *débris* set in. I saw her and diagnosed encephaloma of left posterior base. A small nut of scirrhus was noticed in the axillary border of the left breast in March, 1866. When she died at the end of May following, this did not exceed a hen's egg in size, and the skin was only very slightly involved. A post-mortem examination was not permitted, but no trace of carcinoma could be discovered in any other part of the body by most careful external examination.

I am, &c. EDWARD T. BLAKE.

63, Darlington-street, Wolverhampton, September 6.

THE METROPOLITAN SANITARY ASSOCIATION AND THE CHOLERA.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In the reports that have been published of the proceedings which took place at a meeting convened "for the purpose of taking into consideration the present epidemic in its Medical, sanitary, and social aspects," it does not appear that the subject of "dietetics" received the attention which its importance demands. The majority of the speakers dwelt upon the need of an abundant supply of pure water, the establishment of a greater number of baths and washhouses, a better system of drainage, and an improvement in the moral and sanitary conditions of domestic life among the poor. All these matters are of very great importance, but they must all fail of their object—viz., the prevention of epidemic diseases and habitual sickness—until the importance of good food shall be placed side by side with the other requirements to that end. Dr. Druitt and the Rev. Mr. M'Gill were the only gentlemen, upon the occasion to which I allude, who referred at all to the subject of food in connexion with the main question under discussion.

I think, Sir, you will agree with me as to the urgent need that exists for sanitary philanthropists to turn their attention to this interesting and momentous view of the subject. I cannot occupy more of your space at this time, and I will therefore refer your readers to the current number of the *Journal of Social Science* for some more lengthy remarks on the subject—viz., "the dietetic treatment of choleraic diarrhœa and infantile diarrhœa"—only now summing up the matter by directing attention to the following proposition:—"Ill-nourished children—those who are improperly fed, even by an excess of unsuitable food—are more liable to fall a sacrifice to epidemics, while those whose blood is kept in a pure state by wholesome food possess constitutions which fortify the individuals against the inroads of disease, for they have the power of resisting the morbid influences which strike down the feeble frames by hundreds." I am, &c.

September 15. M. A. B.

A CAUTION ANENT CHOLERA PRECAUTIONS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Whilst the public press and authorities in the most laudable manner are recommending preventive and curative means as to cholera, it may be well to point out a danger liable to be created by zeal itself in initiating the latter—curative means. This city of Salisbury, seven weeks ago, had a very narrow escape from a panic of an extraordinary kind. Last year a councillor caused to be put on the minutes of the Board of Health an order that all Medical Practitioners in the city should be requested to report any case of cholera to the town clerk, who was immediately to call a meeting of the councillors, the bishop and clergy of all denominations, and the Medical men. Nothing occurred last year, but this year, in July, a woman of dissipated habits residing in the suburbs of the city, having drunk gin very freely and eaten largely of cucumber, died, as was no wonder, with choleraic symptoms. The councillor alluded to, having heard of the death, caused the gentleman who attended to certify the case as one of cholera to the town clerk. By mere accident happening to be present at the clerk's office when the case was discussed, and hearing about the cucumber eating, I ventured to suggest that the order for a meeting be not acted upon, as such a meeting would cause a panic in the city. One chief object of the meeting, I learned, would have been a house-to-house visitation, with curative intentions. Had the meeting taken place, about seventy persons would have been called together, and consternation created, the greater from being on a market-day; and very much mischief must have ensued. House-to-house visitation, doubtless, in a hot July, among many thousands of people, must have found some, probably many, cases of diarrhœa, which in the nature of things, would have been more or less viewed as incipient cholera cases, and in the history of this city a lasting false page handed down to posterity. Instead of this panic what has happened? The city has been in a state of quiet, never more healthy, only twenty-four deaths from all causes in two months—*i.e.*, at the rate of but 15 in 1000 per annum.

Although an early practical sanitary reformer, this case has discovered to me a new difficulty in practice, as to the exact time for initiation of curative as distinguished from preventive measures in a district—*i.e.*, the diagnosis of a district's health; for whilst it is clear that no time should be lost, it is also certain that a new danger is possible through overmuch zeal—the danger of hastily viewing a death with choleraic symptoms as evidence of epidemic cholera, and of thus causing direful panic by proclaiming cholera in a most healthy district, as certainly would have occurred in this city but from the merest chance. I publish these facts, hoping that a knowledge of this danger may prove a further stimulus to the employment of hygienic measures which may literally prevent any question about the time for curative means having to be raised at all.

I am, &c. : A. B. Middleton, M.R.C.S. Eng.

The Close, Salisbury, September 16.

P.S.—It may be useful to state that in this city members of the police force have been appointed inspectors of nuisances, and as such have been well received from the cottage to the palace.

The Eliminative Treatment of Cholera.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—On September 9, 1854, you kindly inserted in your weekly a letter of mine relative to the danger of prescribing purgative medicines in full doses while epidemic cholera prevailed. That letter appears at page 272 of your weekly for 1854.

In that letter I stated that I had seen a few days before at St. George's Hospital four cases where that morning the usual dose of a purgative medicine had been administered in consequence of their bowels being costive; that a few hours after their bowels were severely acted on; and when I saw them they were labouring under developed cholera—that is, vomiting, spasms, etc., etc.

It appears that Dr. Ogle took exception to my statement, and addressed you a letter, which appears at page 378 of your weekly for 1854.

Dr. Ogle's letter had escaped my notice till Dr. George Johnson was so good as to call my attention to it a few days ago. But as the hypothetical plan of treating cholera by the eliminating system still attempts to make a stand against pathological facts, permit me, in the interest of the public, to state that I never thought, or ever said, that cholera "depended on purgatives." What I have said and what I have written is this—that where the eliminating plan of treatment is carried out there it assists the disease to destroy life, as is seen by the returns at the Army Medical Department.

Sir Ranald Martin informs me that it was the fashion in his time in India to prescribe a blue pill at bedtime and a black draught in the morning, whatever might be the nature of the disease; and wherever this prescription was carried out when cholera prevailed, as a rule, the patient was found next morning in collapse.

I shall feel obliged if this note can find a place in your weekly.

I am, &c., David Macloughlin, M.D.,
Member of the Legion of Honour.

36, Bruton-street, Berkeley-square, W., September 17.

COMMUNICATIONS have been received from—

Dr. Macloughlin; M. E. T. Blake; Chirurgus; Pharmaceutical Ethics; Ignorans; Dr. Dyce; Dr. Parkes; Mr. Curgenven; Mr. Goyder; Dr. Balthazar Foster; R. D.; Dr. Foulds; Mr. Maclagan; Mr. R. O. Clark; Dr. Ferguson, Elgin; Dr. Symonds; Dr. E. G. Figg; Apothecaries' Hall; Mr. A. B. Middleton; Mr. J. Bassett; M. A. B.; Mr. Haynes Walton; Dr. Lionel S. Beale; Mr. F. H. Marsh; Dr. Divers; Mr. Spencer Wells; Dr. Hughlings Jackson; Dr. Bence Jones; Dr. Braidwood; Mr. F. C. Skey; Mr. James Lewis; Mr. R. Tatlocke.

BOOKS RECEIVED—

Suggestions in reference to the present Cholera Epidemic. By W. Sanderson, C.E.—Report of the City of Glasgow Fever Hospital—Gibsone's Chemical Addenda—De Morgan's Case of Excision of a part of the Spinal Accessory Nerve for Spasmodic Wry Neck—The Edinburgh Medical Journal—Bartholow on Spermatorrhœa—New York Medical Journal (July)—Rapport sur le Choléra (Constantinople)—The Dental Journal (August)—Explanatory Statement in Millett *v.* Edmonds—Medical Report of the Aberdeen Lunatic Asylum—Dr. Lankester on Cholera—Report of the Sanitary Condition of Merthyr-Tydvil—Howe's Reflections on Cholera—Report of the 35th Section of the Public Health Act, 1866, by W. S. Trench, M.D.—Higgins on Vitality—The Fourth Annual Report of the Peking Hospital—The Quiver—The Journal of Social Science.

NEWSPAPERS RECEIVED—

The Southampton Times—The Kingston (Jamaica) Morning Journal—The Cosmopolitan—The Ormskirk Advertiser—The Cambria Daily Leader—The Sunday Gazette—The Dumfries Courier—The Collingwood Observer—The Melbourne Leader—The Sunday Gazette.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 15, 1866.

BIRTHS.

Births of Boys, 1080; Girls, 1035; Total, 2115.
Average of 10 corresponding weeks, 1856-65, 1770·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	734	637	1371
Average of the ten years 1856-65	565·2	542·6	1107·8
Average corrected to increased population ..	..	..	1218
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	3	1	11	2	1	9	14	10
North ..	618,210	6	3	6	2	10	11	11	27
Central	378,058	1	1	5	2	2	7	15	20
East ..	571,158	8	9	13	1	6	6	35	77
South ..	773,175	4	10	7	6	5	8	35	48
Total ..	2,803,989	22	24	42	13	24	41	110	182

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·544 in.
Mean temperature	56·7
Highest point of thermometer	70·2
Lowest point of thermometer	47·4
Mean dew-point temperature	50·1
General direction of wind	S.W.
Whole amount of rain in the week	0·87

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, September 15, 1866, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending Sept. 15.	Deaths. Corrected Average Weekly Number.*	Deaths. Registered during the week ending Sept. 15.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3067536	39·3	2115	1400	1371	70·2	47·4	56·7	0·87	88
Bristol (City) . .	163680	34·9	99	73	‡156	65·5	47·3	54·8	1·97	199
Birmingham (Boro')	335798	42·9	254	163	125	65·1	46·4	55·7	0·70	71
Liverpool (Borough)	484337	94·8	330	281	513	65·2	47·9	56·[illegible]	0·84	85
Manchester (City) .	358855	80·0	257	203	‡192	68·0	43·6	54·9	1·73	175
Salford (Borough) .	112904	21·8	68	57	56	67·1	42·9	53·7	1·95	197
Sheffield (Borough) .	218257	9·6	147	115	90	64·1	45·0	53·6	0·99	100
Leeds (Borough) .	228187	10·6	213	116	126	69·0	44·0	55·2	0·75	76
Hull (Borough) .	105233	29·5	94	49	41	..	..	..	..	..
Nwcastl-on-Tyne, do.	122277	22·9	98	65	73	64·0	47·0	53·6	0·70	71
Edinburgh (City) .	175128	39·6	106	84	63	67·7	44·0	55·3	0·50	51
Glasgow (City) . .	432265	85·4	385	252	212	66·2	44·7	53·7	0·16	16
Dublin (City and some suburbs) .	318437	82·7	145	†156	181	65·4	42·5	54·2	1·08	109
Total of 13 large Towns . . .	6122894	34·4	4261	3014	3099	70·2	42·5	54·8	1·02	103
	(1863)				Week ending Sept. 8.	Week ending Sept. 8.				
Vienna (City) . .	560000	..	..	..	405	..	..	§ 64·6	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·544 in. The barometrical reading decreased from 29·80 in. on Wednesday to 29·29 in. on Friday.

The general direction of the wind was S.W.

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* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 58·5°.

APPOINTMENTS FOR THE WEEK.

September 22. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p.m.

24. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

25. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

26. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

27. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

28. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

WHY NOT USE THE BEST?

"MAIZENA"

Is the ONLY "PRIZE MEDAL" CORN FLOUR. It was also reported by Jury of 1862, London,
"EXCEEDINGLY EXCELLENT FOOD."

It is superior to the best Arrowroot; makes in short time, and at trifling cost, delicious Blanc-mange, Puddings, Cakes, Omelets, Creams, and scores of other dishes, and is always an invaluable Food for INVALIDS and CHILDREN. Sold in Packets, with directions, by Chemists, Grocers, &c. N.B.—The price is *no more* than for inferior articles.

TRY IT ONCE.

INVALID TURTLE.

As the best restorative for strength, used and recommended by all Physicians in cases of WEAKNESS and PROSTRATION. Kept ready for use in Half-pints, Pints, and Quarts, by Mr. DONALD, St. James's Hall, Regent-street, W.

Natural Mineral Waters of Vichy, Carlsbad, Seltzer, Kissengen, Homburg, PULLNA, FRIEDRICHSHALL, &c., direct from the Springs; also the Artificial Mineral Waters prepared by Dr. Struve and Co. at the Royal German Spa, Brighton.—Agents, W. BEST and SONS, 22, Henrietta-street, Cavendish-square, London, W.

NATURAL MINERAL WATERS OF VICHY,

Efficacious in Stomach, Liver, and Renal Diseases; Gout, Rheumatism, Diabetes, &c.

Also, the celebrated OREZZA MINERAL WATER, containing Iron, and which is extensively prescribed as an invaluable Tonic.
VICHY PASTILLES, the best Digestive Lozenges; and VICHY SALTS for Baths. Also, other French and German Natural Mineral Waters.
VICHY WATERS COMPANY (only Depôt in Great Britain), 27, MARGARET-STREET, REGENT-STREET, LONDON, W.

The Mineral Water of Geilnau (Nassau), an Acidulous and slightly Alkaline and Chalybeate Water, of very agreeable and refreshing taste, owing to its large proportion of carbonic acid; a valuable Dietetic Beverage in many morbid tendencies through its antacid, diuretic, and tonic qualities.

Specimen and analysis of the Water may be obtained from Messrs. BECKER and JUNG (Ems), the appointed Agents, 9, Rood-lane, Fenchurch-street, E.C., London, who supply also the other German Mineral Waters.

THE PANCREATIC EMULSION,

A NEW REMEDIAL AGENT.

Originated by **Dr. DOBELL**, Physician to the Royal Infirmary for Diseases of the Chest.

Vide The Lancet, *Nov.* 11*th* and 18*th*.—"A third report of cases of consumption treated with Pancreatic Emulsion at the Royal Infirmary for Diseases of the Chest."

THE IMPORTANCE OF PANCREATIC EMULSIONS of Solid Fat over Cod-liver Oil, in the treatment of Tuberculosis, must be as great as that of supplying a plant with good soil instead of putting it into water."—Page 50. "On Tuberculosis," by Horace Dobell, M.D.

This Preparation is now made on an extensive scale, and the Price is therefore considerably Reduced.

N.B.—The TRUE PANCREATIC EMULSION has an acid reaction, and is readily miscible with water or milk.
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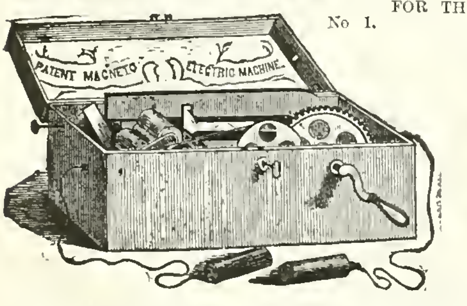

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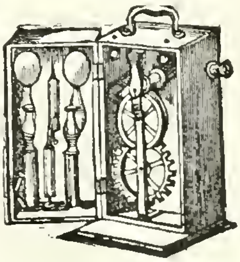

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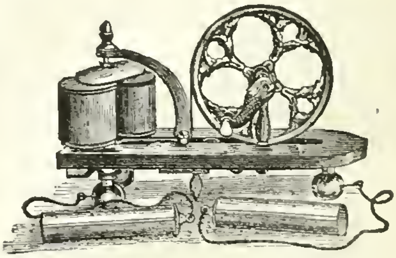

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ORIGINAL LECTURES.

APPENDIX TO A

COURSE OF LECTURES ON THE RELATIONSHIP OF CHEMICAL AND MECHANICAL DISEASES,

BEING A SKETCH OF THE ACTION OF MEDICINES.

By H. BENCE JONES, M.D., F.R.S.

PART II.

IN the second great division of medicines I place those substances that directly or indirectly promote or retard nutrition.

The chemical actions which are concerned in the formation of the multitude of organic substances of which the body is composed are far more complicated than those comparatively simpler chemical actions on which oxidation depends. If even now the different steps and processes, the helps and hindrances which affect the formation of carbonic acid and water in the body, are not yet determined, how much less able must we be at present to comprehend the chemical actions which take place in the formation of blood-globules, bone, muscle, nerve, etc.

Many of those medicines that promote or retard oxidation also promote or retard nutrition. When they are present in excess they render the formation of different substances more easy, and when absent the chemical actions necessary for the formation of these substances are retarded or altogether stopped.

Our knowledge is so deficient regarding the way in which these actions are carried on that at present no clear view of the chemistry of the repair of the body can be obtained. Still the fact is certain that some food and some medicines are capable of promoting or of retarding the formation of different substances. To comprehend this for the present we must assume no vital force, but we must wait until the advance of chemistry enables us to determine all that belongs to chemistry in the process of nutrition. Then, and not until then, we shall be able, by deducting the chemical portion, to see clearly how much of the actions that determine the composition, form, and position of the different structures depend on a different force from chemical force; and to this residue the term vital force may then be given.

E. Medicines or Food that directly promote nutrition.

It is not possible to draw any distinction between food and medicine; for oxygen, and iron, and water, and common salt are as necessary food as starch and gluten or fat and albumen, and increased supply of any substance that can enter into the structure of any tissue as surely promotes nutrition as increased supply of air increases oxidation.

The most remarkable example of increased nutrition by medicine is seen in the increased formation of blood-globules when iron is taken. The formation of hæmoglobin implies the formation of hæmatin, and without iron no hæmatin is produced, so that iron may be regarded as one food of the blood-globules. When it is absorbed in greater quantities than the ordinary food supplies, increased formation of hæmatin occurs, and in cases of anæmia this increased formation may be watched and stopped when it is considered that sufficient red colouring matter has been produced.

The chemical process by which the iron helps to build up the hæmatin is quite as unknown to us as was a few years since the formation of urea or any other of the innumerable organic substances which chemistry is now able synthetically to construct; but that the metal itself and many of its salts will lead to the increased formation of new blood-globules is proved by the innumerable preparations of iron that are in use in medicine, no one of which can be said to have an undoubted superiority in the cure of anæmia.

Possibly, by giving ready-formed hæmatin or hæmoglobin, a more rapid formation of blood-globules will be obtained than when any other preparation of iron is given

The second remedy I may mention is phosphate or carbonate of lime in promoting nutrition of the bones. In cases of rickets, by giving ivory shavings, by powdered bone itself, by calcined bone, by pure phosphate or carbonate of lime, increased formation of bony substance may be produced.

The third medicine is cod-liver oil. This remedy clearly shows the impossibility of distinguishing between food and medicine. Its chief ingredients increase the deposit of fat in the cellular tissue, and this nutritive action on the adipose tissue differs in no respect from that which might be obtained by turtle, or cream, or olive oil. It is, however, quite certain that many substances besides oily matter exist in the cod-liver oil, and to these intermixed substances the cod-liver oil probably owes its medicinal repute. M. Chevreul has found no less than twenty-nine substances in mutton suet.

Fourthly, it is highly probable that other nutritive substances might be found which will specially promote the nutrition of particular textures, the more nearly in chemical composition the nutritive substance agrees with the texture to be nourished. Thus, in failing supply of the whole blood, the whole blood may be renewed by transfusion. In wasting muscle from exercise or other cause, meat may be the special remedy. Gelatine may perhaps supply the wasting cellular tissue, and even the highest of all textures, the brain and nerve substance, may perhaps be best restored by food of which these substances form a part. That phosphorus assists in the formation of protagon, as iron does in the formation of blood-globules, is far from any direct proof. Far less probability exists that phosphoric acid or the salts of phosphoric acid—as phosphate of iron, or phosphate of iron and strychnia—can be so decomposed, and the elements recombined in the body, that the phosphorus may promote directly the nutrition of the brain or spinal cord. Whatever good these medicines may do otherwise, they can hardly be of use in helping the formation of protagon, either in the nervous substance or in the blood-globules. Phosphorus or phosphorous acid can be shown by direct experiments (see Lecture VII., vol. ii. 1865, p. 594) to be oxidised into phosphoric acid; and hence the phosphoric acid of our medicines, though it may leave the iron or strychnia in great part to combine with soda and other alkalies, and may keep continually passing into a more or less basic salt, yet will never lose its oxygen by reduction, never be capable of combining with carbon and hydrogen to form that phosphorised oil which exists in the nervous substance. The worth or the worthlessness of phosphorus or phosphates as nutriment for the nerves must be established by experiments which the chemist alone is capable of making.

F. Medicines that indirectly promote nutrition by, 1stly, increasing the action of the heart, and 2ndly, by lessening the resistance in the capillaries.

The different ways in which the heart has its action increased I have already brought before you in speaking of medicines that indirectly promote oxidation. The exceedingly complex nervous system which makes the human machinery so far more perfect than any made by hand, renders it almost impossible to rightly estimate the way in which and by which different medicines acting upon the different nervous centres can cause increased action of the heart. It is not less difficult also to determine accurately the probable action of medicines upon the different nervous centres in lessening the resistance in the capillaries.

Besides these nervous actions there is also the action on the muscle itself by medicines, and by the work which it has to do, and by the qualitative and quantitative variations in the fluid which circulates in the heart and vessels.

All these different actions lead to the same result, and that is, increased flow of blood to the part; and whatever cause produces a flux of blood to any structure, in that structure increased nutritive action will take place. The Hunterian experiment on the growth of the spur of the cock when implanted in the comb is daily repeated wherever, by mechanical and chemical or any other force, the quantity of blood brought to any part is increased. From corns to cancers increased flow of blood causes increased growth of healthy and diseased structures; and in whatever way increased supply of blood to any part is occasioned, increased nutrition of that part or texture indirectly is produced.

Increased flow of blood to any part may be produced in at least four different ways by medicine.

First, there may be an action on the nerves which increase the action of the heart.

Secondly, there may be an action on the muscular structure of the heart itself.

Thirdly, there may be an action on the nerves that dilate the capillaries.

Fourthly, the quantity and quality of the blood in the heart and vessels may be improved, so that a smaller quantity may become equivalent to a larger quantity.

1st. Alcohol, ether and chloroform, nitrous oxide, chloride of methyl, olefiant gas, before they are destroyed by the oxydising process going on in the body, have a very decided action on the heart through the nerves. This action on the nerves does not proceed from the action of the blood-globules, because the symptoms appear before any blood-globules are destroyed, because animals with white blood are affected by anæsthetics, and because animals, as frogs, the respiration of which is with difficulty interfered with, are easily and strongly affected by these substances.

The protagon of the nerves is readily acted on by these substances, and it is this same protagon in blood-globules (a) that causes them also to be attacked and dissolved by these stimulants.

The first action of these substances, then, is a chemical combination with one ingredient of the nerves—this is the primary stimulating action; and as soon as this combination is formed the nerve is rendered less sensitive (perhaps by being made less capable of being acted on by oxygen than before), and until the foreign substance is removed by oxidation the nerve is checked in its action.

2ndly. Of all the medicines that stimulate the muscles, probably ammonia is one of the most remarkable. It has no exciting action on the nerves of motion, but almost immediately deprives them of the power of exerting motion, but it acts as an intense exciter to the muscles.

3rdly. Of medicines that dilate the capillaries—that is, according to M. Bernard, by paralysing the sympathetic, which constantly tends to close the capillaries. This dilatation may be done in two ways—by dividing the sympathetic nerve, or by acting reflexly or directly on the cerebro-spinal nerve.

In the submaxillary gland the vessels are relaxed and saliva flows when the superior cervical ganglion of the sympathetic is cut, when the lingual nerve is excited as by vinegar, or the chorda tympani is irritated. Curare paralyses all the motor nerves, and then secretion of saliva takes place.

4thly. Improvement in the quality of the blood is chiefly effected by iron and animal food; or the quantity in any part may be increased by friction or by other force.

G. Medicines that directly retard nutrition, either, 1st, by themselves entering into combination with the organic substances of which the textures are composed, by which the chemical changes that would otherwise occur are stopped, or, 2ndly, by the accumulation in the textures of any of the substances resulting from the chemical changes in the textures.

Among the many mineral substances which act in the first way lead is the chief, and probably zinc, silver, copper, arsenic, antimony, and even in some rare cases mercury, as, for example, in methyl-mercury, can also combine with nerves, muscles, skin, or other textures, rendering them incapable of going through changes on which their action depends.

Among the substances which act in the second way must be included all the different products from each texture in their downward course to carbonic acid, ammonia, water, and salts.

Even the accumulation of "ashes" may come to be impediments to the chemical changes on which nutrition depends, the old textures may cease to be removed, and "calcareous degeneration" may result.

When carbonic acid accumulates in the blood and textures from excessive carbonic acid in the air, it causes no convulsions, provided sufficient oxygen is at the same time supplied; but the carbonic acid passes from the blood to the nerves, and acts on the moving and on the regulating systems of nerves. At first the pressure of the blood is increased, and the frequency of the pulse becomes greater; then the regulating action prevails, the pulse becomes slower and larger; then the pressure sinks quickly and considerably. The regulating action is exhausted, and again the increase of pressure shows the excitement of the motor system remains. Soon the motor action in the medulla oblongata is lost, and that proceeding from the ganglia of the heart alone remains, and this gives only slight pressure, small and quick systole and diastole, and long intervening pauses. The action on the nerves of respiration brings the respiration as well as the heart to rest, less oxygen goes in, and more carbonic acid accumulates till the muscles stop.

With carbonic oxide the same phenomena are produced with the addition that an immediate action of carbonic oxide takes place on the hæmoglobin of the blood-globules, and probably also on the hæmoglobin of the muscles (Virch. *Archiv*, 1865). Carbonic oxide takes the place of the oxygen and hinders the escape of carbonic acid, so that not only a deficiency of oxygen but an accumulation of carbonic acid is produced by it, the blood-globules being made incapable of carrying on the escape of carbonic acid from the textures (Pokrowsky, *Archiv für Anatomie und Physiologie*, 1866, p. 59).

The organic acids are a next step nearer than carbonic acid to the textures; and if these accumulate in excess in the blood and textures, stoppage of oxidation and nutrition results.

Of all organic acids, the bile acids, even when combined with soda, have been proved by Kühne, Traube, and Hermann to have this action most decidedly, rapidly causing "fatty degeneration," dissolving the hæmoglobin, so that this constantly appears in the urine, and stopping the muscular action of the heart.

Other organic acid salts, as lactic, citric, tartaric, for the time they remain in the textures before they are thrown out or burnt, stop the changes going on in the textures, and thus retard nutrition.

Sugar or fat in quantity, when taken, not only may lead to excessive deposit of fat, but may stop the changes in the material that is being removed to allow of new matter taking its place, and thus these substances produce an arrest of nutrition, even whilst adding to the adipose deposit.

The nitrogenous substances that arise from the albuminous textures react also in stopping nutrition; in addition to a multitude of other chemical actions on different textures which these substances may possess. What the amount and nature of these substances may be, and what the difference of their actions, cannot at present be conjectured with any certainty.

Beginning with carbonate of ammonia, and then urea, there are substances like kreatinine, animal quinoidine, and higher compounds of carbon, all of which, if they could be given as medicine, would check the formation of the downward products from albumen, and thus would retard nutrition. What other actions these substances possess in first combining with nerves and muscles, and then rendering them less active as long as the combination lasts, must be worked out by the most careful experiments; and among the multitude of substances that may ultimately prove to be formed in the body from albumen, perhaps we shall find the same poisons which, when procured from vegetables, we know produce the symptoms that constitute some of the diseases to which man is liable. Even animal strychnia and animal morphia may, like indigo, quinine, starch, or cellulose, be formed in the body by some modification of the process of repair.

H. Medicines that indirectly retard nutrition by lessening the action of the heart and increasing the resistance in the capillaries, by which actions the flow of blood through the textures is lessened.

Four different actions may be distinguished, by any of which nutrition may be lessened—first, by an action on the nerves of the heart; secondly, by an action on the muscular structure of the heart; thirdly, by contraction of the capillaries in consequence of an action upon the sympathetic nerve; fourthly, by the reduction, quantitatively or qualitatively, of the state of the blood.

It is impossible at the end of this sketch to bring before you in any detail the progress of experimental inquiry abroad on some of these subjects. I can now do little more than give you the names of some of the substances and the kinds of action which they possess, and I must refer you to the original works for full details of the experiments that have been made except in the single case of potash salts, which I shall take solely because it gives a good example of the progress that may be expected in therapeutical knowledge from scientific research.

A medicine may act in only one, or in many, or in all the different ways that I have mentioned, and practically there is rarely a limited action, for the medicine passes into every structure, and acts according to the properties of the substances with which it comes in contact.

1st. Of the medicines that act on the nerves of the heart in stopping its action, and thus making the circulation of the blood slower, strychnia is one of the most remarkable. When applied directly to the heart, it acts on the vagi nerves, lessens the frequency of the heart's action, and also on the ganglia. Nicotin acts on the vagi nerves alone. Conicine stops all the action in the peripheral nerves without affecting the muscular contractility. Digitaline first stimulates, and then paralyses the regulating nerves, and then stops the action of the muscle. Quinine first stimulates, and then lessens, the action of the motor nerves of the heart.

(a) "On the Existence of Protagon in the Blood," by L. Hermann (*Archiv für Anatomie und Physiologie*, 1866, p. 36).

The difficulty of determining whether the retarded circulation depends upon an increase of the checking action of the nerves or upon a decrease of the motor action, whether in the heart itself or in the brain, is in many experiments exceedingly great, and, to add to the complication, a reflex action on the vagi nerves may produce the same effect as though a poison had been applied to the vagi nerves in the heart itself.

Thus, as I have already said, mechanical irritation of the sympathetic nerve in any part of the abdomen may be reflected by the vagi nerves to the heart and stop its action. Of this the occasional effect of a sudden blow on the solar plexus, or of cold water when drunk, are familiar, though happily rare, examples.

2ndly. Of the medicines that act chiefly on the muscular structure of the heart, veratria may be taken as the most remarkable: it stops the contractility of the heart, and colchicine has probably the same action; both may also act on the nerves or muscular structure of the small arteries, and thus alter the circulation through the capillaries.

The effects of salts of potassium, compared with the effects of sodium salts, show that salts of potassium act very strongly on muscular contractility. When salts of potassium are injected into the blood, the pulse falls rapidly, and the pressure of the blood, when accurately measured, rises for the first few minutes and then falls, and if the injection is then repeated the heart stops beating.

A muscle, by the application of potassium salts, may be rendered unexcitable to the stimulus of electricity, and it may be restored by treatment with sodium salts. A nerve, also, when treated with potassium salt, loses much quicker its power of exciting contractions in a muscle than when a similar nerve is treated with sodium salt Even a nerve of sensation, as in a tooth, may lose its power when treated with potassium salt.

So remarkable are the phenomena that even a similarity has been stated to exist between the action of potassium salts and digitaline.

Microscopic observation shows that chloride of potassium may affect the blood-globules, making them contracted and granular, while chloride of sodium has no action of this kind.

3rdly. Of medicines that act on the capillaries morphia is the most striking. It acts also first as a stimulant, and secondly strongly retarding on the nerves of the heart.

4thly. The blood is made less energetic in quality or quantity by bleeding, starvation, and excess of water; by lead salts and excess of acids mineral and organic.

Finally. If you look for a moment to the second great division of the healing art, you will find that among other indications of treatment two principal objects always present themselves to the Surgeon. These are MECHANICALLY to control the working and repair of the body. In other words, he endeavours, qualitatively or quantitatively, to regulate by mechanical means the oxidation and nutrition which take place in every structure of the body.

Of each of these actions I must limit myself to one striking illustration.

The Surgeon promotes oxidation in croup by mechanically opening the trachea. He retards oxidation after mechanical or chemical injuries by bleeding, by cold, and by rest, by defence from irritating substances. He directly promotes nutrition by removing pressure, as in the operation for strangulated hernia, and he retards nutrition by pressure or ligature in cases of aneurism.

As in Medicine, so in Surgery; the actions of oxidation and nutrition are mutually dependent everywhere, and no separation of these two functions in any part of the body really exists; and although I have endeavoured in this sketch to bring each of them separately before you, I have done so only in order that I might at least give you a clear though most imperfect view of the two most important of the many chemical actions of medicines (b) which are now being worked out by experimental research. The progress of all accurate knowledge of the actions of medicines depends now on exact chemical and physical experiments, and by the perfection of these alone will the practice of our Profession lose its doubts and difficulties and disagreements and deceptions, and become esteemed by all as the art that can confer the highest benefit upon mankind.

Instead of being as formerly blind wielders of heavy clubs that may cure the disease or kill the patient; or instead of being as at present "judicious" or injudicious "bottle-holders," Physicians at some future time will estimate exactly the effect of the increased or diminished action of any one force upon all the other forces concerned in the production of general or local disease; and by adding to the resistance of one or more forces, or by liberating more energy by means of the powers that are latent in food and medicine, they will restore that equilibrium of action in the body upon which our health depends.

Those who wish for further information on the chemical actions of medicines will find it in the following references, for which I am indebted to Dr. Ludimar Hermann, of Berlin:—

1. Oxide of Carbon, $C\Theta$.

Cl. Bernard. Leçons sur les Substances Toxiques, 1857, p. 172; Leçons sur les Propriétés des Liquides de l'Organisme, i. 376-393.

Hoppe. Virchow's *Archiv*, xi. 288; *Centralblatt f.d. med. Wissenschaften*, 1863, 819, and 1865, p. 52.

Lothar Meyer. De Sanguine Oxydo-carbonico Injecto Diss. Inaug., Vratislaviæ, 1858.

Lothar Meyer. Henle und Pfeufer's *Zeitschrift für rationelle Medicin*, 3 Reihe, v. 83.

Eulenburg. Die Lehre von den schädlichen Gasen, Braunschweig, 1865, p. 52.

Kuhne. Virchow's *Archiv*, xxxiv. 244.

L. Hermann. *Archiv* von Reichert und Du Bois Reymond, 1865, 469.

Pokrowsky. Virchow's *Archiv*, xxx. 525; and *Archiv* von Reichert und Du Bois, 1866, p. 59; *Centralblatt*, 1865, 801.

Masia. Virchow's *Archiv*, xxxiv.

Dybkowsky. Hoppe Seyler's Medicinisch-chemische Untersuchungen in Tubingen, Berlin, 1866, p. 131.

Klebs. Virchow's *Archiv*, xxxii.

Leudet. *Archives Générales de Médecine*, 1865, i. 513.

Traube. Verhandlungen der Berliner med. Gesellschaft, i. 67.

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Eulenburg and Landois. *Berliner klin. Wochenschrift*, 1866, Nos. 6-12.

Friedberg. Die Vergiftung mit Kohlendunst, Berlin, 1865.

2. Sulphuretted Hydrogen, H_2S.

Hoppe Seyler. *Centralblatt*, 1863, p. 433; Med.-chem. Untersuchungen v. Tubingen, p. 151.

Kaufman and Rosenthal. *Archiv* v. Reichert und Du Bois, 1865, p. 659.

Lewisson. Virchow's *Archiv*, xxxvi. 15.

3. Phosphoretted Hydrogen, PH_3 (not spontaneously inflammable).

Dybkowsky in Hoppe Seyler's Med.-chem. Untersuchungen, p. 57.

4. Arsenetted and Antimonetted Hydrogen, AsH_3 and SbH_3.

Hoppe Seyler. *Centralblatt*, 1863, 434.

Lewisson. Virchow's *Archiv*, xxxvi 15.

5. Protoxide of Nitrogen, $N_2\Theta$.

L. Hermann. *Archiv* v. Reichert und Du Bois, 1864, p 521.

6. Binoxide of Nitrogen, $N\Theta$.

L. Hermann. *Archiv* v. Reichert und Du Bois, 1865, p. 469.

7. Heart Poisons in General.

Rosenthal. *Archiv* v. Reichert und Du Bois, 1865, p. 191 and 601.

8. Salts of Potass and Ammonia.

Bernard and Grandeau *L'Institut*, 1863, No. 1555.

F. Ranke. *Archiv* v. Reichert und Du Bois, 1864, 320.

P. Guttmann. *Berliner klinische Wochenschrift*, 1865, Nos. 34 to 36.

Podcopaew. Virchow's *Archiv*, xxxiii. 505.

9. Salts of Baryta and Salts of Oxalic Acid.

Onsum. Virchow's *Archiv*, xxviii. 233.

Cyon. *Archiv* v. Reichert und Du Bois, 1866, p. 196.

10. Salts of Bile Acids.

Kühne. Virchow's *Archiv*, xiv. 30.

Traube. *Berliner klinische Wochenschrift*, 1864, Nos. 9 and 15.

Röhrig. *Archiv der Heilkunde*, iv. 385.

Namias. *Comptes Rendus*, 1864, i. 800.

L. Hermann. *Archiv* v. Reichert und Du Bois, 1866, 27.

11. Digitaline.

Eulenburg and Ehrenhaus. *Allgemeine med. Centralzeitung*. Berlin, 1859, No. 98.

Traube. Same journal, 1863, No. 30.

12. Nicotine.

Traube. Same journal, 1862, No 103, and 1863, No. 9

Rosenthal. *Centralblatt*, 1863, 737.

Braun. V. Gräf's *Archiv*, v. 112.

Hirschmann. *Archiv* v. Reichert und Du Bois, 1863, 309.

13. Aconitine.

Achscharumoff. *Archiv* v. Reichert und Du Bois, 1866, 255.

14. Curarine (new discovered alkaloid substance of curare).

Preyer. *Comptes Rendus*, lx. 1327—1346; and *Berliner klinische Wochenschrift*, 1865, No. 40.

15. Curare.

Bernard. *Comptes Rendus*, 1856 (vol ii. p. 825); Leçons sur les Substances Toxiques, p. 238; Robin's *Journal de l'Anatomie et de la Physiologie*, 1864, 5[illegible]7.

Kölliker. Virchow's *Archiv*, x.

Kühne. *Archiv*, v. Reichert und Du Bois, 1860, 477.

Traube. *Centralblatt*, 1863, 49.

(b) Among these are the action of acid in the stomach for digestion; the action of pepsine and pancreatine; the action of charcoal as a deodoriser; the action of an increase or decrease of acidity in the urine for the prevention or cure of stone; the destruction of parasitic animals and vegetables on the skin; the defence of the skin from the action of oxygen and dust by lead and zinc paints; the neutralising foul discharges by charcoal poultices, chlorine washes, nitrate of silver lotions; the destruction of tumours by caustics; and many others might be mentioned.

Richter. Henle and Pfeufer's *Zeitschrift* (3), xviii. 76.
Von Bezold. Unterschungen über die Innervation des Herzens. Leipzig, 1862. 2 Abtheilung.
Czermak. *Centralblatt*, 1865, 881.
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Bidder. *Archiv* v. Reichert und Du Bois, 1865, 337.
Winogradoff. Virchow's *Archiv*, xxvii. 533.
Saikowsky. *Centralblatt*, 1865, 771.

16. Conine.
P. Guttmann. *Berliner klinische Wochenschrift*, 1866. Nos. 5 to 8.

17. Sulphuric Acid and Other Mineral Acids.
Leyden and Munk. Virchow's *Archiv*, xxii. 237; *Berliner klinische Wochenschrift*, 1864, Nos. 49—50; Die acute Phosphorvergiftung. Berlin, 1865.
Mannkopf. *Wiener med. Wochenschrift*, 1863. Nos. 5 to 8.
Bamberger. *Wiener Medicinal Halle*, 1864, Nos. 29—30.
Löwer. *Berliner klinische Wochenschrift*, 1864, No. 40.

18. Phosphorus.
V. Hauff. *Wurtembergisches Correspondenzblatt*, 1860, No. 34.
Ehrle. Die acute Phosphorvergiftung. Tubingen, 1861.
Lewin. Virchow's *Archiv*, xxi.
Munk aud Leyden. Die acute Phosphorvergiftung. Berlin, 1865.
Dybkowsky in Hoppe-Seyler's Med.-chem. Untersuchungen aus Tubingen, p. 49.
Virchow. Virchow's *Archiv*, xxxi. 399.
Schultzen. About to be published.

19. Arsenic and Antimony.
Saikowsky. *Centralblatt*, 1865, 353, 769.
Seufftleben. *Centralblatt*, 1865, 914.
Cunze on the Action of Arsenic. *Zeitschrift für rationelle Med.*, xxviii. pt. i. p. 33.

20. Æther, Chloroform, Alcohols, Liquor Hollandicus, etc., Bisulphide of Carbon, Heavy Carburetted Hydrogen, Protoxide of Nitrogen, Chloride of Methyle.
L. Hermann. *Archiv* v. Reichert und Du Bois, 186[illegible] 27.

21. Samandazine (poison of several species of Salamanders), $C_{34}H_{60}N_2O_5$. Zalesky in Hoppe-Seyler's Med.-chem. Untersuchungen aus Tubingen, p. 85.

22. Sulphate of Quinine.
Eulenhurg. *Archiv* v. Reichert und Du Bois, 1865, p. 423.

ORIGINAL COMMUNICATIONS.

◆

MICROSCOPICAL RESEARCHES ON THE CHOLERA.

By LIONEL S. BEALE, M.B., F.R.S.,
Fellow of the Royal College of Physicians, etc.

No. IV.

ON ELIMINATION.

It is necessary to consider what is generally understood by "elimination" before I proceed further. By this process it is held that certain substances existing in the blood are removed from that fluid. The agents which effect their removal are the gland cells, and it is supposed that these possess an attraction for the substances which it is their duty to eliminate, by virtue of which they are enabled to select and draw towards themselves these particular matters. It seems further to be generally concluded that the gland cells, after having taken up the particular substances in question, produce in them important alterations and convert them into new substances. When the change is complete and the gland cells have attained their mature state, it is supposed that they are cast off from the surface loaded with the materials they have taken part in eliminating. In short, the gland cell is supposed to take up certain matters as cells in general take up nutrient materials—to grow, to pass through certain phases of existence, and to die, its contents being set free at the time of its destruction. The place of this cell is then occupied by a new one which grows up. If this view is correct, it follows that numerous cells in every gland must grow, pass through their several stages of existence, and die in the course of a few hours at most; and necessarily the changes occurring in the cell must take place very quickly indeed.

Now what are the facts which lead us to conclude that in the process of secretion the cells are thus destroyed bodily? Cells occupying different positions in a gland follicle are seen to exhibit different characters, the most mature cells apparently containing the perfectly elaborated secretion. But does this fact alone prove that these cells are removed and renewed as fast as the secretion is formed? Can the fact be only explained upon this view? There is no doubt that the epithelial cells are gradually cast off bodily from the surface of the cuticle and mucous membranes and replaced by new ones, which grow up from below. This is an argument in favour of the occurrence of a similar process in glandular organs, but surely the analogy has been much overstrained. The rate of desquamation of cuticular epithelium is not very rapid, but it must be slow indeed compared with the desquamation of liver and kidney cells that must take place if the bile and urine formed is discharged by the rupture of epithelial particles. But what shall we say concerning the gastric juice, in which case many pounds of secretion are poured out in the course of twenty-four hours from glands which, with their vessels and other structures included, weigh but a few ounces? Does the formation of every drop of gastric juice necessitate the destruction of an equal bulk of gland cells, or does the secretion filter away fully formed from the gland cell while the latter remains apparently unchanged? In the case of the cuticular cell, it is necessary to inquire if the hard epithelial material is the *only* thing eliminated by its agency. Was it not very moist at an early period of its life, and is it not probable that much liquid holding various soluble substances in solution filtered through it and was carried off for a long time before the cell itself was cast away?

If the formation of a liquid secretion, like the bile, urine, or gastric juice, involved the growth and destruction of epithelial cells, the quantity of the secretion formed in these cases is so very great that the growth of the cells would take place very quickly. I think that we ought to be able to see, under our microscopes, the actual process of growth taking place—if not in man, at least in some of the lower animals—just as we can see the movements of the blood, lymph, and chyle corpuscles, and the wonderful alterations in form and size of the mucus and pus corpuscles and portions detached from them.

Many circumstances, however, render it far more probable that the act of secretion, and "elimination" of excrementitous substances from the blood, does not involve the destruction of the cell. That every cell grows old and dies is certain; but the process is much slower than it would be if the functional activity of the cell involved its death as a whole. I think the facts arrived at from a careful study of the cells at different stages of development lead us to conclude that every cell, instead of secreting only its own weight of matter, elaborates and eliminates a hundred, or a thousand, or ten thousand times its weight of material in its lifetime. The doctrine generally entertained upon this point involves an extravagance of cell destruction which neither the results of anatomical observation nor the conclusions arrived at from physiological experiments permit us to entertain.

In secretion and elimination it is probable that the germinal matter of the cell absorbs the materials from the blood, and converts these into matter like itself, while at the same time a portion of the germinal matter already existing dies, and undergoes conversion into those substances which constitute the secretion according to the explanations given in the *Medical Times and Gazette*, March, 1865. The cell may thus take up a quantity of material, convert it into new constituents, and give off these into the duct, without itself undergoing any appreciable alteration either in form or weight.

A large quantity of urea or uric acid may, I think, be "eliminated" from the blood without the destruction of a vast number of renal cells. Lactic acid, and lactates, and ammoniacal salts may be "eliminated" by the agency of the cells of the sweat glands without these cells being destroyed and replaced by new ones.

I would further observe that when the eliminative act does undoubtedly involve the destruction of the organ of elimination we have an arrangement very different to that observed in the permanent or true glands possessing ducts. The secreting organ in that case is a closed follicle, like the "solitary glands" and the glands constituting Peyer's patches in the alimentary canal. The little "cells" or masses of germinal matter, of which the gland is composed, grow and multiply, and retain in their substance at least a great part of the nutrient pabulum they take up. The mass composing the closed gland therefore increases in size, approaches the surface of the mucous membrane, an opening is formed, and the contents escape. The walls of the old gland shrivel up, the wound in the mucous membrane heals, and probably a very slight cicatrix, with a little condensed areolar tissue beneath, are all that mark the seat of the gland. But even in this case we cannot affirm that the "cells" which have elaborated the secretion die and discharge their contents. They escape from the cavity in which they grew, but has anyone shown that they die and undergo rupture? We have much to learn concerning the destination of these "cells" in the closed glands which escape by rupture of the capsule of the gland. We know that "cells" of the same kind formed in the spleen have a very different office and destination. They seem to be commencing their career when they become free, and I could bring forward several facts which justify me in expressing a strong opinion that the life of the cells does not cease when the temporary follicle in which they grew becomes ruptured and permits their discharge. On the contrary, it appears to me that at this very time they commence the really important part of their life-work, and they may now be only beginning to perform their active duty for the first time; so that neither in the case of the secreting glands with permanent ducts, nor in that of the temporary closed glands, can I admit that the doctrine which maintains that the formation of a secretion involves the detachment, death, and destruction of the cell which formed it, rests upon sound evidence.

(To be continued.)

CASE OF CHOLERA IN ST. GEORGE'S PARISH, HANOVER-SQUARE.

By MARTIN BRUNJES, M.R.C.S.E., L.S.A.

September 20.—Called between 8 and 9 a.m. to see Mr. John G., bricklayer, of 13, Avery-row, aged 55 years, who had been suddenly taken ill at two o'clock the same morning with diarrhœa. He had taken giblet-pie and cabbage for his dinner the day previous; had not been in communication with anybody suffering from cholera. I found him in a state of collapse, the pulse being imperceptible at the wrist, voice almost gone, cramps commencing in the calves of both extremities, extending upwards to the abdomen, producing very great agony in the latter region. He had been purged seven or eight times since the attack, the stools being very dark and offensive; had not vomited, but felt as if anything swallowed would bring it on. Skin livid, cold, and clammy; eyes very much sunken; tongue pale, cold, and flabby; temperature of axilla and rectum not observed. Ordered hot flannels to be wrapped round both legs and thighs, and a turpentine stupe over the abdomen, all of which were to be renewed every three or four hours; an ordinary astringent diarrhœa mixture, with the addition of sal volatile, laudanum, chloric ether, and five-grain doses of the carbonate of ammonia every two hours; a teaspoonful of iced brandy every ten minutes, and ice to be sucked *ad libitum.* 5 p.m.—Voice reduced to a mere whisper; surface still cold and clammy; had vomited everything taken, "excepting the last dose of medicine," containing portions of previous day's dinner; cramps not quite so severe since the hot flannel and turpentine applications; purging stopped; pulse just perceptible at the wrist, about 120 in the minute. Iced brandy to be continued every ten minutes, and an effervescing mixture, composed of the citrate of ammonia, the ammonia being in excess, chloric ether, dilute hydrocyanic acid, and the sedative solution of opium, every four hours. Carbolic acid to be thrown about as a disinfectant. 9 p.m.—Vomited twice since 5 o'clock, but retained the last dose of medicine; cramps almost entirely subsided; pulse 92. The motions have now the character of rice-water, which ooze from the rectum almost without the patient's knowledge, soaking everything placed underneath him. Ordered gr. iij. of calomel and gr. ss. of opium, to be taken at bed-time. All other remedies to be continued; a little beef-tea occasionally in addition to the iced brandy. Not more than a teaspoonful of each to be given at a time.

21st, 10 a.m.—Had not vomited during the night, but a cup of tea given for breakfast without my sanction was rejected with great force. Rice-water oozing per anum the same as yesterday; abdomen hard and slightly distended, dull on percussion, no pain on pressure; has passed no urine since the attack nor had any sleep; skin warmer and lividity of skin almost gone; no cramps whatever; tongue very much the same as when I first saw him; effervescing mixture to be continued, with three grains of calomel, half a grain of opium every four hours; beef-tea and arrowroot, with brandy and ice, as before; a little milk occasionally. 10 p.m.—Has not vomited since the morning; abdomen a little more distended, but softer; rice-water evacuations, less in quantity and less frequent; passed a small quantity of urine; pulse 84; no pain or cramp the whole day; feels inclined to sleep; same remedies to be continued.

22nd, 10 a.m.—Still progressing favourably; had four hours' good sleep; no pain, sickness, or cramp; pulse 83; had two rice-water stools during the night, and passed a little more urine; the same mixture and pills, leaving out the opium. 9.30 p.m.—Better, bowels having acted twice since the morning, of a pitchy blackness, and very offensive; urine more abundant; pulse 86.

23rd, 10 a.m.—Much better; has passed two more bilious stools; appetite returning; slept pretty well; no pain or sickness; ordered dry toast with a little tea, and boiled rice added to the beef-tea; to be given in larger quantities than before, and not so often; less brandy to be given; the effervescing mixture to be continued, omitting the pills; a rhubarb draught to be taken directly.

24th, 11 a.m.—Better, but weak; pulse 80; skin warm; tongue whitish; urine clear and abundant. Ordered a stewed mutton chop with rice and half a pint of porter. The draught had not operated.

25th, 12 p.m.—Still feeling better; had a good night; bowels acted once; takes food with a relish; able to get up a little. Ordered a stomachic mixture, a glass of porter, with a mutton chop.

26th, 10 a.m.—Slept pretty comfortably; bowels acted twice; enjoys his porter very much; allowed to take two glasses instead of one and a mutton chop; pulse rather weaker, 96; looks somewhat depressed in spirits; his wife has been attacked with cholera, producing great anxiety concerning her condition.

12, Brook-street, Grosvenor-square, W.

ON THE

APPLICATION OF THE GRAPHICAL METHOD TO THE STUDY OF THE DISEASES OF THE HEART AND GREAT VESSELS.

By BALTHAZAR W. FOSTER, M.D., M.R.C.P. (Lond.),
Professor of Clinical Medicine in Queen's College;
Physician to the Queen's Hospital and the General Dispensary,
Birmingham, etc., etc.

I.

The application of the Sphygmograph to the investigation of disease has of late engaged the attention of many observers in this country, and from their combined experience we may hope to gain important evidence concerning the value of the instrument as an aid in clinical research. But before the value of the sphygmograph can be fully established, it is necessary for us to have its varied indications connected with the particular pathological conditions to which they are referable. This end can be accomplished by two classes of observations. The first must consist of carefully recorded cases in which the peculiarities of the pulse-trace observed during life have been compared with the structural changes discovered on post-mortem examination. The second class of observations must consist of carefully noted cases of acute disease in which the pulse-trace has been taken daily or several times a day throughout the malady. By the first series we may hope to perfect the domain of cardiac pathology and to greatly augment our knowledge of the diseases of the arterial system. By the second we shall gain a much more perfect acquaintance than we at present possess with the various changes which the organs of the circulation undergo during the course of acute diseases, and very valuable indications will, I have no doubt, be obtained to guide us in the treatment of these maladies. And, *pari passu*, with these observations, useful information will be gathered concerning the effects produced on the circulation by affections of the organs of respiration and other viscera, and thus the domain of general pathology will be enriched, and the progress of scientific Medicine insured.

In a series of papers to be published in the *Medical Times and Gazette* I propose to record from time to time the cases occurring under my own observation which may tend to increase our knowledge of the value of the indications afforded us in the diseases of the heart and great vessels by the brilliant inventions of my distinguished friend M. Marey.

Case 1.—*Aortic Valve Disease, with Dilatation of Aorta—Examination with Sphygmograph and Cardiograph—Death—Autopsy.*

J. P., aged 36, married, of Hunnington, farm labourer, was admitted into the Queen's Hospital on August 16, 1866, complaining of great difficulty of breathing and profuse epistaxis.

History.—He states that he has been ill since last Christmas, when he had a low fever, which lasted several weeks. Previously he had suffered from occasional rheumatic pains in his limbs, but never from rheumatic fever. Up to the last year or so he always enjoyed good health, and has lived temperately. Since his illness last Christmas he has been subject to shortness of breath, attacks of pain in the chest, and paroxysms of difficult breathing. About eight weeks back an attack of epistaxis occurred and lasted some fourteen hours, and has since recurred nearly every week. He has not been able to sleep soundly for some time, on account of noises in his head and horrible dreams, and whenever he has slept well for a little time he has found an attack of dyspnœa occur on waking.

Present Condition (*August* 18).—The man sits in his bed supported by pillows. His appearance is very striking, on account of the yellowish earthy colour of his skin, which is rendered more ghastly by the streaks of blood which bedaub his hands and the blood clots collected round his nostrils. His expression is very anxious, and his breathing quick and laboured; he speaks in a short gasping manner, and complains of an almost constant sickness, which distresses him very much, and of frequent bleeding from his nose. Wants sleep, but has had scarcely any, as whenever he has, so to speak, surprised his disease in a moment of remission and dozed off, he wakes up in a few seconds with a start to fight for breath. Tongue pale and anæmic; soon dries, as he breathes through his mouth alone, the nares having been plugged; feet œdematous; respirations 30 per minute; has occasional cough; pulse 80, jerky; visible pulsation of arteries; scarcely any difference can be found by the finger in the two radials—if anything, the right seems the smaller; temporals equal to the touch; the pupils equal. Pulse-traces were taken, and found to be as follows:—

Fig. 1.—Right radial.

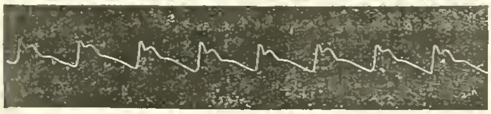
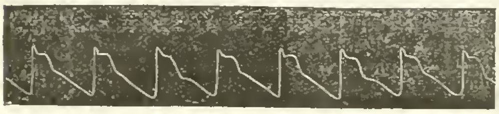


Fig. 2.—Left radial.



On examination, percussion sounds over lungs were normal; respiratory murmur accompanied only by occasional rhonchus; cardiac dulness considerably increased, extending from the middle of the third intercostal space on left side downwards to the lower border of the seventh rib, and laterally from half an inch beyond the left nipple to two inches beyond the left edge of the sternum; the impulse was heaving and extended. In the interval between the second and third costal cartilages on the right side was noticed a point of pulsation; this pulsation affected the next intercostal space below, and was felt by the hand to extend to within about one inch of the right nipple. The pulsation immediately followed the heart's systole, and gave an apparent motion to a considerable portion of the right side of the thorax from the lower margin of the second to the sixth rib.

On auscultation the heart's sounds were heard as follows:—At the apex the first sound was loud and clear, but the second sound was marked by a murmur which nearly filled up the interval and increased in intensity as the base was approached. This murmur was more audible over the right ventricle and at the ensiform cartilage. At the base a loud double murmur was heard. The systolic murmur was loud and rough, and terminated just before the second murmur. The diastolic murmur, loud and long, replaced the second sound, and was only terminated at the base by the succeeding first sound. Both murmurs were heard loudest at the junction of the third right costal cartilage with the sternum. Over the pulmonary artery they were not so distinct, and the pulmonary second sound could be distinguished through the murmur. These two murmurs could be heard close to the right nipple, along the great vessels under the clavicles, and at the sternal notch. They could be heard also posteriorly on both sides of the back of the chest. The liver was found to be somewhat enlarged; the urine was high-coloured, scanty, and contained a little albumen and a few casts. As the epistaxis had occurred twice since his admission in spite of the means used, the nares were plugged, and he was ordered—℞ Pot. citratis gr xxv., spt. eth. nit. ʒss., acidi hydrocyan. dil. ♏iij., aquæ ℥j.: ter die. Brandy in cold water was also ordered frequently, but was generally rejected by the stomach.

August 21.—A careful examination of the chest discovered the same conditions as above described; the heart's action, however, was somewhat weaker. A slight murmur could be detected with the first sound at the apex, and from its nature and position it was referred to secondary mitral insufficiency consequent on the dilatation of the ventricle. Urinary secretion very scanty and slightly albuminous; œdema of the legs increased. Patient has had no sleep; has frequently vomited during the night; breathes about thirty times per minute, and hears a noise in his head like a forge at work (as he expresses it). Slight dulness posteriorly at the bases of the lungs, and mucous rhonchi heard all over the chest; cadaveric odour from the patient of unmistakeable character. Ordered a stimulant draught every two hours; dry cupping over kidneys, and afterwards hot poultices. The pulse-traces were taken and found as before. The cardiograph was applied to the apex beat and to the point of pulsation on the right side of the thorax. The traces taken are figured farther on, Nos. 4 and 5.

After this note the patient gradually sank, the heart's action failing more and more, and the mitral murmur becoming almost hourly more developed. Total suppression of urine occurred, frequent vomiting, and the patient sank into a semicomatose condition, and died on August 23.

The post-mortem examination was made thirty hours after death by the Resident Physician, Dr. Wood. The legs were œdematous; the body had a peculiar earthy yellow tint, and gave out a strong odour of commencing decomposition. On opening the thorax, the aorta was found large and flaccid. There was some fluid in the pleural cavities. The lungs were œdematous, and congested posteriorly. The liver was large and congested. Kidneys œdematous; cortical portion of normal depth, but coloured by commencing decomposition. Spleen and other viscera healthy. On opening the pericardium, the heart was found to be very large, the left ventricle being greatly hypertrophied. The left cavities contained blood and fibrinous clots. Some clots were also found in the right cavities.

The heart and aorta were carefully examined seven days after the post-mortem examination. The heart was very large, weighing nineteen ounces, and the increase was chiefly due to the hypertrophy and dilatation of the left ventricle. The aorta was much dilated in the ascending portion, and formed anteriorly and towards the right side a dilated pouch. At the termination of the ascending portion, however, the dilatation was no longer marked, and at the origin of the great vessels of the neck the diameter of the vessel was but little more than normal. On looking down the aorta, the aortic valves could be seen to be deficient, forming a small irregular-shaped aperture through which fluid found easy access to the ventricle. On opening the left ventricle, the following lesions of the valves were found:—The posterior and right segments of the aortic valves were united, and much diseased. Their edges were rounded, and one-eighth of an inch in thickness. This thickening was hard and fibrous in the right segment; but the edge of the posterior was studded with calcareous particles on both the aortic and the ventricular surfaces. A small portion of the left valve was also thickened at its junction with the right segment, to which it was adherent. It was, however, free from adhesion to the posterior segment, and, with the exception of the thickening of about one-third of its free edge, was healthy. The valves thus formed a thickened fringe surrounding the dilated aortic orifice. From the under-surface of the posterior segment the atheromatous degeneration extended downwards along the endocardium, lining the ventricle to the superior curtain of the mitral valve. Half of the ventricular aspect of this valve was rough, its edges thickened and studded with a few calcareous particles, and the tendinous cords attached to this portion of the valve were thickened and opaque. Some of the cords were very thick, and at their attachment to the valve were as large as crow-quills. The anterior part of the valve was healthy. The auricular surface was smooth, but the edge of the valve was thickened and slightly rough towards the auricle. The other mitral curtain was not diseased. The valves on the right side presented a striking contrast to those of the left cavities on account of their healthy appearance. The aorta was smooth on its inner surface; its coats were thinned; but only one or two small atheromatous patches could be detected.

The following measurements were carefully made according to the plan mentioned by Dr. Peacock in his Croonian Lectures, with this exception, that the orifices were measured by circular discs instead of balls:—

		Inches.
Length of the cavity of the right ventricle		5·25
„ „ left „		5·75
Thickness of walls of the right ventricle	base ..	·25
	midpoint ..	·31
	apex ..	·18
„ „ left „	base ..	·68
	midpoint ..	·62
	apex ..	·31
„ of the septum of ventricles		·5
Circumference of right auriculo-ventricular aperture ..		5·5
„ left „ „ ..		4·75
„ aortic aperture		5·25
„ pulmonic „		3·87
Internal circumference of dilated aorta one inch above origin		6·25

The above measurements need no comment; I may, however, add that as the circumference of the left ventricle could not be taken when I came to examine it, the cavity, when opened and spread out so as to form a plane surface, measured, half an inch below the origin of the aorta, 6·25 inches between its extreme limits, and in the middle of the cavity 7·50 inches. When dilated and distended with blood during life, the circumference of the cavity must have been much greater.

Remarks.—In the following observations I shall confine myself as much as possible to a consideration of the traces collected on the radial arteries by the sphygmograph, and those recorded by the apex beat and the pulsation on the right side of the chest. The comparison of these with the lesions disclosed by the post-mortem examination will prove an interesting and by no means barren study.

I. The pulse-traces as figured above (they were verified by several observations), when first taken, enabled me to state the sounds which had been heard on auscultation by those who had previously examined the case. The careful study and comparison of the traces subsequently led to the conclusion that dilatation of some portion of the aorta existed. The traces bear in their vertical line of ascent evidence of the hypertrophy of the left ventricle. In the little hook which caps each pulsation, we see the record of aortic regurgitation, and the fact that this hook is not followed by a sudden line of descent, but by a horizontal summit in the left trace, and by a slight ascent in the right trace, tells us that the systole of the ventricle was long, and the amount of regurgitation not very large.

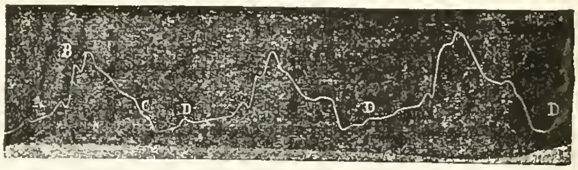
This observation will, I believe, be confirmed by further investigation; certainly a large number of cases which I have examined favour the conclusion that the sudden descent of the summit of the trace after the hook-like process is characteristic of free regurgitation into the ventricle.

A consideration of the peculiarities common to both traces afforded this much information. A comparison of them, however, helped to another step in the diagnosis. The right pulse-trace is of much less amplitude than the left, and differs also in the form of its summit. A difference of this kind, when constant, always excites a suspicion of aortic aneurism, and in this case some condition interfering with the equal distribution of the blood-current was rendered more probable by the diminished relative amplitude of the right pulse-trace, which is, as a rule, more ample than that of the left side. In the examination care was taken to exercise as nearly as possible the same pressure upon both the arteries. The index which I have added to the pressure-screw was adjusted at the same point in both observations. The form and position of the aortic dilatation, I need scarcely say, were exactly calculated to interfere with the full force of the systolic wave, entering the brachiocephalic trunk, while the vessels of the left side received without hindrance the blood directed towards them.

II. The traces of the cardiac impulse and the movement at the point of pulsation on the right side of the thorax were obtained by means of the cardiograph of Marey. This consists, I may briefly say, of a flexible stethoscope terminated by a bell-shaped cavity, which is closed by two layers of thin caoutchouc. Between these layers water is introduced, and the convexity thus formed fits into the intercostal space, while the movement of the heart produces corresponding vibrations in the enclosed fluid. This movement is conducted by the air contained in the flexible tube of the stethoscope to a small circular cavity in which the tube ends. This cavity is of metal below, and covered above by a thin layer of caoutchouc, on which rests a lever, which executes movements corresponding to those produced at the other end of the apparatus by the impulse of the heart. The movements of this lever are registered in the same manner as those of the sphygmograph lever.

With this instrument M. Marey has obtained the following

Fig. 3.

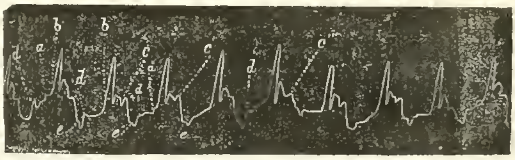


trace, which he has published(a) as that of the normal cardiac impulse.

In my own observations and experiments I have never succeeded in obtaining a trace at all approaching in amplitude the above. I have, however, been able to register traces of smaller amplitude possessing in a minor degree the characteristics of the large trace. I have preferred to reproduce Marey's figure here because it shows more readily than a smaller one the several features of the heart beat.

The interpretation of the trace is as follows:—The point indicated by the letter A corresponds to the contraction of the auricle. The elevation at B corresponds to the systole of the ventricle, which lasts up to the point C; the intermediate undulations are referred by Marey to the closure of the mitral valves. The point marked by the letter C corresponds to the closure of the sigmoid valves, and the sudden fall in the trace which occurs after this point corresponds to the diastole of the ventricle. The slight undulation (D) at the beginning of the line of ascent of the trace Marey considers to be due to the sudden influx of blood from the auricle to the ventricle immediately after the relaxation of the latter. It is no doubt caused by the commencement of the flow into the ventricle; but whether we are to attribute this flow simply to the effect of the relaxation of the ventricle, or to the first part of the contraction of the auricle, is open to discussion. In comparing the trace of the heart's impulse (Fig. 4), as registered

Fig. 4.

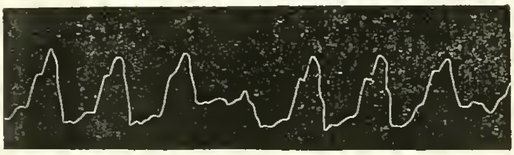


in the case under consideration, with the normal form, several peculiarities may be noticed. Beginning with the line of ascent, which corresponds to the filling of the ventricle after its contraction, we observe that the point *d*, which corresponds with the elevation indicated by the same letter in the normal trace, shows a much more sudden elevation than in health. The height of this little wave is generally a test of the perfect emptiness of the ventricle, but in that case it is followed by a second strong wave in the line, corresponding to that marked A (Fig. 3). In the trace before us, however, we notice no relation of this kind; we have indeed but one well-marked sudden elevation followed by the ordinary undulations which mark the line of ascent and correspond to A (Fig. 3). This sudden elevation of the pressure at the beginning of the filling of the ventricle indicates a considerable arrival of blood in the cavity, which comes partly from the auricle, but chiefly by regurgitation from the aorta. This peculiarity I have observed in several cases of aortic regurgitation, and the above is, I believe, its explanation. The next peculiarity is the altitude of the line which marks the ventricular contraction, and by which the trace betrayed during life the hypertrophy and dilatation of the left ventricle discovered after death. The vibrations succeeding this line are not very marked, but we notice that after the first fall of pressure, immediately succeeding the forcible systole of the heart, the line is almost horizontal in many of the pulsations, indicating the increased duration of the period of the systole. The slight elevation at the end of the period of the systole, as seen in some of the pulsations (2nd, 3rd, and 4th), also points to the energetic character of the ventricular contraction. The closure of the sigmoid valves corresponds to the points marked c, c', c'', but we also find near the end of the line of descent another indication of their closure at e; this may possibly be attributed to the vibrations of the valves caused by the backward flow of the blood into the left ventricle. In some cases of free aortic regurgitation, I have observed several undulations in the trace corresponding to the closure of the sigmoid valves; this can occur, however, only when the regurgitation is free, and consequently the tension in the aorta very low. The line of descent in the trace (Fig. 4) has a vertical character, indicative of sudden diminution of pressure in the ventricle, which is not seen in the normal form. This is an indication of value in certain conditions, and here it tells us that the contraction of the ventricles was effectual, and completely emptied their cavities. In conditions which interfere with the complete expulsion of the blood, this line often has a more oblique form. The suddenness of the fall of pressure in this case was due to the diminished state of tension in the vessels, permitting the left ventricle to empty itself completely; and the obliquity which the right ventricle might have given to the line, if its pulsation could have been recorded, was masked by the greater share taken in the formation of the impulse by the hypertrophied left cavity.

(a) Robin's *Journal de l'Anatomie et de la Physiologie*, No. 3, 1865.

III. The trace figured below (Fig. 5) was taken by applying the cardiograph over the point of pulsation between the second and third right costal cartilages.

Fig. 5.



I record it as of interest; a comparison of it with the heart's impulse and the trace of the radial arteries will suggest an explanation of some of its features. The length of this paper precludes any analysis on my part at present. I may merely add that the peculiarity of the third pulsation is due to an inspiratory effort, the expansion of the chest-wall separating the bell of the cardiograph from the pulsation. In Fig. 3 we can also see the effect of inspiration on the cardiac impulse in the 3rd pulsation, and the same influence is seen to have modified the form of the 5th pulsation in Fig. 4.

In conclusion, I may add that the record of this case will, I trust, have the effect of inducing many observers to apply the cardiograph and sphygmograph to the study of the diseases of the heart, for the value of these instruments in the investigation of disease can only be determined by the combined experience of a number of careful and conscientious workers. By the aid of these contrivances, either in their present or in improved forms, we shall gain, I believe, a much more perfect knowledge of cardiac pathology, and arrive at sounder and more exact views of those numerous conditions which we now vaguely classify as functional disorders of the heart.

4, Old-square, Birmingham.

Dr. Fowler, one of the district Medical officers of the East London Union, writes to the *Times*, giving a graphic account of the crowded and filthy state of some of the places under his charge, and especially of Catherine-Wheel-alley, Bishopsgate-street. He makes out a strong case against the officials, of whom he says:—"Day after day have I transmitted 'the results of my own and my assistant's inquiries' to the deputed receiver of these reports. By Section 6 of the aforesaid Order of Council it is the duty of the Board of Guardians to without delay cause a report of such facts to be made to the nuisances removal authority—*i.e.*, the Commissioners of City Sewers Some half-dozen repetitions have I in as many weeks sent in of some of the above statements. My very first report was of the filthy and overcrowded condition of No. 140, Bishopsgate-street Without. Although I then stated that 'This house requires the constant supervision of an inspector of nuisances,' its state on the 15th inst. was in the main no better than it was six weeks ago when visited with cholera."

REPORTS OF HOSPITAL PRACTICE

IN

MEDICINE AND SURGERY.

◆

SAMARITAN HOSPITAL.

CASES OF OVARIOTOMY.

(Under the care of Mr. SPENCER WELLS.)

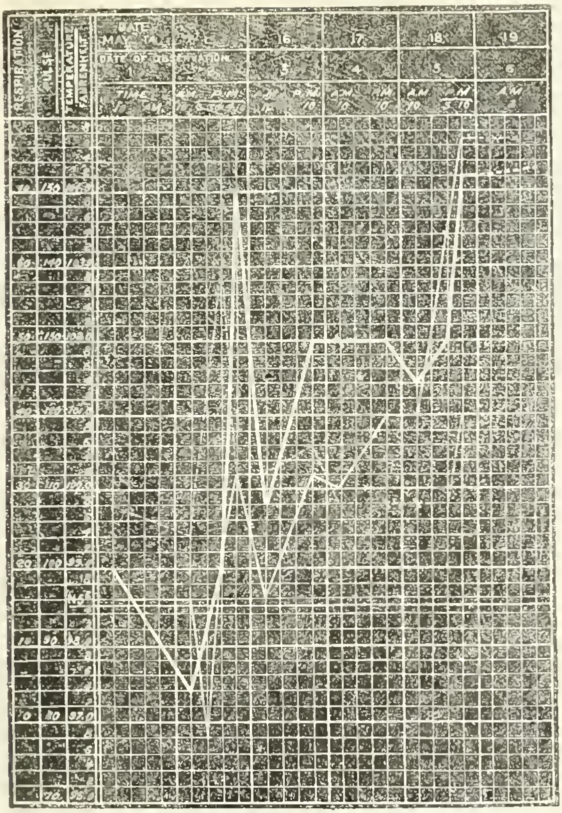
(Continued from page 616, vol. i. 1866.)

Case 82.—*Adherent Multilocular Cyst—Never Tapped—Ovariotomy—Death on the Fourth Day.*

The wife of a Lincolnshire farmer, 52 years of age, consulted Mr. Wells in October, 1865, by the advice of Dr. Robbs, of Grantham, whom she had consulted in the previous June, on account of a tumour in the abdomen. The catamenia had been regular till the summer of 1864. There was then constant uterine discharge till the end of the year. It stopped entirely early in 1865, and there had been no appearance since. For some time before the end of 1864 she had felt that her body was large, and it increased slowly till June, 1865, when Dr. Robbs discovered a tumour. Increase after June had been slow until October, when Mr. Wells found a multilocular ovarian cyst, non-adherent, extending upwards half way between the umbilicus and sternum, and laterally into both flanks, but further back on the left than on the right side. The situation of the uterus was normal; its mobility moderately free, and there was no tumour below the brim of the pelvis. The general condition was good, and ovariatomy was recommended; but as the patient was not suffering from any very great discomfort, she wished to postpone any operation, and returned home. In April, 1866, Dr. Robbs wrote to Mr. Wells, stating that the patient was suffering from dyspnœa and the legs were swelling, and she was admitted to Hospital May 3, 1866. The tumour had increased considerably since October, and the general condition was much less favourable. She was emaciated, had a jaundiced aspect, and the left thigh and leg were much swollen. There were some phlebolites in the superficial abdominal veins just above the pubes and in the left groin. The uterus was moderately mobile, the cervix soft, and the os open. There was occasional diarrhœa, and the pulse was variable, ranging from 90 to 120. Cough was troublesome, but was relieved by touching a relaxed uvula with nitrate of silver. The lungs appeared to be healthy.

Ovariotomy was decided on as the only resource, although the above unfavourable conditions were fully considered, and it was performed on May 15, Professor Hubbard, of Newhaven, U.S., Dr. Chisholm, of Charleston, Dr. Dalton, of Demerara, and Dr. Kocher, of Berne, being among the visitors. Dr. Junker gave chloroform. The usual incision was made, and a tumour exposed with firm and extensive adhesions, which were very vascular near the pubes. They were separated by the hand, and one large cyst was tapped and emptied. Then, as the rest of the tumour consisted of many small cysts, the incision was extended till it reached from three inches above to five inches below the umbilicus, and the tumour was pressed out unbroken. A pedicle as broad as four fingers and close to the right side of the uterus was secured temporarily in a clamp, and the tumour was cut away. But, as the clamp was very tense, the pedicle was transfixed behind the clamp and tied in two portions, the clamp removed, and the end of the ligatures cut off short. Two vessels in the abdominal wall near the incision, where adhesions had been separated, were tied, and the ends of the ligature also cut off short. A piece of unhealthy omentum was also cut off after a ligature had been applied. The left ovary was healthy. The surface of both visceral and parietal peritoneum had a rough, red, granular appearance—evidence of chronic peritonitis. The liver was large, dark in colour, and its peritoneal coat was rough. The wound was closed in the usual manner. The fluid removed was eight pints. The weight of the rest of the tumour, 17½ pounds. Externally the peritoneal coat was highly injected, with patches of fibrine, rough and granulated, and with shreds of separated adhesions. Internally most of the cysts exhibited signs of intense inflammation, many of them containing a very offensive greenish purulent fluid.

The accompanying chart exhibits the range of temperature, pulse, and respiration from the day before operation till death on the fourth day, eighty-three hours after operation.



Remarks:

Day before operation.

Ovariotomy at 3 p.m. Immediately after operation pulse sank to 78.

Sick, restless, skin and tongue moist; no wind passing; urine loaded with lithates.

Sick, restless; wind passing by tube; lithates in urine.

Sick, restless; 12 oz. of offensive dark red fluid removed from Douglas's space at 10.30 a.m.; continues sick.

Died at 2 a.m.

The patient went on badly from the first. There was not very much pain, and it was soon calmed by some small opiates; but vomiting was frequent. She was very thirsty, and slightly delirious during the night after the operation. On the next day, the urine became scanty and turbid; specific gravity 1028; it contained no albumen, but lithates in great quantity, and much urophain. The vomiting had ceased, and citrate of potass was given. On the second day she vomited several times, and was very restless; 10 grains of sulphite of potass was given every two hours. On the third day, the vomited matter assumed all the characters of "black vomit." Finding evidence of fluid in Douglas's space, Mr. Wells introduced a long trocar by the vagina behind the uterus, and evacuated about twelve ounces of very fœtid claret-coloured serum. He left the canula, but removed it in the evening, as very little fluid came through it. The vomiting continued; she had a very restless night, and died early on the fourth day, eighty-three hours after operation.

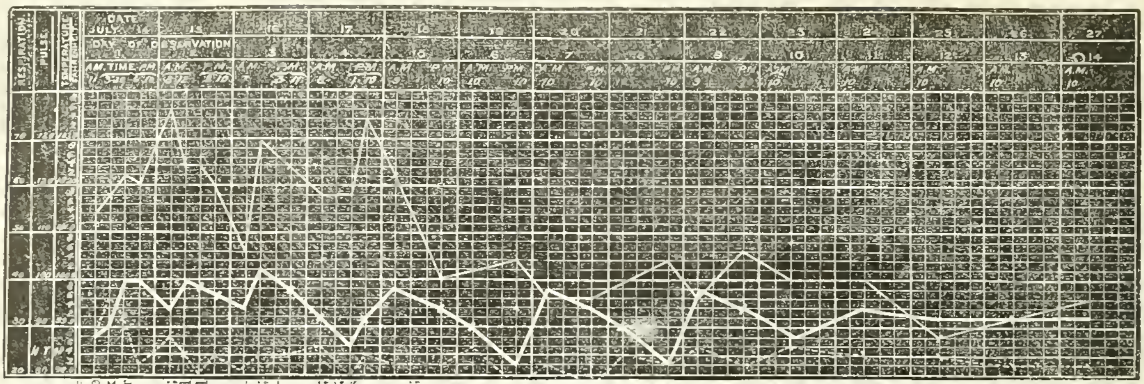
On examination fifteen hours after death, the wound was found to be accurately united. The peritoneal cavity contained a few ounces of dark red serum. There was half an ounce of blood-clot in the pelvis near the opening made by the trocar from the vagina. The peritoneal surface of the abdominal wall from which the cyst had been separated appeared gangrenous. The intestines and all the abdominal viscera showed by their red, rough, granular surfaces marks of chronic peritonitis of some standing. The uterus and left ovary were healthy. The right ovary had been removed. The right Fallopian tube and part of the round ligament were encircled by a ligature which had effectually secured the vessels. Neither the included tissue near the ligature, nor the ligature itself, had any coating of lymph.

Mr. Wells remarked on this case that it was an example of the evil of delay in operating. When he first saw the patient in October, she was in a favourable condition for ovariotomy; but six months later, chronic peritonitis had gone on to such an extent that the case was a very unfavourable one for operation. Still, it was the only hope of saving life, and although a large proportion of such almost hopeless cases must necessarily prove unsuccessful, a certain small proportion of recoveries under apparently desperate circumstances is obtained, and justifies the attempt to save a life which must otherwise be certainly lost. The following case is a striking example of this proposition:—

Case 83.—Multilocular Cyst—Two Tappings—Ovariotomy—Recovery.

A widow, 45 years of age, married seventeen years ago, mother of three children, but a widow for the last eleven years, came from near Lutterworth to consult Mr. Wells by the advice of Dr. McIlree, of Claybrook, in February, 1866. She had been well till August, 1865, when she suffered from some pain in the left hip, which afterwards descended into the left thigh. She began to increase in size about the same time, slowly at first, but more rapidly after Christmas. On explaining the nature of the case to her, it was arranged that she should return home, and, as there was one large cyst the emptying of which would afford much temporary relief, Mr. Wells agreed with Dr. McIlree that he would tap as soon as need for relief arose. On the 4th of May Dr. McIlree did so, and removed eighteen pints of "dirty gruel-like fluid." This gave great relief, but a considerable amount of solid tumour remained. Dr. McIlree wrote that "the uterus was firmly fixed before the tapping, and the tumour projected into the vagina very much between the uterus and bladder. It entirely receded from touch after tapping, and the uterus became quite moveable." The cyst refilled rapidly, the patient became much emaciated, and so very weak that it was doubtful whether she could bear the journey to London; but she did so, and was admitted to Hospital in June, 1866. On the 26th the girth at the umbilicus was 41 inches, the distance from umbilicus to sternum 9½, to symphysis pubis 11½, to right ilium 13, and to left ilium 12½ inches. The whole abdomen was filled by a multilocular ovarian cyst, which could also be felt *per anum* and between the uterus and bladder. There had been no appearance of the catamenia since April. She was excessively emaciated; the pulse small—124; the apex of the heart exactly at the left nipple; the sounds normal; the lungs healthy. She was thirsty, but had no appetite; the tongue was coated, and flatulence was distressing. On June 20 Mr. Wells tapped three inches below the umbilicus, and removed twelve pints of viscid fluid. Groups of cysts were then seen above and on both sides of the emptied cyst. Some of them appeared to be free, others fixed. She improved very much in health after this tapping; but the emptied cyst rapidly refilled, and ovariotomy was performed on July 14. Dr. Keith, of Edinburgh, and Dr. Chisolm, of Charleston, were present. Dr. Junker administered chloroform. An incision, extending from one inch above to six inches below the umbilicus, exposed a cyst which adhered so intimately all round the incision that Mr. Wells opened a large cyst, and emptied it before he attempted to separate any of the adhesions. Then, finding it difficult to discover the precise boundary of the cyst, he broke up some secondary cysts and inverted them, when, after separation of only a small extent of close anterior adhesion, the whole tumour was easily removed. A pedicle as broad as three fingers was enclosed in a cautery clamp about three inches from the right side of the uterus, and the tumour was cut away about half an inch from the clamp. The projecting tissue was burnt up by the gas cautery; but on loosening the clamp a vessel close to the Fallopian tube bled freely. Mr. Wells then applied another clamp below the first, and seared the tissue with hot irons. But on loosening the second clamp, the same vessel bled, and it was necessary to tie it and another close to it. This was done with fine silk, and the ends were cut off short. The peritoneal cavity was sponged carefully, and some serum removed, which coagulated into a transparent jelly on exposure to air (*fibrinogene* of Virchow). The left ovary was healthy. The wound was closed, as usual, with silk sutures.

The annexed diagram shows, as in the last case, the range of temperature, pulse, and respiration after the operation.



Remarks:

First observation three hours before operation. Operation at 2 p.m. Sick after operation. xx. ℳ. laud. per rectum at 4. Frequently sick.

Sick during night; skin clammy, cold; much flatulence; urine lithic and scanty; tongue coated; very ill and faint. Inj. of beef-tea and brandy.

Passed a better night; urine more profuse, clearer; tongue and skin moist; passes flatus; can take tea and arrowroot without sickness.

Much better; tongue and skin moist; more urine; passed twice stools; somewhat restless at night; stitches removed.

Tongue clean; passes flatus freely; appetite.

Rapidly improving.

Bowels moved.

Bowels moved.

Slight suppuration in the stitches.

Doing well.

The weather was extremely hot and oppressive on the first and second days after operation, and the patient's skin was soddened by profuse transpiration rather than perspiration. Windows were kept open night and day. Beef-tea and brandy were injected every two hours to the rectum, and after the third day she made a speedy recovery. She travelled to Leicestershire twenty-one days after operation, bore the journey well, and has since regained strength rapidly.

KING'S COLLEGE HOSPITAL.

ENCHONDROMA, IN WHICH BONY DEPOSIT HAD TAKEN PLACE, REMOVED FROM THE CHEEK.

(Under the care of Mr. SPENCER WATSON.)

Mrs. —, aged 40 years, applied in June, 1865, with a small hard tumour of the size of a horse-bean immediately over the inner and lower angle of the malar bone of the left side. The tumour had been there for some years, but had lately become painful, and she thought it was increasing in size, and was anxious to have it removed.

It was found to be freely moveable on the subjacent structures, but the skin was somewhat adherent over the surface.

June 21.—The ether spray jet was directed on to the cheek, and as soon as the surface became white, an oblique incision of one inch in length was made. This first incision was scarcely, if at all, felt by the patient. It was then found that the tumour was closely attached to the skin and surrounding parts, and a cautious dissection was necessary to remove it. During this dissection the ether spray was directed into the wound, but the patient evidently felt a great deal of pain, and complained loudly of it. The deep surface of the tumour lay immediately over the periosteum, and was bony in structure, but freely moveable over the subjacent bone.

22nd.—Erysipelatous œdema, and redness of the face and eyelid; very much depressed and anxious; stimulants and quinine ordered.

23rd.—Less redness of the surface; discharge from the wound purulent.

From this time she progressed favourably, and the wound closed up, leaving a small puckered cicatrix. The tumour consisted partly of a structure resembling fibro-cartilage, and partly of imperfectly developed bone. When examined by the microscope, the cartilaginous part was found to consist of cells with granulated contents closely aggregated, and for the most part arranged in a fibrillated manner, some of the fibres being waved and interlaced so as to enclose cavities. The hard bony part had no true Haversian systems, and only imperfect lacunæ and canaliculi at the junction of the bony and cartilaginous structures; the spiculæ of dark granulated bone were seen projecting into the translucent cartilage.

Observations.—The unusual situation of this tumour led a Surgeon who first saw it to suppose that it was a cyst,(a) probably dermoid, and the same diagnosis was made in the first instance by Mr. Watson, but the great hardness of the tumour was against such a supposition. The pain in the face associated with this disease is difficult to be accounted for, and possibly might be owing to the morbid mental irritation of the patient. Since its removal the pain has no longer troubled her. The local anæsthesia seemed, as in other cases in which Mr. Watson has tried it, to act well for the surface-incisions, but did not deaden the pain to any considerable extent in the deep dissection.

A CASE OF BLOOD-CYST IN THE THYROID GLAND—PUNCTURE—INJECTION OF ASTRINGENTS, CONTRACTION OF THE CYST-WALLS, AND CLOSURE BY GRANULATION.

(Under the care of Mr. SPENCER WATSON.)

Mrs. P., aged 45 years, was admitted on April 14, 1866, with a large swelling occupying the whole of the left side of the neck from the ramus of the jaw to the clavicle, and having all the characters of a cyst of the thyroid gland. The tumour had been growing for twelve years, but had increased in size lately, and had within the last week caused her great difficulty in swallowing. It was not painful nor tender, and her health had not materially suffered. She had applied at the Hospital two years before, but the Surgeon who then saw her had advised her not to have any operation performed. She now applied on account of the difficulty of swallowing (she stated that she was unable to swallow any solids), and on account of the tumour's rapid increase in bulk. The tumour had a lobulated surface, some lobules being about the size of eggs, and others smaller. The skin was stretched tightly over the surface, and was somewhat translucent over the centre of each lobule, but not reddened nor otherwise discoloured, excepting over a spot at the lower and inner part of the swelling of about the size of a shilling. At this point a black slough or scab had made its appearance, and the cyst was evidently on the point of bursting. The tumour moved when the patient swallowed, but the opposite lobe of the thyroid gland did not seem to be enlarged. It was observed after the puncture of the cyst that the thyroid cartilage and the larynx were thrust over one and a half inches or two inches to the left side by the growth of the tumour, and there must therefore have been considerable pressure exerted by it on all the surrounding parts, and especially, as was proved by the difficulty of swallowing, upon the œsophagus.

(a) Mr. Paget, in his Lectures on Surgical Pathology, says:—"To the touch, cartilaginous tumours may be very firm, or hard, especially when they are not nodular, and their bases are ossified. In other cases, though firm, they are compressible, and extremely elastic, feeling like thick-walled tensely-filled sacs. Many a solid cartilaginous tumour has been punctured in the expectation that it would prove a cyst."

The conjunctiva of the left eye was congested, and there was some watery discharge and swelling of the eyelids. This was probably due to pressure upon the facial and jugular veins of the same side.

April 14.—The anæsthetic spray of Richardson was directed upon the lower and outer part of the tumour, and a trocar thrust into one of the lobules as soon as the whitened appearance of the skin had been produced. About a pint and a half of reddish serum escaped, and the whole tumour subsided, showing that the lobules were mere recesses in the wall of one large cavity. Around the deeper part of the growth was felt a firm resisting substance, closely connected with the surrounding tissues, but the nature of which it was impossible to ascertain. Pad and strapping applied over the puncture.

16th.—Was much relieved after the emptying of the cyst, and was able to swallow easily. The redness and congestion of the left eye also subsided. About 4 a.m. this morning was roused from sleep by feeling an escape of blood from the puncture. This was at first like dark blood, but has subsequently been a merely dark-coloured serum. She was much alarmed at this, but did not become faint. At 10½ a.m the cyst, though not distended, was fuller than immediately after the puncture, and was hard at its base, as if from the formation of clots. Firmer pad and strapping were applied.

The oozing of red-coloured serum continued almost without cessation up to April 26. It was then partly stopped by the application of perchloride of iron to the sloughing aperture, through which the discharge now came, and the discharge was then for a few days much diminished in quantity.

Up to May 29, however, there was occasional discharge of a fluid very like venous blood, and at intervals this discharge was replaced by that of clear serum. Her health did not suffer materially. Injections with a solution of the perchloride of iron served to check the bloody discharge, and it soon absolutely ceased.

June 25.—The last week there has been no discharge; the tumour remains solid, and the puncture has scabbed over. The opening left by the slough is also closing.

July 31.—The tumour has shrunk to the size of an orange, is flattened out over the anterior triangle, and is quite firm. Both openings have closed. A small separate cyst at the lower part, which threatened for some time to increase in size, has, on the contrary, shrunk under the sterno-mastoid muscle. Her breathing, which was somewhat difficult, is now comfortable, and she swallows with ease. The larynx and trachea are still thrust over very much to the right side, but this does not seem to produce any inconvenience.

The history and progress of this case make it almost certain that the disease consisted of a proliferous cyst, with a very vascular villous lining; that so long as there was firm internal pressure the exudation from the vessels in its walls was of a serous nature only and limited in quantity; but that on emptying the cyst and removing the pressure, the coats of some of these vessels gave way, and a discharge of blood was the consequence. When the perchloride of iron was injected, it sealed up the open mouths of the ruptured capillaries, and set up a certain amount of inflammatory action, which ended in contraction, granulation, and closure of the cyst cavity.

A case which was, in all probability, of the same nature, is related by Sir William Fergusson in his work on Surgery, in which there was very copious bleeding after opening the cyst, but which ultimately terminated in as satisfactory a way as this. (Fergusson's "Practical Surgery," p. 645.) The aspect was at one time suspiciously like that of a malignant tumour, and the favourable issue of the case was therefore more worthy of observation.

ST. MARY'S HOSPITAL

LARGE INGUINAL HERNIA—OPERATION—RECOVERY.

(Under the care of Mr. HAYNES WALTON, F.R.C.S., Surgeon to the Hospital, and to the Central London Ophthalmic Hospital.)

[Reported by Mr. T. BEARD BURTON, M.R.C.S.]

THE following case possesses several points of interest, and the treatment illustrates some of Mr. Walton's modes of practice in strangulated hernias:—

The patient, a strong muscular man in middle life, was brought to the Hospital with an enormous strangulated hernia on the right side, passing in a large volume to the very bottom of the scrotum, which was very much pushed down and elongated; it was very tense. The hernia had existed for several years, and a truss had been worn, which completely kept it up, but the man getting tired of the appliance had thrown it aside for about a couple of years; and when the hernia came down, as it was wont to do, from day to day, it was pushed back; but it was never very large. About twelve hours before admission he failed to return it as usual. There was a reducible hernia on the other side.

When Mr. Walton saw the patient and examined the hernia, he said there was little hope of returning it; that he would have the man chloroformed, and give the taxis a full and careful trial; and if that failed he would operate. He pointed out the importance of operating early in all cases of strangulated hernia, as by far the greatest number of recoveries were under these circumstances, and dwelt on the pathological changes that quickly set in in the peritoneum and in the intestine, and which changes were conditions adverse to success, and, above all, the injury to the vital powers—indeed, he considered that a person commenced to die from the time the strangulation was accomplished.

An operation proved imperative. Mr. Walton made his incision through the integuments from a spot opposite the external abdominal ring downwards in the axis of the tumour. He mentioned that it was unnecessary ever to begin the incision higher than the point mentioned; it was not wanted, and all above that was useless cutting, and an unnecessary wound. It could never be required to extend the incision in that direction, while it might be necessary, as will be presently shown, to make it afterwards longer downwards. The several coverings of the hernia were so tense that a pair of forceps were never used to raise them, but layer after layer was treated by light touches with the scalpel, when it immediately gaped, and the dissection was continued. Here it may be well to mention the way in which Mr. Walton conducted this. As soon as each covering was opened he separated it a little with the handle of the scalpel, and then introduced his forefinger and divided the texture to the intended extent with the blunt-pointed bistoury on his finger—that is, he used his finger as most men use a director. He always makes it a rule to do this—his reason being that he operates with greater despatch, and he believes with greater safety to the patient, as he feels where the point of the knife is, and knows what he is doing. It is probable that an operator with a large finger would not do this as readily as himself.

An attempt was made to return the hernia without opening the sac. This could not be done, as the stricture proved to be in the neck of the sac, which was then divided with the bistoury and the finger. As the sac proved to be filled with intestine, there being as yet very little fluid present, Mr. Walton deemed it prudent to elongate the lower part of the incision in order to examine the contents of the rupture, and to see if there was any omentum through which it might have been possible to become twisted, but there was intestine only, which was but slightly congested, and the return of which was easily accomplished. The intestine was in actual contact with the testicle, so that this was a congenital hernia—that is, anatomically congenital, although the intestine did not descend until adult life. Sutures were then applied, and a compress and bandage put on. Mr. Walton pointed out the manner in which a bandage should be applied in all hernia cases—that is, in the figure of 8 manner over the thigh and over the pelvis, and pinning the bandage to the pad each time it was passed over it; that the abdomen above the pelvis should not be bandaged, as is usually done, because then the bandage was always slipping, and the pressure was always intolerant if the slightest peritonitis ensued.

The after-treatment consisted in watching. Mr. Walton does not give opiates as a matter of routine and without necessity, lest he should disorder the patient's stomach and cause his appetite to be interfered with, and produce the disagreeable after-effects of an opiate.

Directions were given to the nurse to support the scrotum by a pillow placed between the legs, so as to remove all dragging on the parts, which was of greater necessity on account of the hernia on the left side, which frequently came down. The patient progressed well. At the end of three days the sutures were removed. Now, however, the scrotum on the right side was much infiltrated, inflamed, and painful, and at a later period, when there was no doubt of pus having infiltrated from diffuse cellular inflammation, Mr. Walton divided it freely to the very bottom. The patient got very low, suppuration was freely established, the wound gaped very much, and the testicle was exposed. Stimuli were freely given. Improvement of the wound quickly followed, a clean granulating surface was then established, and the patient began to gather strength.

Mr. Walton caused great attention to be directed to the drawing together of the scrotal wound as well as could be, by strapping and bandaging and the most painstaking support to the scrotum. As matters progressed, and the edges of the wound could be nearly approximated by pressure, sutures were applied and kept in for several days, being the most effectual means, at that period, of keeping the parts in nearest apposition for the longest period undisturbed, and therefore the best measure for securing adhesion, or the union between the granulations of the scrotum and those of the testis. They never produced the slightest irritation, and were removed after they had fulfilled their object. This practice, which we believe to be peculiar to Mr. Walton, is one often adopted by him in like conditions.

By the timely division of the scrotum, no skin was lost, although some of the cellular tissue perished, which always causes contraction of the integument in proportion to its loss. After the effects of the operation had passed away, the wound had healed to its entire extent. A double truss was applied, and the patient left the Hospital.

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Medical Times and Gazette.

SATURDAY, SEPTEMBER 29.

THE INQUEST ON RICHARD GOLDING.

There is no class of men to whom the public are so much under obligation as to members of the Medical Profession, and it is not too much to affirm that there is no class of men to whom they are so ready to impute evil motives and corrupt practices. The fact is, we believe, that the Profession are so constantly bestowing benefits on the public, inaugurating charities, undertaking unpaid appointments, and scattering broadcast gratuitously what other men are paid for—their time, their knowledge, and their talents—that the world will not give them credit for having no ulterior motives in their acts. The public will not believe in so much disinterested benevolence, and are delighted to cast off the debt of gratitude they owe by throwing doubts on the source whence the good deeds they profit by spring. Accordingly, any imputation on a Doctor's conduct or intention is eagerly welcomed and commented on by a section of the public press with a zest that proves the estimate the writers have formed of the predilections and opinions of their readers. To read the tirades which from time to time appear in some of the daily papers, it might be supposed that Doctors were a set of crafty scheming adventurers, wielding deadly agents for evil with irresponsible power, deaf to the voice of conscience and the dictates of humanity, and bent only on obtaining their personal ends. The doings and sayings of no other profession are canvassed with so much prejudice. The enmity which used to be launched against priestcraft is now transferred to Medicine. The enormous obligations which are due to the Medical Profession are entirely forgotten, and a charge of moral delinquency against a Medical Practitioner, whether supported or unsupported by any evidence, is made an occasion for the most merciless personal attack, and too often for insinuating calumnies against the whole body to which he belongs.

The inquest on Richard Golding, aged 80, an engraver of some celebrity, which was brought to a conclusion last week, points the moral which we have asserted. The cruel and unjustifiable attack made on the character of Dr. Part, of Camden-town, derived all its power of injury from the fact that he was called in as Medical attendant on the deceased. There can be no doubt that had he been a casual acquaintance of Mr. Golding's, or his legal adviser, or in fact had stood to him in any relation except that of his Medical attendant, the affair would never have been heard of. The worst insinuation made against Dr. Part was founded on the fact that he had prescribed medicines and nourishment for the deceased, and had literally acted to him the part of the Good Samaritan.

The facts of the case are really few and simple. Richard Golding, an artist and engraver, had amassed a small fortune of about £1200. With this and some valuable prints and pictures he retired from active life. For some twenty years he lived in the house of a Mrs. Southgate, with whom and with her daughter he appears to have contracted a degree of intimacy. He, however, lived the life of a recluse. He had relations, but he had quarrelled with them. He cooked his own food, waited on himself, and seems to have been an eccentric reticent old man of miserly and dirty habits. On Mrs. Southgate leaving her house, her lodger obtained a new residence. He took rooms in the house of a Mrs. Todd, in Stebbington-street, Oakley-square. Here he was occasionally visited by his former landlady and her daughter. It does not seem that he had any other friends or acquaintance except Dr. Part, whom, however, he had not seen for some years. He had met him formerly, on several occasions, at the house of a Mr. Taylor, a brother artist. Dr. Part had once called on him, and he knew that Dr. Part had worked for thirty-two years as the unpaid Medical attendant of the Artists' Benevolent Fund Society. About Christmas last year Mr. Golding, then in his eightieth year, contracted bronchitis. He was ill for ten or twelve days, but appears to have obtained no Medical assistance, and to have been visited by no one. On December 26, Miss Southgate called on him and was sent by him to Dr. Part, with the message "that he was very ill and wished Dr. Part to see him as soon as possible, and that he also wished the Doctor to see him on some private business." Dr. Part received the message about eleven o'clock in the forenoon, but he did not visit Golding until about three in the afternoon. Golding said to him, "I have sent for you to ask you to be my executor. I am very ill, and feel I have not long to live. I went out some ten or twelve days ago, in the evening, and got my clothes wet. Since that time I have not been well. I have a very bad cough, and my breathing is very troublesome. I have become so very much weaker the last two or three days that now I cannot get up and down stairs." Dr. Part examined him. He says:—"The chest was perfectly resonant upon percussion both in front and behind. There were both large and small bronchial mucous râles, with very little vesicular respiration. His pulse was 100; his breathing was difficult; the expectoration was copious and puriform; his legs and feet were œdematous, and his countenance dusky." He was in a miserably neglected state. His room was filthily dirty; there was a handful of struggling fire in the grate, but the temperature was low, and the old man's extremities were very cold. Golding said, "I want to make my will." Dr. Part suggested to him that he should see a solicitor. He said, "No; I feel so ill; you had better take the instructions and let your solicitor make the will." Dr. Part accordingly wrote from his lips his final wishes. He left to Mrs. Southgate and her daughter each £100, and his furniture to his landlady; his remaining property he bequeathed to Dr. Part, whom he left sole executor and residuary legatee. Dr. Part naturally inquired if he had any relatives. He said he had some, but had not seen them for many years, and they had behaved badly to him. Dr. Part then asked him if he wished the legacies to the Southgates to be paid free of legacy duty. His answer was—"Well, no; I have been thinking of that matter, and if you do that your legacy will not reach one thousand pounds, which I am very anxious it should." Dr. Part sent Golding some wine and nourishment, had his room cleaned and properly warmed, and prescribed for him the following mixture, which was dispensed by his Assistant, Mr. E. Roberson:—℞ Liq. ammoniæ acetatis ℥ij., oxymel. scillæ ʒij., tinct. camphoræ comp. ʒij., aquæ anisi ℥vj. M.; sumat 6tam partem 4tâ quâque horâ. He also sent him four pills, each containing a quarter of a grain of ipecacuhana, a quarter of a grain of squill, a quarter of a grain of sulphate of zinc, and two grains of extract of henbane. Golding took only one dose of the medicine; and as two of the pills disappeared, it is presumed that he had taken them. Dr. Part sent him no other medicine. On that evening the Doctor saw Mr. Nicholas Wehnert, a solicitor, a brother of the well-known water-colour painter, and gave him instructions to prepare a will in accordance with Golding's wishes. If there could be a doubt as to Golding's testamentary capacity and acquaintance with what was passing around him, it is completely dispelled by Mr. Wehnert's evidence. He said—"On the following day I went to 17, Stebbington-street, and saw the deceased man. When I got there I read the will over to Mr. Golding, and asked him for the name of the landlady, as there was a legacy to her. Dr. Part had not given me the name, and I had left it blank. He said it was Mrs. Todd. I read the whole of it over to him. He seemed perfectly sensible. When I went there, there was no ink in the house, and Dr. Part went to fetch some. In the meantime, Golding was speaking about Lord Palmerston, and said what a loss it was to the country. He also said he had known Dr. Part for upwards of twenty years, and had a great regard for him, particularly as being connected with the Artists' Fund and with artists. The will was read in the absence of Dr. Part, and when I had read it the deceased said it conveyed exactly his intentions and wishes. He executed the will in my presence, and in the presence of a gentleman named Brooker (Commander Brooker, R.N., Dr. Part's son-in-law). After the will was read Golding asked me what was my charge for it, and Dr. Part said he would arrange that. Deceased mentioned Miss Southgate to me. I took the name Frances Julia Southgate, I think, and Mr. Golding said he thought I had put the name wrong; he thought it was not Julia, and after the will was executed she came into the room, and I asked her whether her name was Julia. She said it was." We have here ample evidence that Golding knew perfectly what he was about when he executed the will in Dr. Part's favour, and the fact that Dr. Part was his executor completely disarms any hostile criticisms founded on the fact that he evinced a reasonable care for the property in the deceased's apartments.

At his first interview Golding had given Dr. Part a fifty pound note to defray his testamentary and funeral expenses, and with that exception Dr. Part took away no property until after Golding's decease. He most emphatically denied that he took away two watches—with which the Southgates charged him. We pass over the fact of the removal of money from Golding's drawer by Miss Southgate, and her subsequently producing it when spoken to on the subject by Dr. Part; also the deficiency in the sum found on the premises as compared with the amount mentioned by Golding to Dr. Part. These facts may admit of various explanations. He seemed better on the 27th, and was up and dressed when he executed his will. He appears to have gone to bed that night in his clothes. The next morning he was found moribund. He was seen by Miss Southgate, who states that he was convulsed; this, however, seems to be contradicted by the evidence of the landlady, Mrs. Todd. Dr. Part was sent for, and came, and ultimately Mrs. Part attended at the bedside of the dying man and ministered to his wants. He became unable to speak, but was apparently conscious. He died between two and three o'clock in the afternoon.

Now, really in all this we see nothing exceptional or extraordinary. An old, almost friendless man, having a little property to leave, fixes on a person whom he has known and respected for many years, and to whom his profession are under the greatest obligations, as the heir to his property. Every day heirs are chosen for not a tithe of such good reason. To his old landlady and her daughter, with whom he had resided for a good many years, he left not inconsiderable legacies, and to his landlady at the time of his death he left his furniture. However, the Southgates were dissatisfied. They had expected a larger sum, and Miss Southgate asserted that Golding had told her he had left her mother and herself £700 each. The value of this testimony, however, is completely outweighed by the circumstantial evidence of Mr. Wehnert, who, it must be recollected, was an entirely uninterested person. The Southgates at intervals appear to have written to Dr. Part, and at last Miss Southgate applied to the Coroner of Middlesex to institute an inquiry into the cause of death. We do not know that she actually charged Dr. Part with having poisoned the deceased, but she evidently insinuated it. She gave her version of the matters connected with the property, and intimated that Dr. Part had neglected the deceased in not providing a nurse for him, and that Mr. Golding became drowsy after taking the first dose of his medicine, and that he was convulsed on the morning of his death when she visited him. With regard to the nurse, Dr. Part proved that he had endeavoured, although unsuccessfully, to procure one, and the improvement in Golding's condition on the day previous to his death seems to have determined all parties to delay obtaining one. The Coroner, Dr. Lankester, seems to have thought that, in the interests of all concerned, an inquiry was advisable, and accordingly an order was made out for the exhumation of the body. The post-mortem examination was made by Mr. Rodgers, the Lecturer on Chemistry and Toxicology at the London Hospital Medical School, who also made an analysis of the various organs. The condition of the body—nine months after death—of course afforded no reliable pathological evidence of the cause of death. The chemical examination, Mr. Rodgers states, revealed the presence of a trace of morphia and a trace of arsenic in the contents of the stomach. There was none in the liver, spleen, or other organs. By a trace toxicologists mean a quantity that can neither be measured nor weighed, although Mr. Rodgers hazarded the opinion that the quantity of arsenic found might be accounted for by the administration of five minims of Fowler's solution during life. This gentleman expressed his firm conviction that from the minuteness of the quantity of arsenic found, and from the fact that no absorbed arsenic was present in the liver, it was not likely to have been administered with felonious intent, that it could not have been in any way productive of injury to the deceased, and that in all probability it had been introduced into the stomach accidentally, either by a mistake of the person who dispensed the medicine, or from the presence of a shot in the wine or medicine bottle, or in some other unknown manner. It was clear that the symptoms of the deceased were entirely different from those produced by morphia or arsenic given in poisonous doses. He was awake to the last hour of his life, and he neither vomited nor was purged. The trace of morphia might, of course, be accounted for by the dose of paregoric elixir taken by the deceased. For ourselves, however, if we may venture to express an opinion, we should look with great doubt on any analysis which professed to discover a trace of morphia in the stomach of a man who had been dead for nine months. Morphia is chemically one of the substances most difficult to be isolated from organic mixtures, and we should require very strong evidence to convince us of its presence even in a quantity that might be submitted to the balance if it were alleged to have been obtained from the stomach of a man who had been dead and buried in an ordinary earth grave for nine months.

With regard to the arsenic, we may observe that the test by which it was discovered was Reinsch's—by boiling copper in the suspected solution acidulated with hydrochloric acid. Now, in the face of the fact that both copper and hydrochloric acid contain arsenic, and that it is exceedingly difficult to procure them pure, we regret that evidence of the presence of arsenic was not obtained by the more careful and scientific process of Fresenius and Von Babo. Mr. Rodgers urged, as proof of the purity of his materials, that with the same means he did not extract arsenic from the liver and other organs. But we presume Mr. Rodgers did not use the identical piece of copper gauze with which he tested the contents of the stomach for his experiments on other organs; neither is it clear that because in one organic solution, of the liver for instance, copper is not dissolved, there may not exist in the contents of a stomach some substance which, like chlorate of potash, will dissolve it. This, however, is a matter of no real moment in the case. The infinitesimally small quantity of arsenic produced, conjoined with the facts that no arsenic had been absorbed, and that no symptoms of arsenical poisoning existed during life, prove that arsenic was no more concerned in the death of Mr. Golding than Woorali or the Upas Antiar.

The verdict was evidently wrung by the stubborn argument of facts from a most prejudiced and adverse jury. That there was a strong animus amongst them against Dr. Part was proved at the adjourned meeting by the voluntary confession of one of their number, that since the previous inquiry he had been in communication with Miss Southgate, and that "he had taken a great deal of trouble to get up the evidence." Accordingly, although they returned a verdict which really completely exonerated Dr. Part, by stating that the deceased died from the mortal effects of bronchitis, and that the said death arose from natural causes, yet, by introducing the utterly unnecessary clause, "although small quantities of arsenic and morphia were found in the stomach," they permitted a sinister impression to be left on the minds of the unscientific, uneducated, and suspicious.

We cannot draw this already too long article to a close without pointing out one or two of the lessons it teaches. In the first place, we would urge the necessity of reform in the mode of conducting chemical researches in cases where character and, it may be, life are at stake. Chemists, the best, are fallible, and surely it is not too much to require that an analysis should not be conducted by one expert alone, but that two independent sets of experiments should be carried on by two competent observers, who should have no means of becoming acquainted with each other's processes or results. Next, we would say a word upon the delicate question of the course to be pursued by a Medical man who finds himself placed in Dr. Part's circumstances. We consider that gentleman has been most grievously and cruelly attacked. We believe that he acted as he did from the pure motive of wishing to spare his dying patient trouble and exertion. But had he been more worldly wise he would not have selected the solicitor; he would have allowed the lawyer to receive his instructions directly from the testator's lips, and when he found himself appointed executor and residuary legatee he would have associated with himself in the management of the case some Medical man of competent standing. The French law—lately put in force in the case of the Duke of Grammont-Caderousse, who left the bulk of his fortune to Dr. Déclat, his Medical attendant—which prevents a Doctor who shall have attended a person in his last illness receiving a legacy made in his favour during the progress of the malady, would be regarded in this country as an unjustifiable infringement of private liberty. But there is no doubt that common sense recognises the propriety of avoiding the circumstances into which Dr. Part was unfortunately led. It would be absurd to assert that a Medical attendant should not receive a legacy from a patient. But we strongly advise any reader on no account to allow himself to be sole Medical adviser, sole executor, and residuary legatee, if he would escape the most injurious imputations. Dr. Part was most peculiarly circumstanced. Delay would have been as unjust to the patient as it would have been injurious to the interests of all who benefited by the will. The dying man was in no condition to be harassed by strangers or to be fatigued with long conversation. Under these circumstances, Dr. Part did what he felt to be just, and we believe that he acted from pure and right motives. But we do not think he acted with prudence. The story teaches that no Medical man must depend on a reputation, however high and unsullied, to protect him from the worst charges, if, although completely innocent, by any lack of worldly caution he lay himself open to them.

THE WEEK.

THE HASTINGS MEMORIAL.

Any objections which may be urged against the system of indiscriminate testimonials to living men lose all their weight when applied to the case of a public mark of respect to the memory of the departed great. Our readers are already aware, from the advertisements which have appeared, that it is the intention of the friends of the late Sir Charles Hastings to raise a sum of money which shall be expended in establishing a lasting memorial to the memory of the Founder of the British Medical Association. The British Association, at their Chester meeting, decided on an application of the money raised which we are certain would have been warmly approved by the public-spirited man whose memory they wish to keep fresh in the minds of the Association and Profession. Eulogy on Sir Charles Hastings' character and work would be superfluous. We can only say that the memorial proposed is of a kind thoroughly in unison with the career and purpose in life of the provincial Physician who founded and established the largest and most catholic Medical Society of his day. The sum to be raised is to be added to the Hastings Medal Fund. This medal has hitherto been awarded to a member of the Association for the best essay on some Medical subject. The interest of the money now obtained is to be added to the medal, and the entire prize is to be open to Medical men throughout the world. We trust that a scheme so fitting the character of Sir Charles Hastings, and so excellent in itself, will meet with ample support from members of the Medical Profession, both in and outside the pale of the British Medical Association.

MEDICAL PAYMENT BY FRIENDLY SOCIETIES.

The Committee representing the Medical Profession at Bradford in Yorkshire have determined to raise their terms for attendance on members of Friendly Societies. Hitherto the club Doctor has been allowed the munificent sum of 2s. 6d. per annum for supplying Medical aid and medicines to artisans whose wages average at least from £50 to £100 a year. The Committee now announce that the terms (remuneration we cannot call it) for attendance shall be 4s. per annum, and that a fee of 2s. 6d. shall be paid by each candidate for lodge membership presenting himself for examination. We need scarcely say that we think these terms, although an improvement on the former, are still too low. It is to be hoped that no qualified Medical man will be found who, after this announcement by the Committee, will be induced by any offer on the part of the Friendly Societies to undersell his brethren, and accept the clubs at the old rate of payment. The Bradford Committee have already done good service by raising the midwifery fee for artisans' wives from 10s. 6d. to 15s. If the Medical Profession is to keep its place as a liberal calling to be exercised by gentlemen, its remuneration must rise in proportion to the increased expenditure of all classes of society and the rapidly increasing wealth of the nation.

WHY THE "GRAND TIR INTERNATIONAL" AT BRUSSELS IS POSTPONED.

The following cholera statistics of Belgium supply a sufficient answer to this question :—

Brussels.

	Population.	Deaths.
1832	100,000	500
1849	130,000	1000
1855	149,000	281
1856	152,000	209

The above for city of Brussels alone, without *faubourgs.*

1866.—*Nine Provinces of Belgium—Cases and Deaths to August* 21.

	Cases.	Deaths.
1. Antwerp	6956	3575
2. Brabant	6597	4034
3. West Flanders	666	402
4. East "	5994	3426
5. Hainaut	4230	1581
6. Liege	4919	2787
7. Luxemburg	1084	577
8. Limburg	131	57
9. Namur	574	260

Up to September 1, 1866, in Brussels, with population of 189,337, the total deaths in 100 days were 2000—*i.e.*, in the *city, without the faubourgs.*

FRENCH SANITARY MEASURES.

The *Gazette des Hôpitaux*, of September 22, contains a capital paper on Hygienic Precautions against Cholera, drawn up by the Comité Consultatif d'Hygiène, and addressed to the Minister of the Interior. It states that the mortality caused by the Paris epidemic in 1865 was much lower than that of 1832, 1849, and 1854; that out of the 300 women employed by the Bureau de l'Assistance Publique in washing and cleansing the linen of the cholera patients, not one had died of cholera; and that only two cases had occurred amongst the 911 persons employed as bearers or otherwise at funerals. These good results are attributed to sanitary and hygienic measures public and private. The report proceeds to discuss the merits of most kinds of disinfectants, and for purifying water gives the preference to vegetable charcoal over the permanganate of potass. The form recommended is the *braise de boulanger*—Anglicè, "baker's breeze," which, we suppose, is a sort of charcoal remaining from the wooden fagots employed to heat ovens. This substance is directed to be put into the fountains which supply drinking water, so as to form a filtering bed, in the proportion of two kilogrammes to every hectolitre of water, and it is to be renewed weekly. The sulphate of iron is the favourite disinfectant for *fosses d'aisance*, drains, etc. We are somewhat surprised to see ammonia recommended as a gaseous disinfectant on the ground of its opposing the growth of mould, microscopic fungi, etc., and of its exercising a favourable influence on those who breathe it. In England we think the contrary in both particulars. Disinfectants, as carbolic acid, etc., should be placed at every aperture by which air escapes from a cholera ward, so that the disease may not be propagated in the vicinity. Such are some of the points which strike us as novel in this useful paper.

THE BENEFIT OF GOING BAREFOOT.

A letter has been addressed to the Committee of the Ladies' Sanitary Association, 8, Pont-street, S.W., by the Comtesse de Noailles, on the benefit of going barefoot. There is a great deal to be said in favour of this plan, whether we regard development, temperature, or cleanliness. Look at the magnificent gait of a barefoot Highland girl and the elastic play of every muscle, and compare her feet with those of girls who have been tortured in boots, too short or too narrow at the toes, the object of which seems to be to compress the foot into one unshapely and inelastic mass like a bootmaker's "last." As to warmth, it is pretty certain that boots as they are quite as often make the feet cold as warm. If people have good stout boots to walk out in, and change them when they come in and sit still, it is very well. But as for the poor thin, leaky, half-worn boots of poor women and children, they are but a sham; they do not keep out cold and wet; and it is needless to say that people who have no boots at all cannot "catch their death" by sitting indoors in wet boots. As for cleanliness, the thing speaks for itself. Feet freely exposed to the air are not offensive, and if soiled by a walk would be washed or wiped as a matter of course. "The smell in a close schoolroom," says Madame de Noailles, "of so many unwashed feet, carefully enclosed in still dirtier stockings and shoes, is very unwholesome," whereas "no one ever felt disgusted at the little bare brown feet of the Italian peasant children." The thing is so rational that it only needs be set going, and the benevolent authoress suggests to her aristocratic fellow sanitarians that they should set an example by allowing some of their own children to go barefoot in the Park. Probably a simple sole, worn as a sandal, would obviate some difficulties. It would allow of free aeration and free play of the muscles, and would necessitate cleanliness; it might be elegantly fitted on, after the antique, and it would insure the sole of the foot from injury and from contact with disgusting dirt.

DR. E. SMITH AND THE METROPOLITAN POOR-LAW MEDICAL OFFICERS.

It has been stated that Dr. Edward Smith, Medical Officer to the Poor-law Board, has spoken disparagingly of the Poor-law Medical Officers of the Metropolis. In justice to these gentlemen, who ought not to acquiesce in what would be a real stigma on their character, we extract from Dr. Smith's Report (on Metropolitan Workhouse Infirmaries, etc., p. 63) the following remarks :—

> "It has been the fashion to consider the Poor-law Medical Officers as members of the Profession of inferior ability or character, or as young and inexperienced men, willing to accept these appointments with a view to obtain private practice; and it has been very generally asserted that, being underpaid, they have discharged their duties in a careless manner.
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> "However true this may have been thirty years ago, it is, I believe, utterly incorrect now. The advances in Medical knowledge and the improvement in Medical teaching have been great, almost beyond conception, within that period; and an amount of knowledge, whether practical or literary, which thirty years ago was very much restricted to the higher branches of the Profession and to a few leading men in the larger provincial towns, has been extended to the lower branch of the Profession, and, as a necessary result, the position of its members, both before the public and in the estimation of the higher ranks of their *confrères*, has been increased in a remarkable manner.
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> "It is impossible to meet the Medical Officers of the Metropolitan Workhouses without perceiving and acknowledging the high position which they hold by character and attainments, and in many instances the discretion as well as ability with which they discharge their duties. Moreover, it must be borne in mind that the same gentleman who is the Medical Officer to the Workhouse is the Medical adviser of the middle classes in the surrounding neighbourhood; nay, even of some of the very guardians who have charge of the poor; and if he be fitted to attend upon the middle classes and the guardians

in their private capacity, he must be fitted to attend the poorer classes and to merit the confidence of the guardians in their corporate capacity. It would, probably, be scarcely possible to find a body of Medical Officers who could excel those now in office or who could discharge their duties more kindly.

"Moreover, a great advance has been made in the estimation in which these appointments are held both by the Profession and the public. The Medical Officer regards the Workhouse as his Hospital, and, in his degree, regards his position with as much pride and pleasure as is felt by the Hospital Physician; whilst, with few exceptions, the public regard the appointment as honourable, and as evidence of the ability and integrity of the Medical Officer.

"Hence, in every aspect of the question there is reason for congratulation; and it now only remains to reconsider the duties of the office, and the time to be devoted to it, with a view to its increased efficiency, and to award such a salary as shall remove just grounds of complaint, increase the value with which the Medical Officer regards it, and be an inducement to the most able, industrious, and discreet, and, in a word, the most efficient Medical man, to compete for it. There can be no doubt that when this has been attained, and a resident assistant has been appointed in the larger Workhouses, both Physicians and general Practitioners of high position will seek the appointments, and within a few years the appointment may rank as high before the public and the Medical Profession as that of the present Hospitals. When this takes place, or indeed before that period, it may be thought right that the Medical Officer should be a member of the board of guardians, with power to speak at the meetings of the board, but not to vote."

CHOLERA LITERATURE.

Dr. Lankester has published a little book called "Cholera: What it is, and How to Prevent it." (Routledge.) It is marked *sixpence*, though it really contains as much matter and of far better quality than many a book that sells for five times the money. The history of the cholera, its origin and march, its causes and prevention, and as much about the treatment as the public need know, are set forth in the lucid diction for which Dr. Lankester is justly famous. We are sorry to see that amongst preventive medicines he mentions astringents and opium only, and ignores the acids.

Mr. Sanderson, C.E., has published some "Suggestions in reference to the Present Cholera Epidemic," arising out of his experience in India, which are worthy of perusal. He is a staunch supporter of the doctrine which attributes the disease to feculent contamination of water, and adduces in favour of his views the experience of the city of Lucknow, and his own observations at the place where he himself was located, and where he acted as a member of the municipal board and as an honorary magistrate. The town consisted of 5000 inhabitants, and he had caused the wells throughout his district to be lined with mortar and brick in their passage through the upper strata of contaminated mould to a water-bearing stratum lying above a bed of trap rock, and separated from the former by a bed of disintegrated trap 30 ft. thick. When cholera came in 1864, scourging all the country around, nearly in the middle of which his operations were carried on, he prohibited, as far as he could, the use of any water but that of the wells thus treated, and the result was that out of the whole 5000 inhabitants none suffered, except a few who obstinately rejected the advice given, and went to a large city thirty miles off, and to other places where cholera raged. Yet there were treated in a shed outside the town as many as fifty-seven cases of cholera in the persons of travellers, all of whose clothes, whether the patients recovered or not, were burned. The pamphlet contains suggestions for the purification of the River Lea, and the "reclamation of the east-end of London."

An anonymous writer sends us a pamphlet entitled "The Human Blight and Cattle Blight; or, an Explanation of the Cholera and Cattle Plague." He need not have told us that he is not a member of our fraternity, since the dogmatic and fanciful character of his remarks would have betrayed him readily. He says, "The cholera is caused by a blight of different insects expressly formed for the purpose of settling upon and devouring the mucus of the intestines, and ultimately the intestines, of man." We recommend him to read some admirable papers not long ago published in the *Athenæum*, entitled "A Bundle of Paradoxes," from the pen of Professor De Morgan.

There is a useful handbill, issued by Dr. MacCormac for distribution in Belfast, headed "Cholera: its Early Treatment, and especially its Prevention." In addition to the usual sanitary advice, he recommends the use of dilute sulphuric acid daily as a prophylactic.

The September number of the *Edinburgh Medical Journal* contains a paper by Dr. George Steele, entitled "Some Remarks on Cholera, with Reminiscences of the Epidemic of 1832." Dr. Steele does not think that contagion is a very powerful agent in the propagation of cholera, but considers that some order might at last be introduced into the chaos of conflicting opinions upon this subject by instituting researches such as those of Schroeder, Pasteur, and Davaine, and by investigating the local and atmospheric conditions of places attacked and places spared. He does not think that any evil emanates from the dead body, and hence regrets the recommendation of the metropolitan health officers that bodies should be speedily interred. His chief argument in support of this opinion is the impunity with which cholera subjects were dissected in the schools during the epidemic of 1832 and that of 1848-9. Among the post-mortem appearances which he has observed is one which he considers has not been dwelt upon sufficiently by authors—viz., a singularly hyperæmic condition of the sympathetic system and the pneumogastric nerves. The splanchnic nerves, the semilunar ganglia, and the solar plexus were the parts chiefly involved, and these not unfrequently were imbedded in extravasated blood. The cœliac, renal, œsophageal, cardiac, and pulmonic plexuses were also similarly affected, but to a less extent; the neurilemma of the pneumogastric was frequently injected and studded with ecchymosed spots, and in one case he found the phrenic nerve, where it spreads out upon the diaphragm, steeped in a large coagulum. He mentions two cases in which galvanism—one wire placed over the glossopharyngeal nerve exposed by incision, and the other over the epigastrium—produced a powerful effect upon the respiratory function during collapse. The air expired became warmer, and the lips and whole countenance, previously livid, became of the natural colour; after its discontinuance, however, death resulted. Still he thinks that this agent deserves further trial. He regards these facts as pointing to a paralysed condition of the pulmonary plexuses, and, regarding the condition of the abdominal plexuses as similar, he looks upon the discharges as mechanical, and not to be confounded with vital secretions. In his opinion, and here we heartily coincide with him, the most successful treatment will be found to consist in combating symptoms as they arise, carefully studying the features of each case, and adapting our practice to the character it wears.

A pamphlet "On Cholera, its Pathology and Treatment," by Dr. Braithwaite, is a reprint from the *Retrospect*, vol. lii. It embraces the views held by himself, Dr. George Johnson, Drs. Wallis, Maxwell, Massy, C. W. Bell, J. Hill, P. Brady, Plimmer, Steadman, Davies, and Bullar.

Dr. Alexander Hamilton Howe's pamphlet, entitled "Reflections on Cholera," is devoted to the maintenance of a lunar theory of origin of the epidemic, on which he states that he predicted the advent of the epidemics of 1848-49 and 1866. In both these epidemics, and also in 1831-32, and, indeed, in all great epidemics, the longitude of the lunar node has been about 180°, or something less than 180°, and may always be used confidently as a warning and a guide that an epidemic visitation may be expected and anticipated by proper precautionary measures. He thus maintains a definite and periodic law of recurrence at intervals of about 18½ years. This, however, does not account for the 1854 outbreak, upon which Dr. Howe is silent.

We have been favoured with a proof of Dr. Chapman's new work upon "Diarrhœa and Cholera; their Nature, Origin, and Treatment through the agency of the Nervous System." Dr. Chapman enters upon an elaborate refutation of Dr. George Johnson's theory of the collapse of cholera as originating in the spasmodic contraction of the minute pulmonary arteries by the irritant operation of a poison in the blood. Dr. Chapman denies that there is any proof that there exists any poison in the blood, and maintains that the irritation of muscular fibre by the hypothetical blood poison is pure assumption, and that while the blood poisoning, if a fact, may explain the occasional sudden coming on of collapse, his theory fails to explain its sudden passing off. In short, on Dr. Chapman's showing, Dr. Johnson has not a leg to stand upon. For our own part, we are not disposed to give implicit assent to any one-sided views of the pathology of cholera, whether proceeding from the one or the other. Dr. Chapman's critique will, however, be read with interest.

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

(Continued from page 326.)

ON THE CONDITIONS OF THE PROTOPLASMIC MOVEMENTS IN THE EGG OF OSSEOUS FISHES.

By Dr. Ransom, M.D. (Nottingham).

[*Section D.—Physiology.*]

Dr. Ransom, by means of diagrams, exhibited the phenomena seen in the yolks, first, of unimpregnated eggs. Next, after water has entered, he showed not only a distension of the outer rim, but a diminution of the yolk ball, the separation of the food yolk then taking place. The normal contractions shortly after impregnation were then described. After some days these protoplastic contractions cease; fissile contractions commence. Carbonic acid produced the most remarkable changes, and these he illustrated by means of a series of diagrams. Ultimately it causes chemical changes in the matter of the food yolk. He continued this inquiry on the eggs of the pike both impregnated and unimpregnated. He specified the effect and non-effect of various acids and other chemicals in arresting the rhythmic movements of the yolk. Chloroform was the only thing that had any decided effect. Weak solutions of acetic acid disturbed, but did not derange the action as carbonic acid did. Galvanism was also applied to the eggs of the stickleback. Very weak currents caused slight peristaltic action, and stronger currents ruptures in the inner sac. These effects were also shown in the diagrams. He attempted to abstract heat and restore the action by galvanic currents. Galvanised by the weakest currents, distinct contractions were exhibited; but the eggs must have been deriving heat, during the experiment, from the instrument. A temperature too low retards the contractions, but they are not destroyed before 104° Fahr., an action similar to what takes place in the use of poisons. From these experiments it appears that the rhythmic contractions and the cleavage are not destroyed before oxygen is gone. The yolk contractions cease earlier in ova which contain most eggs, and cease last in those nearest to the air-bubble, showing the importance of oxygen. And the inference is, that the influence of oxygen is not to be denied in the production of these contractions, although its quantity must be small.

(DISCUSSION.)

An animated discussion followed the reading of Dr. Ransom's paper.

Dr. Bennett entered into the question of the nature of these contractions. They had no relation to the development of the egg—they had relation only to a homogeneous plasma. He gave many instances of contractions, even in structures absolutely structureless, as well as in the higher organisms, but if they saw such movements in the entire yolk of an ovum, it was very remarkable. Were these owing to any inherent power of contractility, or conditions from without, or both united? It appeared to him that this should be watched with interest.

DEMONSTRATIONS OF LOCAL ANÆSTHESIA.

By Dr. Richardson, M.A., M.D. (London).

[*Section D.—Physiology.*]

Dr. Richardson gave a series of demonstrations of his new mode of producing local anæsthesia by narcotic spray. He used a large and improved diffusion-tube made for him by Krohne and Sesemann, and various volatile fluids—viz., ether, nitrite of ethyl and ether, chloride of methyl, methylic alcohol, and a paraffin ether possessing a boiling point of 60° Fahr. Having laid bare his own arm, the author rendered four inches of surface rapidly insensible, and passed needles through the flesh very deeply and easily, without pain. Mr. Grove, the President of the Association, next laid bare his arm, and was subjected to a similar experiment with perfect success. Dr. Richardson described briefly the course of inquiry which led him to this method, and in this part he referred with special care to the previous and all-important labours of Dr. James Arnott. He next dwelt on the apparatus employed, and explained that, as far as the present principle was concerned, he considered the details were now nearly perfect, and by it operations of the most extreme kind could be painlessly performed. The large tube he had exhibited covered more than six inches of surface with spray, and rendered that surface insensible. In respect to the volatile fluids he was yet content with absolute ether; true, with the paraffin fluid he could produce perfect insensibility with three blasts of the bellows, but the effect was limited as to surface, the insensibility was transient, and there was often irritation and redness afterwards.

After giving a demonstration with the styptic ether spray, and describing that no ill effects of a serious kind followed the local anæsthetic method, and which in itself was perfectly safe in regard to life, Dr. Richardson passed on to consider certain subjects of a physiological character purely.

1. He fixed the freezing point of the tissues of the body at 16° Fahr.

2. He described the heat of fluidity of the various tissues, and assigned to the red corpuscles the function of fixing heat in the pulmonic circuit of blood.

3. He stated his conviction that the force with which the body is charged, and by which sensibility is sustained, is a form of heat.

4. He contended that the general and the local methods of producing anæsthesia were actually the same in principle. Both acted by removing the heat of sensibility; but when a general anæsthetic was employed, it, by depriving the blood of heat in the lungs, and afterwards the brain of its required force, cut off the brain from the rest of the organism, while when a local anæsthetic was used it cut off simply the force of sensibility that was resident in the part itself.

The author concluded by explaining the various operations on horses and other inferior animals which had been performed painlessly by the Messrs. Mayor under his method of anæsthesia.

ON THE COMPARATIVE VITALITY OF THE JEWISH AND CHRISTIAN RACES.

By Dr. Richardson.

[*Section D.—Physiology.*]

In this paper, which created considerable interest, Dr. Richardson proceeded to consider the following question:—"Whether the fact of race specifically modifies the vitality or the value of life of a people?" In the present instance they had a race living through centuries, often under great privations, intermarrying, taking in no new blood, and yet showing a higher vitality than other peoples. How was this, he asked. Was it race? Was it habit, manner, or custom? He would quote Mons. Boudin on this question, who said—"Here is a race which counts less marriages, a less number of children, and enjoys a longer duration of life." Were these, therefore, the signs of a congenital superiority of organisation, or of a more energetic *vis insita!* Although throughout Germany the Jews might be considered poor, yet their mortality was less than that of the Christians. The principal cause of this difference lay in the fact that the poor Israelites were always frugal and temperate. Seeking information from the learned statistician Legoyt, they found him expressing the following—"Marrying earlier in life than the Christians, the Jews enjoy longer the conservative influence of matrimony; statistics having shown the injuriousness of celibacy as concerns the duration of life. The fecundity of their marriages being less, the Jews rear their children more successfully. They very rarely enter into occupations requiring hard labour, attaching themselves instead to pursuits of commerce, banking, science, literature, and public offices." Dr. Richardson's own views on the question were that the Jews, though not by any means up to any grandly developed physical standard, enjoyed good health, and retained their primitive advantages by the force of surrounding conditions. In conclusion, he did not think their vitality arose from traditional superstition or special hygienic laws, but from temperance, faithfulness, and prudence.

(DISCUSSION.)

A gentleman pointed out that the Jewish nation was nowhere a hard-working class in a muscular point of view. They were singularly a brain-working people, and could not be put in comparison with other nations not so situated. He considered that in that, to a great extent, would be found a solution to the problem of their peculiarly favourable vitality.

ON THE MOVEMENTS, STRUCTURE, AND SOUNDS OF THE HEART.

By Dr. Sibson, M.D., F.R.S. (London).

[*Section D.—Physiology.*]

The author's experiments on the movements were made on the ass under the influence of wourali, assisted by Mr. Shepperly, and on dogs subjected to chloroform, assisted by Dr. Broadbent and Mr. Edwards. The contraction of the ventricles takes place in every direction towards a region of rest, which, in the right ventricle, corresponds with the anterior papillary muscle; in the left ventricle, with a situation about midway between apex and base. The movements of the right ventricle are very striking. The base moves extensively from right to left, the septum slightly from left to right; the origin of the pulmonary artery descends, and the lower boundary of the ventricle ascends; the apex and base of the left ventricle approximate; its posterior walls advance considerably, and its left border moves to the left, and with a twisting motion from behind forwards. This twisting motion corresponds with a revolving movement of the apex. Simultaneously with this universal contraction of the ventricles, there is universal distension of both auricles, the pulmonary artery, and the aorta. The distended auricles and vessels step into the place left vacant by the universal retraction of the ventricular base. The total amount of blood contained in the heart and great vessels is the same during both systole and diastole. During the ventricular contraction, however, the distribution of the blood, lessened towards the region of the apex, balances itself by being increased in that of the base, since the auricles and great vessels are enlarged, not only towards the ventricles, but also outwards and upwards. During ventricular dilatation the reverse takes place. When the animal lies on its back, the anterior walls of both ventricles advance during systole, but when on its side they recede. If, however, a fixed prop be then placed behind the base of the left ventricle, the front walls again advance. This advance takes place even to a greater extent, under the like circumstances, when the venæ cavæ are tied and the ventricles contain no blood, and also when the anterior wall of the right ventricle, the septum, and papillary muscles are successively removed. This advance of the ventricular walls when their base is supported either naturally or by an artificial prop is due to a lever movement. When the fingers are applied upon the front, the side, or the apex of the ventricle, or when they grasp both of its sides, during systole they are in each instance propelled outwards to a considerable extent, and that although, at every part except the front, the wall itself then retracts. This propulsion of the finger is very much lessened, though not quite obliterated, when the blood is shut off from the heart, and it is due, to a slight extent only, to the muscular rigidity of the walls over the front of the heart, slightly to the lever movement, but mainly to the outward pressure of the blood contained in the cavity. Thus pressure caused by ventricular contraction is equal in every direction, and is, therefore, as great on the walls as the outlets.

The author then described the structure of the cavities, valves, and muscular walls of the ventricles, and concluded by recounting his experiments on the sounds of the heart, and giving his explanation of their causes.

This admirable and exhaustive paper was received with the most marked interest, and gave rise to a good debate.

ON THE STATISTICS OF THE GENERAL HOSPITAL NEAR NOTTINGHAM.

By Joseph White, Esq., F.R.C.S. (Nottingham).

[*Section F.—Economic Science and Statistics.*]

Mr. White's paper was full of the most interesting and valuable facts, but as we shall have occasion to refer to it at length in another place we merely chronicle now that it was read before the Statistical Section of the Association.

ON SCIENTIFIC EVIDENCE IN COURTS OF LAW.

By Professor Williamson, F.R.S. (London).

[*Section F.*]

The paper read by Professor Williamson was a report of a committee. It was as follows:—

In the year 1862 a committee of this Association recommended that "By a legislative act judges should be empowered, on application from a suitor, in causes of a technical character, to convene skilled assessors, the number of whom should not exceed three, and who should give their opinions truly, on the statements of the witnesses, in such manner as they shall be required by the judge previous to his adjudication of the cause." No legislative action has, however, as yet been taken upon this recommendation. It is admitted that the character and functions of one class of witnesses have of late years undergone an important development which has removed them from the position of ordinary witnesses. Yet no provision has as yet been made for this alteration, and the new witnesses are, in the eyes of the law, still like other witnesses. These new witnesses may be described as active witnesses—for the novelty in their functions consists in the practice of collecting, by active exertions, facts which are favourable to one conclusion upon the question at issue, and even making experimental researches for the discovery of new facts which may be favourable to that side.

An impartial witness goes into court to depose to such facts as he may know pertaining to the question under investigation, and he is bound to state those facts in as accurate and straightforward a manner as possible, and to avoid shaping his statements with a view of promoting one conclusion or verdict more than another. But an active witness, when he undertakes to give evidence upon any question, need not be possessed of any specific information bearing upon the question at issue. He receives statements and information from persons who are interested in particular conclusions, and he receives no information from the opposite party. But with his mind thus prepared with facts on one side of the question, he frequently sets to work to verify these facts experimentally, or to find new facts bearing upon the question at issue. His opportunities of collecting facts for the trial are one-sided, and his facts are mainly in favour of one particular view of the case—the view which he has been employed to support. So well is this partiality of the evidence of scientific witnesses felt and acknowledged, that the more conscientious witnesses, and probably most scientific witnesses, would decline to give evidence at the request of a party whose case they considered unjust. They know that their efforts would tend to increase his chances of success, and they decline to promote a cause which they consider unjust. By thus acting these conscientious witnesses usurp the functions of the judge, for they decide the case in their own minds, and either strive to carry out what they consider a just conclusion, or refuse to aid what they consider an unjust one. If his position in a trial were not of necessity one-sided, and if he did not consider himself bound to support the side upon which he is employed, a scientific or active witness would have no motive for passing an opinion upon the subject at issue before consenting to give evidence. His very solution of what seems the true end is a proof that he is aware of being necessarily partial With our present procedure every scientific witness must either allow chance to decide which side he will aid by his exertions, or else he must prejudge in his own mind the question at issue, and then strive to carry out this verdict by exerting his energies on behalf of the conclusion which he considers true. He is compelled to be a partisan, and tries to avoid being the partisan of falsehood. Among the various remedies which suggest themselves, further evils too have received particular attention from your committee. One remedy would consent in the appointment by the judge of some scientific witnesses in addition to the witnesses engaged by each party respectively in the suit. These judicial witnesses would hear the evidence adduced on each side; they would be empowered to require the witnesses on each side to show them the experimental or other proofs of their statements, and they would report to the court all corrections of statements made by the partial witnesses which they may deem requisite, as well as all other facts of which they may be cognisant bearing on the question at issue. The functions of these judicial witnesses would, however, be confined to particulars of evidence. They would have no concern with questions of law, and would accordingly be precluded from summing up the particulars of evidence in view of any conclusion unless called upon by the judge so to sum up any part of the evidence. The presence of these judicial witnesses could not fail to act as a check upon the statment of partial witnesses. The other remedy would consist in the appointment by the judge of assessors competent to advise him respecting the evidence adduced by the ordinary witnesses. The committee is of opinion that the vast extension which has taken place of late years of national knowledge, and the corresponding development of manufacturing progress, has necessitated in courts of law men cognisant of the principles involved in any processes under consideration, and skilled in the art of eliciting information upon them by experiment, but that the action of these partial inventing witnesses requires some check of this kind above described. They trust that the Legislature may give to the subject the attention commensurate with its interest and importance.

CLOSE OF THE SECTION OF PHYSIOLOGY.

Dr. Richardson proposed a vote of thanks to Prof. Humphrey for the very courteous manner in which he had occupied the distinguished position of President of the Section. He considered the presidency a great honour for one of the Medical Profession to have conferred upon him; and he was sure all present felt themselves deeply indebted to Dr. Humphrey for his attention and for the learned eloquence which he had repeatedly displayed.

Dr. Camps seconded the motion, which was unanimously carried.

Professor Humphrey thanked the audience very cordially for their kind expressions. He thought that physiology had not occupied the position in the Association that its importance demanded, but they had seen sufficient to show its power as a science, and its relation to the ordinary practical needs of life. He hoped that on a future occasion a better provision would be made for physiology, and that it would be more definitely announced. Physiology was a fair vessel, but she had had her rigging clipped, and had failed in meeting the fair wind of popular favour. If she were allowed to get good sail in a fair wind, it would be found that she would bear a good freight, a freight which would conduce to the advancement of science, the credit of the Association, and the general welfare of humanity.

REVIEWS.

◆

An Introduction to Practical Chemistry, including Analysis. By John E. Bowman, F.C.S. Edited by Charles L. Bloxam, F.C.S., Professor of Practical Chemistry in King's College, etc. Fifth Edition. London: John Churchill and Sons. 1866.

Bowman's "Practical Chemistry" being now in its fifth edition, and eighteen years before the public, can hardly be affected by the opinions of the reviewer. Among works on practical chemistry it particularly recommends itself to many persons from containing, in addition to the analytical proceedings for the discovery or identification of the elements and their saline combinations, and for the determination of their quantities, a course of experimental chemistry by which the student may become acquainted with the properties of the gases, and the manipulation and construction of apparatus in ordinary use.

Some material changes have been made in this edition by Professor Bloxam. The first of these is the omission of all chemical formulæ from the work. There can be no doubt in the minds of those familiar with the previous editions that this is a great departure from the idea of the author, who not only used symbolic notation whenever it could be introduced, but further adopted a plan by which the symbols indicated the solid, liquid, or gaseous state of the bodies concerned in a chemical reaction. The grounds given for this omission do not seem to us to be very cogent. However, without stopping to consider these, we shall just say a word or two on the more important point—the effects of this change upon the value of the work for the purposes for which it was written.

For teaching the application of the chemical properties of bodies to their detection and quantitative estimation, such a change can hardly be regarded as unadvised. To know, for instance, such facts as that hydrosulphuric acid throws down in solutions of arsenic a yellow precipitate, soluble in certain liquids and insoluble in others, is all that is requisite, together with proper skill, for the detection and isolation of this substance for medical or other purposes, the symbolic notation and theoretical considerations of these facts being of no importance in such a case.

But for teaching the student the chemical properties of bodies by making him develope them for himself—a purpose which forms so large a part of the object of Bowman's "Practical Chemistry"—the use of symbolic notation by which the nature of these properties is so admirably expressed, is only to be dispensed with at great loss. So far, then, this change in the work must be considered as one which does decidedly take from its usefulness.

The other alterations in this edition are in every respect great improvements. They consist principally in a much more convenient and systematic arrangement of the analytical part, and the introduction of analysis tables and other new matter. All through, without material exception, the work exhibits proofs of a very careful and painstaking revision.

Des Odeurs, des Parfums et des Cosmétiques. Par S. Piesse. Edition Française, publiée avec le consentement et le concours de l'auteur, par O. Reveil, Professeur agrégé à l'École de Pharmacie et à la Faculté de Médecine. Paris: Baillière et Fils. 1866.

The French edition of Piesse's book on perfumes we consider a great improvement upon the English, both from its revision in style and from its numerous additions, mostly by the late Professor Reveil. The chapter, by M. Reveil, entitled "Hygiène des Parfums et des Cosmétiques," is a very sensibly written article, possessing some interest for members of our Profession. For our own part, we think that the value of powerful scents and other strongly smelling substances in removing noxious matters from the atmosphere is placed too low by Medical and other *savants.* It is more than doubtful whether, as is usually stated, these substances merely serve to hide the presence of offensive effluvia by exerting a more powerful action on the olfactory sense. Does not the brown paper burnt in a room after the use of the *commode* give off empyreumatic matters, and are not matters of this kind effectual in destroying, for the time at least, the chemical activity of animal substances to which is due their baneful and offensive character? And as for camphor, volatile oils, and other matters which impart marked odour and pungency to aromatics, are they not known to have preservative powers over animal matters and used on account of them? Hence the employment of *eau-de-Cologne* and other scents, Mr. Piesse's *ruban-de-Bruges*, and last, but not least, a twist of smoking brown paper in the sick room, are surely in their way sanitary measures not to be altogether despised. The present edition of Mr. Piesse's work covers more than 500 pages.

The Prescriber's Analysis of the British Pharmacopœia. By J. Birkbeck Nevins, M.D. Lond., Lecturer on Materia Medica in the Liverpool Royal Infirmary School of Medicine, &c. Third Edition. London: John Churchill and Sons. 1865.

The present edition of this well-known little book differs from the second principally by some additional matter which it contains. This includes sections on the general rules for prescribing, the nature of the French weights and measures, and a further explanation of the processes for volumetric analysis employed in the Pharmacopœia, together with notices of the hypophosphites, Physalis Alkakengi, and the cinchona barks and alkaloids. The article on cinchona, extending over seventeen pages, is very readable, and the best of the kind we have seen on the subject. Dr. Nevins is evidently endeavouring to give the hardworked Practitioner, by the successive editions of his "Analysis," the means of keeping himself fairly *au fait* with the more important recent additions to our knowledge of medicines.

GENERAL CORRESPONDENCE.

REPLY TO DR. BEALE.—DESQUAMATION OF EPITHELIUM IN CHOLERA.

Letter from Professor W. T. Gairdner.

[To the Editor of the Medical Times and Gazette.]

Sir,—The remarks of Dr. Beale in your paper of this day (September 22) tend to bring into question the observations made by Dr. Parkes and by me in 1849 on the rice-water stools in cholera, as compared with the intestinal contents examined after death. There is, indeed, no formal contradiction in terms, but the result of a rather intricate and, as I cannot help thinking, somewhat unnecessary argument is to leave the impression that our observations on the alleged desquamation of epithelium in cholera were incorrect, and our inferences, accordingly, erroneous.

It would be very easy to yield the palm gracefully to Dr. Beale in a question of microscopical research, and I am sure I may say for Dr. Parkes, as well as for myself, that we are not at all anxious for a mere victory in argument, although in this instance believing Dr. Beale to be in the wrong. But as I have no opportunity at present of re-investigating the subject (Glasgow being happily quite free from epidemic cholera), perhaps you will allow me to place the following concise and, I think, clearly intelligible issue before your readers, so as to assist in giving a useful direction to further inquiry.

In 1849 I wrote as follows :—"On microscopic examination the intestinal contents invariably showed immense quantities of perfect epithelium, sometimes in coherent masses . . . preserving the form of the villi and follicles to which it had been attached." And as these "immense quantities of perfect epithelium" are the very basis of the desquamative theory, it will scarcely be denied that this statement, at least, is correct. But side by side with this must be taken another statement apparently (but not really) impugned by Dr. Beale, that "the true cholera stools, passed during life, contained so little perfect epithelium that it cannot be considered as anything more than an accidental ingredient." Dr. Beale says that in some cases the stools passed during life do contain perfect epithelium. I venture to submit that this, if true, is in no way inconsistent with what is stated above.

But if the discharges from the intestines contain usually little or no perfect epithelium,(a) while the discharges found in the intestines contain invariably "immense quantities of perfect epithelium," what is the inference? Is it not probable, at least, that Boehm was wrong when he assumed that this epithelium was always detached during life, as an essential part of the morbid process? Supposing the facts as stated above to be correct, I can see no other conclusion than that these "immense quantities of perfect epithelium," including complete and almost unbroken moulds of the villi and follicles, in many instances were really separated after death, as Dr. Parkes and I inferred. It is, therefore, of great importance, as Dr. Beale indeed admits, to determine by other observations the accuracy or inaccuracy of this primary position; but I submit that it is not necessary or expedient, in proving or disproving the facts, to follow the subtleties of Dr. Beale's argument, or to rush into analogies derived from the supposed case of "other diseases" and "other mucous membranes." Let us strive to determine exactly what is true of cholera, and leave the remaining argument to be worked out afterwards.

In stating that "the epithelium found in each division of the intestines is always that of the particular part where it is found," I had in view specially the casts of the villi above referred to, and not (as Dr. Beale appears to understand) the individual epithelium cells. I am still of opinion, until better informed, that this statement also is in substance correct, although, of course, I do not mean to deny that Dr. Beale may by chance have found in some case or other "epithelium from the small intestine in the large bowel." It would be strange indeed were it otherwise.

The whole argument, so far as I am concerned, on the points in controversy may be briefly stated as follows :—The intestines after death, in cholera, always contain masses of coherent and perfect epithelium, bearing the anatomical impress of the section of the intestine in which they are found; but the stools contain no such masses, and only rarely any perfect epithelium at all—*ergo*, the "immense quantities of perfect epithelium" found in the intestines after death and not in the stools must have become separated after death and not during life. I also inferred that the separation took place in the way of maceration; and though Dr. Beale questions this inference, and demands further proof of the other, I must confess that had these objections emanated from anyone less eminent in physiological science, I should have passed them by without notice as being not only trivial, but to me utterly incomprehensible. The facts, indeed, may not have been correctly stated, and I have already said that to obtain further precise evidence of the facts is one object of this communication; but surely it is not an excessive strain upon logic to put forth the inferences above given as dependent upon the facts stated.

It cannot be difficult to ascertain whether the statements here referred to are in accordance with fact or not; and if they are not so, I shall most cheerfully withdraw them and yield up the whole case as founded on them. I must protest, however, against being involved in verbal contradictions that do not properly belong to the case; and therefore, with all due respect for Dr. Beale, I have thought it necessary to bring the question back from one of ingeniously devised arguments to one of simple facts. I am, &c.

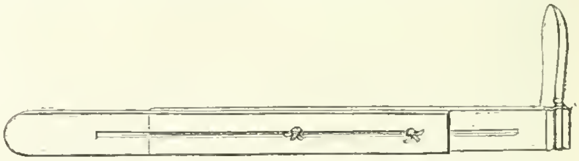
Glasgow, September 22. W. T. Gairdner.

IMPROVED FORM OF LONG SPLINT.

Letter from Dr. P. M. Braidwood.

[To the Editor of the Medical Times and Gazette.]

Sir,—Although fractures of the thigh are, as a rule, treated by the long splint, the splint commonly used is truly a shapeless plank compared with some of the highly ingenious and artistical splints employed in the treatment of other fractures. But of still greater importance is the fact that certain evils result from the ordinary method of applying the long splint.



To obviate these, and to promote the comfort of the patient without in the slightest degree diminishing the theoretical action of the splint, was my aim in constructing the above modification. As seen in the figure the splint consists of two parts, having each an open groove, into which are fitted two screws, so that, while keeping the two halves firmly together, the screws also allow the splint to be lengthened or shortened. The lower end of the splint becomes gradually thicker, and the foot-piece can be adjusted to suit either limb.

The defects in the old form of long splint which are obviated by the above modification are these :—1. Consisting of a single piece of wood, each splint can be used only in the case of patients of a proportionate length. 2. For the same reason it is not conveniently portable. 3. The foot being attached to the splint by a handkerchief tied round the ankle in the form of the figure 8, leaves the heel unsupported, and the toes droop, so that even for some time after the patient gets up the toes tend to "point." 4. There is no protection against the weight of the bed-clothes.

The advantages, on the other hand, of the above modified long splint are—its portability; its applicability in the case of persons of all ages, and in fractures of either limb; and the prevention of "pointing" of the toes by means of a foot-piece. The patients, moreover, on whom it has been applied have in each instance expressed comfort from its use.

As regards the application of the splint, the following points deserve attention :—After the splint has been lengthened to the necessary extent, as is seen by comparison with the sound limb, the screws are tightened firmly. The knuckles of the screws must be always on the outside of the splint. The foot and leg are next bandaged, the foot-piece properly adjusted, and the splint wrapped in a sheet. The limb and splint are next fixed together by bandaging the foot to the foot-piece, and by drawing the portion of the sheet left for the purpose around the limb, and fastening it with large pins. Extension is then kept up by firmly tying the perineal band.

(a) See the descriptions of them in detail in Dr. Parkes's paper, as well as in mine (Clin. Med., p. 218, or *Monthly Journal of Medical Science*, vol. ix., pp. 907-8). I made at the time numerous drawings of the nuclei and imperfect cell-forms there described.

Believing that after a fair trial the above modification of the long splint will be found to possess the advantages before mentioned, I have taken the liberty of requesting the insertion in your journal of this communication.

Samples of the splint may be had from the maker, Mr. John McCallum, 33, Bridge-street, Caldewgate, Carlisle.

I am, &c. P. M. Braidwood,
House-Surgeon, Cumberland Infirmary.

FRACTURE OF THE NECK OF THE THIGH-BONE.

Letter from Mr. John Gabb.

[To the Editor of the Medical Times and Gazette.]

Sir,—After having treated several cases of fracture of the neck of the thigh-bone in old people by the long splint and extension unsuccessfully (for the patients all died), I determined, on being called to a case in a woman 85 years of age, to make her as comfortable as possible for the time she might have to live. She was placed in bed, head and shoulders comfortably raised, the knees raised and supported with pillows beneath them, making a double inclined plane, and a bandage was applied around both legs below and above the knees, to make the sound limb a support to the fractured one, merely for the sake of steadiness, to prevent pain, and for the comfort of the position. This case did well; the patient recovered, and is able to walk about, not so actively as before the accident, not without a limp, but with her stick she is as active as most persons of her age, being now in her 89th or 90th year.

The fracture occurred before she fell. She rose quickly from her chair, and as she rose the bone gave way. May it not be that in very old people the fall is generally in consequence of the fracture, rather than the fracture the consequence of the fall? This old lady had a severe attack of influenza about three months ago, but is now pretty well.

I am, &c.
Bewdley, September 3. John Gabb.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, June 26, 1866.

Dr. James Alderson, F.R.S., President.

A paper, by Dr. Hermann Weber, was read, entitled

REMARKS ON CHRONIC ALBUMINURIA, ORIGINATING DURING THE CONVALESCENCE FROM SCARLET FEVER AND OTHER ERUPTIVE DISEASES.

These remarks do not refer to the well-known and easily recognised acute scarlatinal dropsy or desquamative nephritis of scarlet fever, but to a chronic form of albuminuria originating occasionally at a much later period, when recovery had apparently been established already for several weeks. The author related three cases of scarlet fever, unattended with albumen in the urine or any other symptoms of renal complication during the first four weeks from the commencement. The subjects of the cases appeared quite well at the end of about a month, when they returned to their usual mode of living; but about three or four weeks later the general health became disturbed (loss of appetite and strength, headache, glandular swellings, boils, anæmia, and occasional sickness), and the urine, as soon as the patients came under treatment, was found highly albuminous. Perfect recovery took place in one case; while in another the general health became much improved, but a slight degree of albuminuria has remained; and in the third case death occurred seven years after the commencement from broncho-pneumonia, with uræmic symptoms, the post-mortem examination exhibiting waxy degeneration (amyloid) of the kidneys. The author maintains that the connexion between the scarlet fever and the renal disease in this class of cases is not the same as in the acute scarlatinal dropsy; while the latter may be considered as a part of the scarlet fever process, the former, originating at a much later period, is probably only so far connected with the scarlet fever that through it a greater susceptibility to the development of chronic renal disease is effected, in the same way as there results a tendency to other chronic affections, like glandular swellings and eruption of boils. The author believes that the same tendency may be caused also by other acute diseases, especially those of exanthematous nature, and gave two cases in which chronic albuminuria took its origin in persons who had lately recovered from erysipelas of the head and typhoid fever respectively, in both of which cases, during the febrile state and during the convalescence, the urine had been quite free from albumen. He referred also to a similar case occurring after typhus fever, and described by Dr. Johnson in his work on Diseases of the Kidneys (London, 1852, p. 408). The author was inclined to infer from such cases that amongst the many cases of Bright's disease the origin of which is uncertain, a not inconsiderable proportion may have been developed during the later stages of convalescence from exanthematous diseases; that, therefore, as urged already by Dr. Johnson with regard to fever, particular care ought to be taken during these stages with regard to diet, clothing, habitation, avoidance of over-exertion and exposure to cold and damp air. Dr. Weber further pointed out the insidiousness of the commencement of this chronic albuminuria, as, in four cases out of the five related, anasarca and admixture of blood with the urine were altogether absent. Lassitude, loss of strength, anorexia, swelling of the lymphatic glands, and eruptions of boils, being the principal symptoms, ought, therefore, always to lead to an examination of the urine, the more so as by an early discovery of the renal disease the chance of a perfect cure is much increased, as seen in two of the five cases reported.

The treatment consisted in attention to skin and diet; in the administration of iron with acidulated acetate of ammonia, and occasional doses of elaterium to relieve the kidneys, and in the use of the hot vapour bath or the warm wet sheet.

A paper, by Dr. Samuel Fenwick, was read on the

DETECTION OF LUNG-TISSUE IN THE EXPECTORATION OF PERSONS AFFECTED WITH PHTHISIS.

The author states that he has included in his paper the results obtained from the examination by the microscope of the expectoration of 100 real or suspected cases of phthisis. The plan hitherto recommended of searching for pulmonary tissue in sputum has been to spread it on a flat surface, and to pick out of it with needles any portions that might appear likely to contain elastic fibre. He has, on the contrary, been in the habit of liquefying the expectoration by boiling it with a solution of pure soda, and then placing the fluid in a conical-shaped glass, when every particle of elastic tissue falls to the bottom, and can be removed and placed under the microscope, as is done in the examination of urinary deposits. In this way he has easily found $\frac{1}{100}$ part of a grain of pulmonary structure after it had been mixed in bronchial mucus; and he calculates that $\frac{1}{4000}$ to $\frac{1}{6000}$ part of a grain may be detected in any expectoration that may contain it. In 13 out of 23 cases in which tubercle was suspected to be in the first stage, lung-tissue was found in the sputum. In 7 of the 23 cases, there was no physical sign of tubercle, but its existence in the lung was suspected from general symptoms only; and in the expectoration from these there was no pulmonary tissue. In 16 cases there were stethoscopic signs leading to the belief that tubercle was present; and in 13 of them elastic fibre was found in the mucus coughed up. There were 24 cases in which auscultation and percussion indicated softening of tubercle in the lungs, and in all pulmonary tissue was present in the sputa. In 15 the physical signs were of a doubtful nature, and 7 of these presented microscopic evidence of ulceration of the lungs. In 35 cases the stethoscope indicated cavities, and in all these there were fragments of lung-tissue in the expectoration. In 2 cases the author had diagnosed enlarged bronchial tubes, and in neither of them was there any appearance of elastic fibre in the sputum. In 69 cases he counted the numbers and size of the fragments of lung expelled. In one specimen, coughed up in twelve hours, 800 fragments were found; and often 50 or 60 fragments were detected, where, from the stethoscopic signs alone, no great destruction of lung could have been anticipated. The proportion of bronchial tubes the author found to be least in the stage of softening, and greatest where the stethoscope indicated cavities. The greatest proportion of fragments of single air-cells was found in the first stage, and the largest proportion of large fragments of lung where cavities existed. The author concluded his paper by giving a number of practical directions as to the best method of conducting the examination of the expectoration, in order to find with quickness and certainty any pulmonary tissue that may be present.

A paper, by Dr. F. W. Pavy, was read on

HYDATID OF THE LIVER, TREATED SUCCESSFULLY BY THE INJECTION OF THE EXTRACT OF MALE FERN INTO THE CYST.

Harriet V., a woman of pretty healthy appearance, aged twenty-one, admitted into Mary Ward under the care of Dr. Pavy, October 4, 1865. When three years old she was squeezed against a wall by a cart wheel, which struck her somewhere on the right side of the chest. No rib was fractured, and she soon recovered from the accident. About six years ago the patient noticed a slight swelling in her right side, which has since continued gradually increasing in size. On examination, a large deep-seated tumour was to be noticed occupying the right hypochondriac region, and extending considerably beyond, both above and below. Its boundary could be clearly defined inferiorly. It caused a considerable bulging of the ribs on the right-side, and the right mammary gland was raised about three-quarters of an inch above the level of the left. Fluctuation was apparent. Dulness extended as high as the lower border of the second rib on the right side. The case was diagnosed to be one of hydatid tumour of the liver. The relationship that is agreed upon by helminthologists to exist between the hydatid and the tænia, and the known effect of the extract of male fern upon the latter, suggested to the author the treatment adopted. The extract is not miscible with alcohol or water, but it was ascertained that a liquid sufficiently thin for passing through a fine canula was to be obtained by admixture with a little potash. November 6th.—A fine trocar and canula were introduced into the tumour by Mr. Durham, and about four ounces of a limpid colourless fluid allowed to escape, in order to diminish the tension of the cyst. A liquid consisting of half a drachm (by measure) of the purified semi-fluid extract of male fern, half a drachm of liquor potassæ, and six drachms of water, was then injected into the sac, care being taken throughout to prevent the entrance of air. The fluid removed was examined, and found to be non-albuminous, charged with a large quantity of the chloride of sodium, and to contain hooklets of the echinococcus. At the introduction of the trocar the patient complained of experiencing a considerable amount of pain, which she referred to the lower part of the abdomen. Some febrile excitement, vomiting, and purging followed, but there was no evidence of peritonitis. 10th.—On percussion, it was found that dulness did not extend so high in the chest on the right side by one rib as previous to the operation. 16th.—The patient was allowed to get up. 20th.—The tumour was found to be much diminished in size. It was much softer, did not extend so low down in the abdomen, and was much less distinctly circumscribed. The chest was resonant on percussion as low as the space between the fourth and fifth ribs. 29th.—The circumference over the most projecting part of the tumour before the operation was 34¼ inches; today it is 31¾ inches, showing a reduction of 2½ inches. Tumour very soft, and its lower border not to be defined as formerly. The patient, being well, was allowed to leave the Hospital. A fortnight and again a month afterwards she was seen, and found to be progressing satisfactorily. May 10, 1866.—Since she was last seen the patient had suffered from an attack of rheumatic fever with heart complication and bronchitis. She had been in no way troubled with her side, and her circumference now was 30 inches. No swelling was perceptible to the eye, but a hardness remained in the hypochondriac region. The inference to be drawn from the result in this case is, that the injection of the extract of male fern caused an immediate destruction of the life of the hydatid without the production of suppuration, and that a rapid absorption of the fluid element of the cyst afterwards took place.

A paper, by Dr. Sydney Ringer and Dr. Walter Rickards, was read on

THE INFLUENCE OF ALCOHOL ON THE TEMPERATURE OF NON-FEBRILE AND FEBRILE PERSONS.

In this paper the authors give the results of some observations on the influence of alcohol on the temperature of non-febrile and febrile persons, and a few on rabbits. The authors gave alcohol in poisonous doses to three non-febrile adults. The temperature was greatly depressed in two. The depression amounted to 3° Fahr. In the third case the temperature was but little influenced. The subject of this observation was a confirmed drunkard. He confessed to getting drunk whenever he had the opportunity. Alcohol was also injected into the rectum of two rabbits. In both the temperature was considerably depressed. The depression amounted to 15° Fahr. The authors therefore conclude that alcohol in poisonous doses causes a very considerable depression of the temperature of the body of non-febrile persons, and also that it is probable that habit obviates this effect. Further proof in favour of this latter conclusion is given in a subsequent part of the paper. The rapidity of the fall of the temperature after death of two patients and one rabbit was ascertained. This is compared with the rapidity of the fall of the temperature after the use of alcohol. It was found that the temperature falls as rapidly after the use of alcohol in poisonous doses as after death. The circumstances determining the cooling of the body, however, differ in the two conditions. Thus during life much heat is carried off by the air inspired into the lungs. Assuming that the cooling effects of respiration are equal to those that result from radiation from the surface of the body, it follows that alcohol possesses the power to diminish by one-half those processes that produce the heat of the body. Both of the patients whose temperature was depressed suffered from nausea and vomiting. In order to ascertain if the depression of the temperature were due to the conditions that accompany vomiting, tartar emetic was given to a patient every ten minutes, and continued long after vomiting was produced. The administration of the antimony was continued seven hours. No depression of the temperature resulted. Thus the authors conclude that the depression of the temperature was not due to the vomiting produced by the alcohol. Alcohol was next given, in ordinary doses, to non-febrile persons. Eleven observations were made. In eight the temperature was depressed. In three cases the temperature was unaffected. These three persons were strong adults. The quantity of alcohol given them was small (an ounce of brandy). Two of them were confessed free drinkers. The amount of depression was slight. The authors thus conclude that alcohol, when taken in ordinary quantities by non-febrile persons, causes a slight depression of the temperature of the body, but that the amount of depression which occurs is too slight to contra-indicate its use. Numerous observations were made to ascertain the influence of alcohol on the temperature of febrile persons. To some of the patients very large quantities of alcohol were given. To a child of 12 years old eleven ounces of absolute alcohol were given on one day. From these observations the conclusion is drawn that ordinary and extraordinary quantities of alcohol cause only a slight and temporary depression of the temperature of febrile persons, and consequently alcohol cannot bring the temperature of febrile patients to that of health. But if alcohol should be indicated by the general condition of the patient, it will also to some extent act beneficially in virtue of its power to cause some diminution of the temperature of the body.

Some observations were made to ascertain the influence of alcohol on the pulse. From these the conclusion is drawn that alcohol increases the force of the pulse, but lessens its frequency.

In conducting these observations the following precautions were taken: the patients were kept in bed; all the conditions were kept the same; the thermometer was kept the whole time in the axilla, and the temperature was noted every few minutes. The observations were continued many hours—in some cases during the entire day.

A paper, by Mr. R. H. Meade, F.R.C.S., was read

ON ELEPHANTIASIS OF THE SCROTUM AND PENIS.

The tumour of the scrotum in this case was thirty-five inches in circumference; the penis was between six and seven inches in circumference, and very much elongated and twisted. The man was thirty-two years of age, and had never been out of England. The disease had been growing for fourteen years, commencing in the prepuce, and spreading thence all over the penis and scrotum; the whole skin of both organs being enormously thickened and tuberculated. The author recommended the patient to have the genital organs entirely removed; but he would only consent to have a portion of the disease extirpated, so that part of the penis, and, if possible, the testes, should be saved. In accordance with this wish, Mr. Meade took the man into the Bradford Infirmary, and performed the following operation on March 9, 1865:—The patient being in the lithotomy position and under the influence of chloroform, the tumour of the scrotum was transfixed laterally through its root with a long amputating knife; a semicircular flap was then made forwards, with its convexity downwards, to the base of the penis, and the remainder of the tumour removed by another incision made backwards to the perineum. The testes could be seen uninjured in the anterior flap through the tunicæ vaginales, which were not opened. There was very little hæmorrhage, for the precaution was taken of strangulating the superficial parts of the tumour with a series of large and deep loops of whipcord, inserted above the line of the incisions, in the manner adopted in a similar case by Mr. H. Walton. These loops were unfastened one by one after the removal of the tumour, and the bleeding vessels secured. The portion of the scrotum removed weighed eleven pounds. The two anterior thirds of the penis were afterwards amputated, and the flaps of the scrotum brought together and secured by sutures. The wound slowly healed, and the patient recovered, being very much relieved; but a considerable part of the diseased mass remained unremoved, which would probably increase. The paper was illustrated by photographs.

MEDICAL NEWS.

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Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to practise on Thursday, September 20, 1866:—

Robert Harman Smith, 58, St. Andrew's-road, S.E.; Frederick King Green, Stoke Newington, N.

The following gentlemen also on the same day passed their First Examination:—

John Orton, Sydenham College, Birmingham; Edward De Morgan, University College.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Anderson, C. L., L.R.C.P. Edin., L.R.C.S. Edin., L.S.A., etc., has been appointed Assistant House-Surgeon to the Liverpool Northern Dispensary.

Anderson, D. H. B., M.B., M.R.C.S., etc., has been appointed House-Surgeon to the General Infirmary, Hereford.

Chater, Sidney, M.R.C.S.E., has been appointed Chloroformist to the Great Northern Hospital.

Fuller, W., M.R.C.S.E., has been appointed Visiting Apothecary to St. George's Hospital.

Gregson, G., M.R.C.S.E., L.D.S., has been appointed Dental Surgeon to the Metropolitan Free Hospital, Devonshire-square.

Griffiths, R. S. P., L.R.C.P.L., M.R.C.S.E., has been appointed Apothecary to St. Mary's Hospital.

Simpson, H., M.D., has been appointed Physician to the Manchester Royal Infirmary.

Smith, J., M.B., C.M., has been appointed House-Surgeon to the Dumfries and Galloway Royal Infirmary.

Weller, G., M.R.C.S.E., has been appointed Medical Officer to the Limehouse District of the Stepney Union.

Wyllie, J., M.D., has been appointed Resident Physician to the General Hospital, Birmingham.

BIRTHS.

Cobb.—On July 14, at Beaufort, Victoria, Australia, the wife of John Frederic Cobb, M.R.C.S.E., of a son.

Hare.—On the 19th inst., at 41, Brook-street, Hanover-square, the wife of C. J. Hare, M.D., of a daughter.

Harley.—On September 22, at 78, Upper Berkeley-street, Portman-square, the wife of John Harley, M.D., of a daughter.

Lindsay.—On the 19th inst., at Hanwell, the wife of J. Murray Lindsay, M.D., of a son.

May.—On September 18, at Fletcher House, Tottenham, the wife of Emanuel May, M.R.C.S.E., of a daughter.

Shewan.—On the 24th inst., at 90, Kensington-gardens-square, the wife of A. Shewan, Esq., Deputy Inspector-General of Hospitals, of a daughter.

Ussher.—On the 24th inst., at 2, Craven-terrace, East-hill, Wandsworth, the wife of Henry Ussher, M.B., of a son.

MARRIAGES.

Gwynn—Marshall.—On the 19th inst., at Rusthall Church, Tunbridge Wells, Edmund Gwynne, M.D., of Upper Holloway, to Adelaide Eliza, third daughter of the late John Marshall, Esq., of Eden-lodge, Beckenham.

Levick—Curtis.—On the 20th inst., at St. Mary's, Plaistow, Essex, G. Levick, M.R.C.S.E., to Martha Sarah, eldest daughter of the late R. L. Curtis, Esq.

Spratly—Boydell.—On the 20th inst., at St. Bride's, Chester, S. Spratly, M.D., of Rock Ferry, Cheshire, to Anna Maria Elizabeth, eldest daughter of the late James Boydell, Esq., of Hawarden, Flints.

Williams—Helm.—At St. James's Church, Bury St. Edmund's, John Williams, M.D., to Caroline Anne, youngest daughter of the late Rev. J. C. Helm, of Worthing.

DEATHS.

Cribb, H., M.R.C.S.E., at Bishop's Stortford, on September 20, aged 67.

Dunn, Thomas Russell, M.D., Inspector-General of Hospitals and Fleets, at Dunallan House, Bridge of Allan, N.B., on the 18th inst.

Halliday, J., M.D. Glas., of Belfast, on the 11th inst.

Harper, John, M.D., Surgeon 35th Reg. N.I., at Lullutpore, India, on Aug. 5, aged 41.

Horgan, W. C., at 129, Lower Baggot-street, Dublin, on September 21.

Leet, John Knox, M.D. Dublin (Surgeon Cape Mounted Riflemen), at Wellington-road, Dublin, on September 19.

Mulock, J., L.R.C.S.I., Staff Assistant-Surgeon, at Bangalore, Madras, on July 26.

Robinson, R. R. W., M.D., at Swinton-park, near Manchester, on the 21st inst., in his 90th year.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Lanchester Union.—The Tanfield District is vacant; area 10,297; population 7562; salary £30 per annum.

Westbury and Whorwellsdown Union.—Mr. J. H. Gibbs has resigned the First Division of the Second District; area 12,616; population 3623; salary £80 per annum.

Whitchurch (Salop) Union.—Dr. Cumming has resigned the Malpas District; area 15,847; population 3621; salary £42 per annum.

APPOINTMENTS.

Bury Union.—Wm. S. Birnie, B.M., M.C. Aberdeen, to the First and Second Pilkington Districts. Francis Nuttall, M.R.C.S.E., L.S.A., to the First Tottington District. Allan Andrew McClure, M.R.C.S.E., L.R.C.P. Edin., to the Second Tottington District.

St. Giles, Camberwell, Parish.—David Johnson, M.D. St Andrews, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., to the Christchurch District.

St Matthew, Bethnal-green, Parish.—Caleb C. Richards, M.D. St. Andrews, M.R.C.S.E., L.S.A., to the Fourth District.

Consular Appointment.—Her Majesty the Queen has been graciously pleased to appoint Dr. Norton Shaw to be her Majesty's Consul at Sainte-Croix. This gentleman is well known as the late Secretary to the Royal Geographical Society.

Cholera is reported to have broken out in various districts during the last week or two. Cases are said to have occurred at Exeter and other places in Devonshire; in the Vale of York, at Market Weighton, and at Wigan.

Glasgow.—House-to-house visitation is being carried out under the superintendence of the clergy of the various districts. It is mainly through the exertions and influence of Dr. Gairdner that the system has been introduced.

New Lunatic Asylum.—At a meeting of the Court of Aldermen at Guildhall on Tuesday last a grant of £1000 was made, on the recommendation of the General Purposes Committee, to meet the necessary expenditure of the new Lunatic Asylum lately erected by the Corporation at Dartford.

Death of a Medical Veteran.—The death is announced of M. Maria, said to be the last survivor of the French fleet at Trafalgar. He was then Surgeon of the *Formidable.*

Comfort for Ratepayers.—Mr. Arnold, Government Inspector of Public Works in Lancashire, says that if Londoners obtained the soft water of Wales or the lakes, in the place of the hard water which is now supplied to them, they would require but half the quantity of soap and one-third the quantity of tea and coffee which they now use, and he reckons the saving upon these three articles alone at £675,000 a year, which, capitalised at 4 per cent., would amount to nearly £17,000,000, or enough to pay for the waterworks twice over.

Insanity consequent on the American War.—Governor Humphrey, of Mississippi, reports officially that the insane asylums of that State are crowded with negroes, whose minds have become deranged in consequence of the excitement of the war and changes and privations consequent upon their sudden transfer to a condition of freedom and responsibility. There is much insanity also among white people throughout the South, caused by the excitement and afflictions of the war.

Presentation to Dr. Sandwith, of Hull.—On the 20th instant, a party of twenty-five Medical gentlemen met at breakfast at Glover's Hotel with the object of presenting a testimonial to Dr. Sandwith on the occasion of his ceasing to reside in Hull. It consisted of Gustave Doré's edition of the Holy Scriptures in two volumes, magnificently illustrated and bound, and bearing the following inscription on a shield on the cover:—"Presented to Humphry Sandwith, Esq., M.A., Fellow of the Royal College of Physicians, London, by his Medical brethren in Hull and the neighbourhood, as a mark of their esteem and respect, and of their sense of the ability and consistency with which he has maintained a leading position among them for twenty-five years.—Hull, September, 1866." Sir H. Cooper occupied the chair.

ILL-TREATMENT OF A LUNATIC.—A case has been recently investigated before the sitting magistrate at Marylebone which matches that which occurred a year or two ago in Cornwall. The only difference is that one was in an out-of-the-way country village at the extremity of the kingdom, the other in the very centre of one of the western districts of London, and within a few yards of a wealthy and fashionable neighbourhood. Mr. Baker, the District Medical Officer of Christchurch, was empowered by the magistrate to investigate the case, of which he gave the following account:—"According to an order made by your worship to visit and report the condition of Sarah Lee, at present confined in a top room at 12, Dorchester-place, Blandford-square, I beg to state that I have twice visited the case and ascertained the following facts:—Sarah Lee, the alleged lunatic, is an orphan. Her parents have been dead twenty-five years. She is supposed to be 52 years of age, and has been under the custody of an uncle for thirteen years. For the last twelve years she has been in the sole custody of her cousin. No one else has visited her, and she has had no Medical advice for twenty years. During the last four or five years she has become totally blind. On entering the top back room, where she is kept, I was greeted by a yell and most abusive language. She seized hold of anything that came to hand, and hurled it at me. I made a careful examination of her. She is suffering from curvature of the spine, deformed chest, extreme emaciation, and blindness. She crouches in the bed, pulls the towel round her, and howls. She has no nightdress, and is almost in a state of nudity. There are deep stains of blood about her. Her elbows are much scarred. The nails of her fingers and toes have grown like claws. She refused to give any account of herself, and will not answer you. The only intelligible words she uttered were fearful denunciations against her cousin. At last I told her that I had an order from the magistrate to report her case to him. She became calmer, and said, 'Then at last, after twelve years, I am of importance.' She then went on raving incoherently about her cousin. She at times refuses food, and at others eats most ravenously. She has been confined to her present room for 12 years, and has not once been dressed for that length of time. She has not had her bed made for two months, nor a change of linen for a longer period. There are no blankets, simply a coverlet. Near the bed, such as it is, is a table with a little drawer in it. On opening the drawer I found a few fish bones and two or three pieces of mouldy bread. The other food was neither suitable in quality nor quantity. There was half a bottle of currant wine in the room. No description can give an adequate conception of the condition of this woman. With respect to sanity, I have no hesitation in declaring her to be of unsound mind, and that she is not properly cared for." The poor creature was eventually removed to the Workhouse Infirmary.

THE following are the last week's Cattle Plague Returns.

—	1. Attacked.			Back cases reported in the week ended Sept. 15, 1866.	2. Result of reported Cases from the Commencement of the disease.				
	Week ended Sept. 1.	Week ended Sept. 8.	Week ended Sept. 15.		Attacked.	Killed.	Died.	Recovered.	Unaccounted for.
Great Britain .	99	69	58	1	253454	84840	124293	33327	10994

This Return shows that 58 attacks were reported to have occurred during the week ended September 15, being a decrease of 11 on the previous *return*.

Fresh outbreaks took place in 19 farms or places where cattle are kept; the number of such outbreaks in the previous week being 22. The number of healthy cattle slaughtered, to prevent the disease extending to them, was 61 during the week.

Since the commencement of the disease 51 in every 1000 of the estimated ordinary stock of cattle in Great Britain are *returned* as having been attacked.

6 cases are reported during the week as occurring among sheep, making the total to the date of this return 6714

CRYSTAL COD-LIVER OLEINE.—Under this name a specimen of cod-liver oil has been forwarded to us, which is certainly the least objectionable in taste and smell that we have ever seen. We got a patient, who was taking a very pure cod-liver oil at the time, to try it, and she at once pronounced in its favour, as far as the taste is concerned. It is of an extremely pale amber colour, and its taste and smell are very much those of the fresh cod-liver as it is served at table. This oil professes to be pure oleine derived from the liver of the cod, and free from fatty acids. At all events, it seems to us one of the pleasantest-looking, pleasantest-smelling, and pleasantest-tasting specimens of cod-liver oil we have seen.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

An Old Fellow.—Both.

Melbourne.—The trial for criminal abortion shall be noticed next week.

A Metropolitan Student.—The registration commences on Monday next at the College of Surgeons and Apothecaries' Hall. The names will be taken at both institutions in alphabetical order.

Royal College of Surgeons.—The Library and Museum of this institution will reopen on Monday next, the 1st proximo.

The late Dr. Southwood Smith was an eminent Physician and authority on fever, hygiene, public health, and similar matters. We never heard that he invented a sauce.

ELECTION OF MEDICAL OFFICERS TO PUBLIC INSTITUTIONS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Will you have the kindness to inform a correspondent whether it is Professional etiquette for the Physicians and Surgeons connected with an Hospital or an Infirmary to canvass for votes in behalf of the Assistant-Physicians and Surgeons when a vacancy occurs or is expected to take place? I need scarcely say that the Physicians and Surgeons connected with an institution are the first to know when a vacancy is expected, and if they are permitted to exercise undue authority, no member of the Profession, however strong his claim may be, would stand a fair chance of obtaining a public appointment, unless, however, he happens to be a Professional friend of one of the Physicians or Surgeons. The clique system in the Profession is most injurious to the advancement of the science of Medicine and the prospects of some of the most industrious members of the Profession. I therefore trust that the editors of Medical journals will point out the etiquette of the Profession as relates to the subject in question. I am, &c. JUSTICE.

⁂ There can be no doubt that, generally speaking, the Medical officers of an institution are better judges of the fitness and claims of a Medical candidate than any lay committee or body of governors can be. A plan which, in our experience, works well is the following:—That the fitness of all Medical candidates for a vacant post should be decided by a committee of the whole of the Medical officers to an institution; and that, their recommendations having been made to the lay committee or the general body of governors, the latter should proceed to elect one of the candidates so recommended, the Medical officers taking no further part in the affair.

PURIFYING A SICK CHAMBER.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I have thought the following method of purifying a sick chamber may be of use in contagious disease, and, on a large scale, might be applied to the wards of an Hospital. Procure the machine the gardeners use for sending a blast of tobacco smoke into a greenhouse—ironmongers sell such things—connect it with a spray-producing bottle, which half fill with Condy's Disinfecting Fluid, diluted with about 1 part of Condy's Fluid to 200 parts of the softest water obtainable; set it to work now and then, and it will freshen and sweeten the invalid's room to a most marvellous degree. If a large sponge bath be filled with an inch depth of water (boiled water), and changed frequently, or a small knob of fresh lime be added, this will absorb the carbonic acid gas that is either produced by respiration, lamps, etc., or by the oxygen in the permanganate of potash spray combining with the organic emanations in the sick room. It may be objected that the spray and water in the shallow pan would make the room damp. Now, a small fire or an open window, or, if the weather be damp, yet warm, some unslaked lime in a dish, would obviate any inconvenience on that score. I am convinced that badly healing sores or gangrenous wounds would have a better chance of healing in an ozonised and pure atmosphere. I should be glad to hear that any of your readers had given it a trial. I am, etc.

JOHN SIMPSON.

8, Hugh-street, Belgrave-road, Pimlico, S.W.,
September 20.

TREATMENT OF CHEMICAL DISEASES.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I beg respectfully to call your attention and that of your readers to a statement made by Dr. H. Bence Jones, in his opening speech to the Chemical Section of the British Association this year, in connexion with the use of chemical agents for the prevention or cure of zymotic diseases, by destroying the virus or poison which is believed to give rise to complaints of this class. The statement referred to was as follows:—

"In 1866 two chemists—Dr. Angus Smith, Ph.D., F.R.S., and Mr. Crookes, F.R.S.—gave the only useful suggestion for combating the disease (cattle plague), namely, by the arrest or the destruction of the poison by chemical agents."

Now, the learned President, by the use of this phraseology, distinctly indicated that the mode of treating cattle plague by chemical agents for the purpose of destroying or changing the virus which is supposed to be the immediate cause of the disease, originated with the chemists named.

A pamphlet, entitled "Rinderpest: its Prevention and Cure," published in September, 1865, by John J. Lundy, Esq., of this town—a gentleman who has devoted much attention to the study of chemical diseases—will show that they have no claim to originality or priority. Even as far back as the end of 1865, Professor Herapath published in the *Times* the results of an analysis of the blood and mucous surfaces, and the adherent matters, which he found to be ammoniacal (the direct results of putrefaction), and suggested, as Mr. Lundy had done before him, the use of chemical substances to neutralise the alkali and arrest the putrefaction, as the only scientific means of prevention or cure of all zymotic diseases in man or beast. I am, etc.,

Analytical Laboratory and Assay Office, ROBERT R. TATLOCKE.
Salamander-street, Leith, September 19.

RANK OF ARMY SURGEONS IN INDIA.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I beg to bring to notice, through the medium of your widely circulated journal, a matter which affects the position of the Medical officers of the Royal Army while serving in India, and which will be more easily understood by the following reference. In the Indian staff corps officers attain the rank of captain and major after 12 and 20 years' service respectively, thus often obtaining promotion earlier than officers of the Royal Army. To avoid the latter being superseded, local rank is given them after the same periods of service. In the same way the local Medical officer obtains his Surgeoncy after 12 years' service, and as there are Assistant-Surgeons of the Royal Army of longer standing serving in India, they are necessarily superseded when they meet the former on duty. To avoid this anomaly, which on active service would be a serious matter, local rank should be given to the Queen's Medical officers in like manner as to combatant officers. This concession would place the two services on equality as regards rank, and would cost nothing—no slight recommendation in its favour with the Indian Government, the more important matter of pay remaining unaffected.

I am, &c.
August 20, 1866. AN OLD ASSISTANT-SURGEON.

OFFENCE AGAINST THE VACCINATION ACT.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I have cut out of the *Derbyshire Courier* (the leading journal here) the enclosed report of an offence against the Vaccination Act; perhaps you may think it worth copying in your paper. Another case will be tried, on Saturday next in all probability, and in the case alluded to the man, whose children, four in number, are unvaccinated, refuses to give their names or place of birth; and as I have reason to believe the children were born in Staffordshire, there may be some difficulty should the magistrates take the same view of the case, with reference to producing the Registrar who served the notice, as in the case against John Bradbury. My own impression is, that it is unnecessary to have the Registrar, because he can only speak from memory, and it is simply his duty to give the notice, but he keeps no account of the notices so served. Can you give me any information in the matter, or refer me to any cases? I have waited long for some one to take action in prosecuting these cases of neglect of vaccination; and as the class who neglect it are nearly always paupers when suffering from small-pox, I determined to do it myself.

I am, &c. SAMUEL FOULDS, L.R.C.P. Lond., M.R.C.S.
Chesterfield, September 10.

OFFENCE AGAINST THE VACCINATION ACT.—John Bradbury, Brampton, was charged by Samuel Foulds, Surgeon, Chesterfield, with an offence under the Vaccination Act. Defendant did not appear, his wife answering to the summons in his stead. Police-sergeant James Connor proved the service of the summons in the usual form, and Dr. Foulds deposed:—I am the Medical officer for the parish of Brampton, for the purpose of vaccination. I was appointed by the Board of Guardians and approved by the Privy Council. On August 14 notice was given at the house of defendant that his child, which was then ten months old, should be vaccinated Mr. Maynard: Is anybody here who made the application or served the notice upon the defendant to bring her child to be vaccinated? Mr. Foudds: The Registrar served the notice. It is his duty to do so. I produce a copy of the register. (Mr. Foulds handed the copy of the register to the Bench.) The Magistrates' Clerk: Properly the Registrar should be here to prove it. Mr. Maynard read the Act of Parliament bearing upon the subject, where it stated that a notice should be given to the parents of the child, and if the Act was disobeyed after notice a fine of not exceeding 20s. could be imposed. Mr. Foulds said the defendants had the notice in their possession. The Magistrates' Clerk: The man who served the notice ought to be here to prove the service of the notice upon them. You only heard that he had served it upon them. Have you ever seen it in their house? Mr. Foulds: No, I have not. Mr. Maynard: You see the party may deny having received such notice unless you can prove such notice has been served upon them. Mr. Foulds: They won't deny the possession of it. They offered to give it up. The Magistrates' Clerk: To whom? Mr Foulds: To Mr. Walker. Mr. Walker: They offered to give it me. Mr. Maynard read the second clause of the Act, wherein it stated that within three months of the birth of the child the father or mother should get it vaccinated. The Magistrates' Clerk: This child is ten months old. Mr. Maynard: The Act says within three months. It doesn't appear that notice of registrar is necessary so far. The Magistrates' Clerk: Nor any notice whatever. Mr. Maynard drew attention to the 9th clause of the same Act, in which it was stated that the Registrar should give the notice, and that the child should be vaccinated within three months. Mr. Foulds: I never heard of this objection before. Mr. Maynard: Still I apprehend the parents are, within three months, to get the child vaccinated. Mr. Foulds said the child was vaccinated by an old woman from one of his cases, and such cases were calculated to prove very mischievous. The woman was not able to distinguish a proper pock. Mr. Maynard: The woman who did so should be punished. Mr. Foulds: Unfortunately I have not a remedy against it. The woman, Ann Bradbury, here stepped forward, and said she undertook to vaccinate the child herself, as Mr. Foulds did not attend according to his promise. Mr. Foulds said he was unavoidably detained from attending. Mr. Maynard said that was no excuse for the woman. She had no right to take a duty the Medical man neglected. Ann Bradbury: I received no benefit from it. Mr. Maynard said they would certainly require the attendance of the Registrar, and he was sent for. Mr. Shaw, the Registrar, attended, and proved the service of the notice upon defendant. Mr. Maynard, after hearing one or two excuses the defendant's wife had to offer, said the Bench had decided not to impose a heavy penalty upon the defendant, as the offence was committed in ignorance, but if other cases of the kind came before them, they would deal with them differently. They would impose a penalty of 1s. and costs, or seven days' imprisonment. Mr. Maynard: Let me advise you, don't go to old women for medicine, doctoring, vaccination, and so on. Mr. Foulds: If I had a remedy against the old woman, I should have taken out a summons against her, but I am sorry I have not. Mr. Maynard: She deserves it. Mr. Foulds: I don't wish to press for my own costs in this case; I merely wish to put a stop to it. Mr. Maynard: You are quite right. It is more for example to others that such cases might be prevented. The costs of the case were 16s. 6d. The Bench allowed the defendant a fortnight for payment.—*Derbyshire Courier.*

Is it an offence to neglect vaccination *per se*? or is the offence only complete if a parent neglect to have his child vaccinated after having received a notice from the Registrar? Chief-Justice Cockburn seems to hold the latter view. (Quoted in Baker on "Laws relating to Public Health," p. 167.) But if this be the right interpretation, and if the Registrar cannot depose to the delivery of the notice, the case falls to the ground.—ED.

A FEW NOTES ON GIBRALTAR AND MALAGA.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The enclosed notes on Malaga and Gibraltar were kindly placed at my disposal by a gentleman whose son I was attending last spring, and whose engagements have required him to pass much time at Gibraltar at all seasons. I send the notes much as they were written for me, in case you may think well to publish them in the *Medical Times and Gazette*, merely adding that the writer, when in England, is, and for years has been, a martyr to spasmodic asthma, while at Gibraltar he remains quite free from attacks of this complaint. I am, &c.

JOHN C. THOROWGOOD, M.D. Lond.
15, Queen Anne-street, W.

For invalids going to Malaga the best route is by Peninsular and Oriental boats from Southampton (passage £13), as they all carry a Medical man, and the next by Burns and M'Ivor's well-equipped line from Liverpool (passage £10), in both cases to Gibraltar, and thence by one of the Spanish steamers to Malaga. These steamers leave Gibraltar in the evening and arrive at Malaga by daybreak. There is also a line from London (Hall and Co., passage £10), but they do not perform the voyage so quickly, neither are they so well adapted for invalids, being for cargo. The steamers from Marseilles are, I am informed, usually small, and take five or six days to Malaga, as they lie all day in port receiving and discharging cargo, etc., and proceed on the voyage by night. I am also informed they are much crowded by foreigners, are very dirty, small, badly found and provisioned, and most uncomfortable. The cooking also is bad and dirty, and not such as to tempt an invalid. To a person in good health it is a pleasant voyage, as he is enabled to visit three or four of the Spanish shipping towns.

Except the new part, built within ten or twelve years, Malaga is a crooked, narrow, dirty, bad-smelling, ill-ventilated place, with a broad sandy river at the back called the Rio Seco (dry river). Dr. Madden (a) calls it, in his work on the climate of Malaga, the "Gnadelmedina." This in winter has water in it according to the wetness of the season, and as all the sewerage drains into it, you may imagine what will be the result, exposed to a southern sun even in the month of December; besides which, the water does not seem to run off, but to sink into the sands, so that it is always moist and damp, except in the hot weather.

In Gibraltar the east wind (or Levante) is always damp, but very seldom to such an extent as to be of consequence to invalids. We do not have the "Viento Fatal," or "Teral." When the mountains are covered with snow and a north wind sets in, it is very cold and penetrating, but at other times we are very glad to have it. The south-west winds are generally wet. The west wind is fresh and beautiful, though with it we have more sun.

Houses in Gibraltar have wood floors, and in most are fire-places and English coals. In Malaga the floors are brick, and you sit over a chafing dish of charcoal for warmth. You will also find the houses have either good trapped or patent water-closets, where in Malaga you have either to use a pan which is emptied occasionally or go to the *comun*, which, I can assure you, is something very bad; so that in Gibraltar there are many more comforts than are to be found in Malaga; and if more invalids came to stay in Gibraltar there would be greater facilities for their treatment and reception than at present, as we have several clever Medical men and well-supplied English chemists.

Living or provisions in Gibraltar are good, I may say, first-rate. We have fine beef, good mutton in summer, good lamb, superior pork, veal occasionally. Fowls, cheap and good. Turkeys, ducks, game in season, kids, eggs, etc., and, it is said, the best fish market in the Mediterranean; a large supply of fine vegetables all through the winter; green peas from Christmas, beans shortly after, and in the summer and autumn large quantities of fruit at, you would say in London, fabulous prices. All kinds of preserved meats, etc., from England can be procured in Gibraltar, as also good salt butter, which cannot be had in Malaga, as the supply there is the common Dutch (Manteca de Flandre.; as a proof of this, many of the principal merchants in Malaga make arrangements for the various coasting steamers to bring them from Gibraltar joints of beef and mutton and large crocks of butter every time they go down. In cooking also in Gibraltar they use lard instead of oil and omit the garlic, but whether to advantage or no is a matter of taste—in moderation, we prefer it.

I should not recommend any invalid to visit Gibraltar before the end of October or stay there later than the month of May, though in my own case it agrees with me all the year round.

Dr. Madden, in his work already referred to, notices the great number of blind people. On this I have to observe, that they are brought to the neighbourhood of large towns (especially those resorted to by English people) to gain a subsistence by begging. This will account for their otherwise apparent large number.

(a) Madden, "On the Climate of Malaga." Newby, Welbeck-street, W. An interesting work resulting from much experience.

Consumption is a disorder to which Spaniards are subject the same as others, and we occasionally see cases of it. Those attacked are very much alarmed, and keep it as secret as possible from their friends, as they would be avoided as much as possible; in fact, very few would marry into a family where such a case occurred. "Hetico" is the name they give to one affected with the disease, and on death taking place the bedding and wearing apparel are in most cases destroyed (burnt), the walls of the room scraped and limewhited, so infectious do they consider it.

Lastly, Gibraltar is a central spot, with many advantages for invalids. To pass their time they can ride twenty miles into Spain—a beautiful country—without danger, and you cannot go ten from Malaga but at risk of your life; besides the facilities of visiting Barbary, Spain, and other parts, for which there are steamers continually—in fact, communication to nearly all parts of the world. There is a theatre and balls throughout the winter, a pack of hounds, races (spring and fall), a steeple chase in the fall of the year, and much gaiety and visiting in private families.

I have forgotten to mention I have known several gentlemen who were sent to Malaga but who returned to Gibraltar immediately, as they could not put up with Malaga.

Table of Meteorological Observations, copied from the "Gibraltar Chronicle," from March 24 to April 6 of the present Year.

Day of Month.	Barometer, corrected to 32.		Hygrom. humidity, saturation being 100.		Thermometer in the Shade and Wind.				Extre. of Therm. in 24 hrs. in shade.	
	3 p.m.	9 a.m.	3 p.m.	9 a.m.	3 p.m.	Wind.	9 a.m.	Wind.	max	min.
Mar. 24	30·092	30·271	77	75	64	W	57	WNW	67·2	49·0
,, 25	30·229	30·197	75	72	61	W	63	E	64·0	52·0
,, 26	30·184	30·231	71	82	66·5	ESE	60	E	68·0	50·0
,, 27	30·201	30·282	64	82	66	ESE	60	E	68·0	55·0
,, 28	30·221	30·263	54	93	66·5	E	54	E	68·0	50·0
,, 29	30·203	30·256	78	77	67	E	62	E	68·5	50·0
,, 30	30·189	30·099	68	88	67	E	59	E	68·0	49·0
,, 31	30·143	30·167	77	82	63	E	60	E	72·0	44·0
April 1	30·101	29·952	63	73	65	ESE	67	W	69·0	50·0
,, 2	29·883	29·883	77	80	64	W	54	NW	73·0	50·0
,, 3	29·893	29·902	75	66	56	WSW	58	W	63·3	45·0
,, 4	29·869	29·866	62	64	61	WNW	57·3	WNW	64·0	45·0
,, 5	29·836	29·839	72	71	63	W	58	WSW	65·0	46·5
,, 6	29·930	29·939	51	66	64	W	58	SSW	62·0	52·0

COMMUNICATIONS have been received from—

Mr. JOHN SIMPSON; Dr. E. CASEY; Mr. ROBERT OKE CLARK; Dr. FOSTER; Mr. JOHN GABB; JAMES J. KELLY, Esq.; Mr. BEANEY; Dr. W. T. GAIRDNER; APOTHECARIES' HALL; Dr. BELGRAVE; Dr. GREENHILL; Dr. POWER; AN ODD FELLOW; Mr. SPENCER WELLS; Dr. LIONEL BEALE; Dr. SYMONDS; Dr. B. W. RICHARDSON; Mr. BRUNJES; R. E. POWER, Esq.; Dr. WHYTE; Dr. BALLARD; Mr. F. H. MARSH; Mr. E. BELLAMY.

BOOKS RECEIVED—

Waters on the Successes and Failures of Medicine—Harley on Diabetes—The Queen *v.* Beaney—The 44th Annual Report of the Birmingham Medical Benevolent Society—Rapport de la Conférence Sanitaire Internationale à Constantinople—A Brief Account of the Open Scholarships, etc., with Specimens of the Examination Papers, in the University of Cambridge—Bulletin de l'Académie Royale de Médecine de Belgique, vol. ix., Nos. 6 and 7—Pope on Cholera.

NEWSPAPERS RECEIVED—

The Sunday Gazette—

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 22, 1866.

BIRTHS.

Births of Boys, 1057; Girls, 976; Total, 2033.

Average of 10 corresponding weeks, 1856-65, 1772·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	706	644	1350
Average of the ten years 1856-65	559·4	537·0	1096·4
Average corrected to increased population ..	..	..	1206
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	2	—	8	2	2	4	11	14
North ..	618,210	12	4	8	—	7	15	19	28
Central	378,058	2	2	7	—	4	12	17	19
East ..	571,158	6	7	8	2	3	9	24	56
South ..	773,175	3	8	11	1	5	10	27	33
Total ..	2,803,989	25	21	42	5	21	50	98	150

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·564 in.
Mean temperature	53·7
Highest point of thermometer	66·9
Lowest point of thermometer	42·4
Mean dew-point temperature	48·5
General direction of wind	S.W.
Whole amount of rain in the week	0·88

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, September 22, 1866, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending Sept. 22.	Deaths.		Temperature of Air (Fahr.)			Rain Fall.	
				Corrected Average Weekly Number.*	Registered during the week ending Sept. 22.	Highest during the Week.	Lowest during the Week.	Weekly Mean of the Mean Daily Values.	In Inches.	In Tons per Acre.
London (Metropolis)	3067536	39·3	2033	1400	1350	66·9	42·4	53·7	0·88	89
Bristol (City) . .	163680	34·9	91	73	‡157	63·0	44·7	52·8	1·04	105
Birmingham (Boro')	335798	42·9	272	163	113	62·9	42·3	52·2	0·92	93
Liverpool (Borough)	484337	94·8	394	281	479	61·0	44·5	53·8	0·94	95
Manchester (City) .	358855	80·0	256	203	‡205	64·4	40·0	51·9	1·01	102
Salford (Borough) .	112904	21·8	74	57	62	62·9	40·0	51·7	1·01	102
Sheffield (Borough) .	218257	9·6	198	115	87	62·0	42·0	50·6	1·18	119
Leeds (Borough) .	228187	10·6	179	116	112	66·5	33·0	52·1	0·89	90
Hull (Borough) .	105233	29·5	83	49	43	..	..	..	..	..
Nwcastl-on-Tyne, do.	122277	22·9	90	65	81	61·0	44·0	52·5	0·29	29
Edinburgh (City) .	175128	39·6	103	84	65	59·7	41·0	51·0	0·60	61
Glasgow (City) . .	432265	85·4	327	252	185	56·9	39·1	49·7	2·36	238
Dublin (City and some suburbs) .	318437	32·7	156	†150	164	64·9	34·0	51·4	0·62	63
Total of 13 large Towns . . .	6122804	34·4	4256	3014	3003	66·9	33·0	52·0	0·98	99
Vienna (City) . .	(1863) 560000	..	..	..	Week ending Sept. 15. 465	Week ending Sept. 15. ..	..	§ 58·1	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·564 in. The barometrical reading decreased from 29·94 in. on Tuesday to 29·04 in. on Saturday.

The general direction of the wind was S.W.

* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 56·7°.

APPOINTMENTS FOR THE WEEK.

September 29. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p.m.

October 1. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

2. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

3. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

OBSTETRICAL SOCIETY OF LONDON (Council, 7 p.m.), 8 p.m. W. S. Playfair, "On the Mechanism and Management of Delivery in Cases of Double Monstrosity." Dr. C. H. Routh, "On a New Mode of Treating Epithelial Cancer of the Cervix Uteri and its Cavity."

4. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

5. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

OPENING OF THE LONDON MEDICAL SCHOOLS.

ST. BARTHOLOMEW'S HOSPITAL.

The Introductory Address was delivered by Mr. Wm. S. Savory, who said:—Whatever position Medicine is entitled to hold amongst the sciences, this is certain: it is not an exact science. It is concerned with probable truths. Our business is to minister to the cure of disease, to the repair of injury, and so to prolong life and to render it as useful and as agreeable as possible—to prevent, or remove, or mitigate the ills that flesh is heir to. We are therefore immediately concerned with the nature and treatment of disease. But the nature of disease, for the most part, is often during life, and sometimes after death, doubtful. The diagnosis of a particular case, or the determination of the disease which exists, is very often only more or less probable. Indeed, it perhaps seldom happens that one can be absolutely certain beforehand, beyond all doubt or question, of the nature of the disease which actually exists, although we may, in the great majority of cases, from the weight of probable evidence, make our diagnosis a moral certainty, and therefore amply sufficient for all practical purposes. So the treatment of disease is, for the most part, doubtful, for the remedies we employ are in their action more or less uncertain. Some are very equivocal, others almost sure. But, on the whole, when skilfully prescribed, it is highly probable that many of them will act in the way anticipated.

I cannot think less of Medicine as a study because it is not an exact science. On the contrary, if it were, it would, for me at least, lose much of its present interest. We are very often told that Medicine is, at the best, an uncertain science, obscure in its principles, and doubtful in its practice. Difficult enough, we know, but is the reproach of its difficulties to fall on those who have to grapple with them? Uncertain—granted that, for the most part, we have to do with probabilities only—nay, sometimes, it may be, with mere conjecture. But who does not every day of his life depend on probabilities and act upon conjecture? Probability, as Butler says, is the very guide of life. In Medicine, as in the daily occurrences of life, probabilities vary from moral certainties to possible contingencies.

It seems hardly reasonable, when, for disease or pain, the aid of Medicine is sought, to complain that the means employed for relief or cure are rather uncertain in their action or somewhat doubtfully selected—that, after all, recovery cannot be secured, but is, by the aid of Medicine, only rendered highly, or at least more probable than before. I say, it seems hardly reasonable to urge this objection when every day, and all day long, we stake our very lives—nay, what we cherish more and hold dearer than our lives—upon probabilities, when the most important issues in the world are fearlessly and confidently based upon probabilities. But it may be said that the question of probability is a very wide one, from almost absolute certainty to the merest chance. But in this regard I contend that the art of Medicine, in the hands of a skilful Practitioner, stands well. And, moreover, while unfortunately it often happens that the prospect of being able to do much good is very doubtful, it fortunately very seldom happens that we need run much risk of doing mischief.

Amongst many considerations arising out of this, it may be remarked that it is because Medicine is not an exact science, that the man of observation and experience in the practice of his art has so enormous an advantage over others, and why it is that he knows so much more than he can teach; for although he cannot arrange his knowledge into aphorisms, or induce general principles from his collection of facts, he can apply it with skill to the investigation and conduct of individual cases. He has learnt how to hit; he can only teach you how to aim. Professional skill cannot be transmitted from one to another. It can be gained only in one way and in one place—by work at the bedside.

Out of the nature of the science and art with which we have to do arises this, that our work in it can never become a matter of mere routine. The relation between cause and effect is oftentimes so indefinite, the disturbing influences which intervene are so numerous and various, that each case becomes a study in itself. It has been said of injuries and of certain diseases that they are especially interesting because no two cases are exactly alike. But this may be said most truly of all diseases. No two are ever precisely alike. Groups of diseases, like leaves on a tree, are connected closely by strong family features, but like leaves each individual case has peculiarities of its own, which mark it from every other. Nature seems to avoid mere repetition in her modes of action as in her creations, and you will find, if you look far enough, that diseases will vary as your patients' faces.

There is, therefore, something to learn from every case if you will only seek for it. You have not done enough when you have determined its nature and treatment. Look further still, and see what else can be made out of it. When a man ceases to be a student of his profession, the sooner he ceases to practise it the better. I do not mean for a moment to imply that the investigation and management of every case is equally difficult, still less that one's previous experience should go for little or nothing. On the contrary, here, as much as anywhere, practice, and practice only, can make perfect. But what I would warn you against—no matter what your ability, accomplishments, or skill may be—is this, carelessness by the bedside of a patient. Make it a rule, to be broken as seldom as possible—for, in spite of all your resolution, it will be broken too often—but make it a rule either to examine a case thoroughly, or to leave it alone entirely. Get into the habit of making each case, while actually before you, of paramount importance. Haste or hurry, or the suspicion of indifference, is an insult to your patient and an offence against the Profession. We can never have an excuse for doing less than our very best.

In conclusion, students were reminded of the obligations by which they were bound, and exhorted to render themselves worthy of the profession they had chosen.

CHARING-CROSS HOSPITAL.

The Introductory Lecture was delivered by Mr. Richard Barwell, F.R.C.S., of which the following is an abstract:—We, your teachers, come together on this 1st of October to meet old and new pupils, upon whom in the next few years we have to impress our knowledge and the results of our experience, whom we hope to influence for their good, whom, in sending them out to use that knowledge, we shall hope to see prosperous and happy. This, the inner meaning of a meeting like the present, is not new to you. But can interest be only excited by something new? It has always seemed to me that the Preacher who said that "All is vanity: there is no new thing under the sun," was speaking, not as the wise King, but as the worn-out old debauchee whose many wives and concubines had been rather too much for him. The man who duly considers the meaning of his life as part of a vast mass of human existence and work, reaching back to eras before history began, will not be able to regard it as vain and empty; partly because in this present he has his sole grasp of eternity—partly because each man's life and labour is not his own merely, but part of a great commonwealth. Having inherited the result of other men's labour, let him leave something worthy behind him.

This idea may be carried out further, for whether man really descended from several monkeys (as Dr. Hunt asserted at Cambridge) may be doubtful; but it is quite certain that he was originally a very different creature from what he is now—according to Swift, "a forked radish, with a head fantastically carved." He was a skulking, thin-shanked creature, living in holes and woods with cave-bears and hyenas, whom he sometimes ate and who sometimes ate him. This latter event happened so unfortunately often, that he contrived convenient and portable weapons of defence. From this act originates all our elaborate civilisation. Yet countless ages have passed in its development. All the oceans of the earth do not contain so many drops of water as lives have passed in preparing for us this present social state. The commencement must have been very slow, but the impetus of improvement grew gradually more rapid, so that in the beginning of the historic period we find several peoples dwelling at the eastern parts of the Mediterranean and Black Seas possessed of singular and remarkable culture in such arts as poetry, sculpture, architecture, etc. After a number of centuries these nations, thoroughly corrupted, are overwhelmed in a deluge of new nations, so barbarous that the arts of their forerunners are lost and forgotten, or nearly so, until the fashion of studying the ancient writers again revived intellectual development in Europe. Observe, however, that this pristine culture of Greeks and Romans, etc., and the subsequent progress of the Renaissance period, is to be measured and estimated by the perfection of arts. Science—that is to say, the study and knowledge of Nature's powers—did not exist, even in a rudimentary form. Wild speculation and imaginary guesswork reigned in all departments of such study, until Verulam, of whom our country may be justly proud, laid in his "Novum Organum" the first foundation of scientific method and inquiry.

The age in which we live is pre-eminently scientific, that peculiar logical and direct mode of thought characteristic of Bacon's method having diffused itself among people whose vocation mixes them in no way with science. All the mechanical arts are imbued with this same quality, so that the inventions of the age are not simply isolated chances, mere flukes of discovery, but are long chains of solved problems, terminating in some valuable result. There has never been a time when the atmosphere of society was so genial to scientific pursuits; but while the age gives us this pre-eminence, it also imposes on us heavy duties, for as thousands of lives have passed in preparing this condition for us, so must we not let our lives pass without increasing the store for others, not necessarily by discovery or inventions, but at least by earnest love of truth, and hatred—destruction of falsehood. The latter part of this doctrine is not so easy as it at first appears. Medicine is not so much a science, as a science of sciences, many of which are in an imperfect state; many of them, like electricity, chemistry, and certain parts of physiology, have been brought somewhat to the attention of the leisurely and pleasure-seeking portion of the public. There is in all lands, and certainly in England, a class of hangers-on of science, whose occupations forbid them to pursue such knowledge, who love to hear the marvels of nature, and to believe that they know something of abstruse things. From this class of people originates such a wave of pseudo-science as has passed over us the last twenty years, and is now declining. The fashion begins very easily and harmlessly. Perhaps there may be an eminent lecturer whose diction is so simple that his hearers really think they understand him. On his evenings the public lecture-room is crowded; he explains with extreme simplicity of language the most advanced theorems in dynamics and electricity, while a well-dressed audience takes graceful notes, such as would, I am sure, astound the lecturer. He accompanies his teaching with experiments that (although to perform them truly requires the most exact machines, and hands as delicate as a Faraday's) are repeated and excelled in the schoolroom with an old staylace and a lollipop. But soon such things get dull, for the details of science are apt to be slow. Mesmerism, clairvoyance, electrobiology, succeeded each other, and as each experimenter outbids his fellows in the marvellous, so public appetite is stimulated even to the swallowing of spiritualism and table-rapping. A mind greedy of the marvellous will scarcely check at anything, but the limits of absurdity have probably been reached with the idea that disembodied spirits should delight themselves in the company of two mountebanks tied up in a cupboard by playing "Sally come up" and other graceless melodies on a vile guitar and a wheezy accordian.

Such are the results which the flashy genius of pseudo-science wins—aspirations too grand, too æsthetic to follow the simple lead of truth, which must claim a world beyond the limits of mere reason, culminate in a pitiful juggling with ropes and banjos, or in tapping on tables at 10s. 6d. per hour. In the meantime men, whose names were never whispered in the "at homes" and "small and earlies" of the season, have nearly demonstrated the oneness of all force, have made the lightning our despatch postman, and have laid a path for intelligence under the roots of the ocean.

The moral of this history is not far from us. Medicine, as I have already said, is a science of sciences: we gather from many stores the knowledge which is to be the basis of our work, but the application of this science is an art. It is one thing to have at our fingers' ends all possible learning about diseases, and another to perceive what is the matter with a patient; a third to prescribe in such a way as shall counteract the disease and suit the idiosyncrasy; and it is a fourth to get fairly and properly paid for our work, and sometimes, I assure you, this is the most difficult of all the four. Successful and righteous practice of our Profession requires, then, a somewhat rare combination of qualities—power of steady work and close reasoning; rapid and sure perception; quickness and plenty of resource; decision, yet tenderness of character; and great tact, combined with the purest honesty. Upon this latter union we must dwell for a few minutes, for tact is a quality which the Medical man ought largely to possess; yet such possession offers, at times, the greatest temptation to insincerity—untruthfulness—in fact, to humbug. He who has the wisdom of the serpent must take care lest he use it like a serpent.

Unfortunately, the confines of Medical and Surgical practice are haunted by hosts of this sort of unreality, in many ways comparable to the rope-twisting and table-turning juggles above mentioned. The public can know nothing of our abstruse and difficult science, but it is constantly in contact with the art, and having no basis for criticism it is apt to be led away rather by what appears wonderful than influenced by sterling truth. There are always men ready to take advantage of such phase of the public mind—men possessed generally of considerable tact, knowledge of the world, power of pushing, and very little burdened with scruples: from such arise those advertising museums which are only false baits wherewith their traps are set; also, homœopathic, mesmeric, and such like Hospitals. But these individuals are not all extra-professional; there are many degrees of a long ladder—from the handbill-distributing quack upwards—whence originate all sorts of irregular practice, curious special Hospitals, and sundry marvellous establishments. It must not be understood that all special Hospitals are to be condemned, since such institutions as a Fever or Eye Hospital, Children's Hospital, and a Consumption Hospital, and a few others, are even laudable; but, on the other hand, most institutions for the treatment of a special disease, *par excellence* of any special Surgical disease, and emphatically for the administration of one elected remedy, must be wrong in principle and effect; for, in the first place, those who set them up are, for the most part, men who do so only to connect their names with certain maladies; and, secondly, when Hospitals are established for diseases of the stomach, of the kidneys, of the bladder, of cancer, of fistula, etc., etc., the public must diagnose its own diseases before going to the Hospital. Moreover, when institutions to exhibit a certain agent are established, the patient must not only decide his own disease, but prescribe his own remedy. Nevertheless, if we were to judge the value of the places by the number of patients professed to be treated in them, we might form a most brilliant idea of their flourishing state; but there is this curious fact, that the amount of patients advertised as treated in the course of a month, probably exceed, or at least equal, the quantity of persons afflicted with the malady in the whole year. Glitter, though not golden, may attract a good deal of the metal; but although it is your aim to become successful Practitioners, yet that higher aim of paying the debt with its accumulating interest which we owe to posterity must not be forgotten. Let us not forget that truth, scientific and moral truth, is the store whose amount and value we are to increase, not merely by adding more facts, but chiefly by combating falsehood and error—the base alloy, the foul mixture which sullies the good metal, and sadly depreciates what it does not tarnish.

I must, though unwilling to make any boasts, allude to what has been added in this Hospital to our general store of knowledge. Nearly all the professors have worked with more or less success in this direction, and a good deal emanating from the studies of disease here has made its impress on the world. Now, however, I speak especially of an operation on the foot, devised by the Professor of Surgery at the College of Surgeons, who, I am glad to say, is also Professor of Surgery here, which operation has resulted in so excellent a manner that it will doubtless be considered one of the great Surgical improvements of our age.

We are not all, however, to invent or run after novelties: most of what is old is also good; and you, gentlemen, will have to begin with what is already known. A glance at the prospectus will show you that your time and memory will be fully taxed. I will only say that to work well you must divide your time fairly. When you study, do it with all your might; when you play, amuse yourselves with your whole energy. Neither work nor play is worth anything if they be mixed together.

I must now speak of changes in the Hospital staff and school. We have to regret the loss of a good colleague and teacher in Dr. Willshire, who has departed for Italy. We must regret him, but with a modified sorrow, as one gone to another and a better place—at least, let us hope he will like it better. Moreover, we can afford but a moderate sorrow, since his place is so amply, perhaps more than, filled by the full and assistant Physicians elected into the vacancy. In Dr. Salter's hands the Medical lectures, we know, are fully safe, while the Physiological Lectureship will receive perfect justice from the hands of Dr. Morris Tonge. Dr. Pollock and Dr. Parson will respectively teach Pathological Anatomy and Midwifery; and in them we welcome good colleagues about to become good friends.

Mr. Hancock has yielded half the Surgical Chair to Mr. Canton, whereby you will have the advantage of hearing the theoretical and seeing the practical teaching of both Surgeons.

In consequence of the last change, the Chair of Anatomy devolves upon me. I shall do my best to fill it worthily, and to lecture on that subject thoroughly and well; at all events, if you work as hard to learn your Anatomy as I, together with our Demonstrator, Mr. Bellamy, shall do to teach it you, we shall send an uncommonly good set of students to the College examinations.

As then I shall so soon have the pleasure of meeting most of you again, not only, as heretofore, in practical Surgical, but in the Anatomical teaching also, I do not take my leave of you, but simply say to you "*Au revoir!*"

GUY'S HOSPITAL.

The Introductory Address was delivered by the Right Hon. Sir Laurence Peel, the President. After an explanation of the reasons for addressing his hearers, he said he had little to offer that was new, and he did not aim at novelty, nor did he desire to make a sensational address. He would speak unreservedly and freely, and pour out a homily, "as plain as downright Sheppen or as old Montaigne." He had not crammed for his address, nor stuffed himself out for his part to carry a portly paunch of learning. He had read nothing specially for it. Sudden ingesta were not learning — what he had to say consisted at all events of mature opinions. Moore had written in praise of praise. Within proper limits it was a useful stimulant to virtue. A lecturer could seldom know individuals; he must generalise in his observations, and the hearer must apply and appropriate the lesson. The first piece of knowledge he should exhort men to try for was self-knowledge. From that might grow knowledge of men. They must look onward. They would find God there in some nook or recess, if they looked long and well. The kingdom of God was within man. How should a young man cleanse his way? The city reeked with pollution, temptation stood at the corner of every street. The Psalmist said, "The fear of the Lord is the beginning of wisdom; a good understanding have all they that seek hereafter." Work and pray would be his advice to them. They would be tempted to expense, to idleness, and if to idleness to all springing from that bad root. The Medical Profession stood deservedly high, and it could be injured only by itself. The way to support it was to feed its springs. The Medical schools of London were its springs—their food was knowledge. The students were offered the food—they must take it, chew it, and digest it. Sir William Temple thought Physicians the most learned of the three faculties. Dr. Johnson, without express dissent from that preference, hesitated to adopt it, but he had bestowed a just eulogy on Physicians, and he lived in close intimacy with several. To qualify themselves for this Profession, they should be good men, learned men, and liberal-minded gentlemen. For models they need not go far, for the walls of that Hospital included many such. They should regard the dignity of their Profession with a jealous care, and understand on what it rested. It rested on services to mankind, the justifying cause of dignified position. To the honour of Medical men were entrusted the keys of the skeleton closets in many houses, and the deposit was rarely abused. By virtue, learning, and manners united, they maintained an influence which would be lost without that union. There was a time, however, when the Profession, now so honoured, was the butt of ridicule. Satirists in essays, dramas, and novels, delighted to level at it their shafts of ridicule, and the world clapped their hands and laughed. Why? It might be useful to seek for the cause. The weaknesses which were then ridiculed were not limited to the Profession only. The world partook of them. A superstitious reverence for old times and opinions for the practice of the ancients, a pedantic adherence to routine, and a determination to confess no error, and, consequently, to oppose all new discoveries, lost them for a time the respect of thinking people; and as the lives of men were at stake bitter was the derision when these weak points were exposed. Infidelity was at one time imputed to Medical men; as against them the charge was hushed, but it was renewed against men of science, many of them distinguished alike by their profound knowledge, and by the simplicity, purity, unselfishness, and labour of their lives. He could not conscientiously invite them to the pursuit of science if he thought that pursuit really hurtful to them in the all-important point of their salvation; but he thought that all knowledge led ultimately to light, and light to God. The sin of infidelity could not be imputed to bodies aggregate; it must reside in conscience and the individual; it must depend on corrupt motive, and should not be confounded with error. Each truth must be in harmony with all truth, and religion and science could never clash. Men might misunderstand or disregard signals, but properly directed trains of thought never clashed. Collision implied blunder, while science was essentially a progressive thing, and religion was essentially a progressive thing. The sincere inquirer into science wanted to land on some dependency of the kingdom of God. The charge rested on gross assumptions, most, if not all of which, charity forbade. Let them put themselves implicitly into the hands of God, and ask for light. Charity forbade them to condem on assumption, or to suppose a man irreligious, simply because he was in conviction not a follower of that religion which they believed to be alone a revelation from God. He hoped never to see the time when the mind that obeyed would any more be prized "than that which thinks and feels," when a habit would be more valued than a power, when a pail of water taken from a spring would be prized above the spring which filled it. These broadcast imputations of sin by reason of divergence of opinion proceeded from ignorance of man. That Being who fixed "by immutable decrees seed time and harvest in his purposes" saw closer than they. A man was walking in a garden with the gardener. A fig tree stood there clothed with many broad leaves. The visitor looked on it with

> "A restless oblique eye,
> That looks for evil like a treacherous spy,"

and said, "It bears no fruit." "Stand under the tree," said the gardener, "and look into it." So the man stood under the tree, and looked into it, and he said, "I see none." "Look closer," said the gardener. "I see one," said the man; "two, three, many—nay, I thought they were only leaves." "Yes," replied the gardener, "many are mistaken in many things, but God sees closer than we." A man was walking in a road, and he met a carriage full of travellers—strangers to the country—stopping where the road diverged into two. "Which is the road to Godshill?" cried the driver hastily. "Both lead to it," said the man slowly; "but few folks believe me; they all take it there's but one way." Now, this Godshill of which he spoke was in the Isle of Wight; but there was another God's hill, and if men climbed it they got a better view of the country than they did in the low lands. They saw many branching streams flowing into one sea, many roads leading to one city, and that city set on the hill. Dr. Conyers Middleton compared separate truths to drops of rain which fell separately into the river, mingled at once with the stream, and strengthened the general current. A seed wafted by a gulf stream might clothe a barren rock with a forest of palm trees. The roots of good threw up as many branches as the roots of evil. That School of Medicine was not designed by Guy, but it was still a sprout of his beneficence. It was in distant lands a pioneer of civilisation. Man was not a mere receiving animal to hold effusions of grace; he was not a mere electric chain sunk in a sea to carry messages from above. He was an intelligent, acting power, self-existing, put in motion, or aided in motion, by God—not a reservoir, but a river fed from God and flowing to God. A great warrior sneeringly remarked that God favoured "*les gros bataillons*." God might not defeat every well-planned piece of wickedness—an aggressive campaign, for instance—but His blessing might be looked for on works planned with wisdom for the good of man. Doing less than a man might do would be defrauding God. The student who meant to do as little as he could meant to practise on the credulity of dupes. Work should be proportionate to their strength. Exact tasks could not be allotted, for there must be relaxation. Pleasure came from God, and God meant all His gifts to be used, none to be abused. A self-constituted Lycurgus made sumptuary laws to meet his own taste. Such laws were purely arbitrary. Where God had said "go," let no man put up a fence. Every petty tyrant was enclosing God's commons. Man's senses were whetted by pleasure for use; sin consisted in abuse. If they could not travel in safety, let them stay at home; but because they had weak members, let them not bar their neighbour's door. Science was not a jealous mistress; she did not ask them always to be at her elbow. Let them give sufficient time to study. Let them avoid all that detracted from that fair allowance. Let them choose pleasures suited to their age, strength, and means, and make no laws for their companions. The world was a great partnership. God had so wished it. Ignorance made ligatures which cut into the flesh; it was the parent of prejudice, and by its obstruction to improvements was as fatal as a pestilence. Molière had touched the matter finely in "Le Malade Imaginaire;" the promising son would not even listen to the new discovery of the circulation of the blood. In "Gil Blas" and "Don Quixote" the same vein of irony was opened. Selden in his "Table Talk" hinted why simple remedies were at a discount. They were unpopular because simple and plain, and one saw it daily exemplified. In Barataria this was the golden rule—*Difficillimum saluberrimum*—Proscribe what was and prescribe what was not at hand; if they ordered what was cheap, men would think cheaply of them. The old Duke of Queensberry, a vicious but shrewd man, had a good motto in matters of taste—*le grand simple*. A return to Nature had sent old recipes, spring physic, and spring diet to Coventry. The reformation had spread. The list of melancholy meals in Burton's "Anatomy of Melancholy," by its very extravagance, turned melancholy into mirth. The Doctor of the governor of Barataria quoted very learned opinions for his theories; but students now were to be congratulated that they were born in the age of reason. The lecturer proceeded to give some excellent advice to the students. They were not to be in a hurry to come out, like a miss in her teens, but should endeavour to lay good foundations; for they did not want men, like the Irish students in "Gil Blas," to be foaming at the mouth with theses and arguments. Nothing would stick long by them which was not in a manner worked into them by themselves, nor do them much good unless it was based on principles. They did not think much of a case lawyer. Let them not then be case Physicians, but saturate their minds with principles. Let them pick up all the knowledge they could, for a German story said that even a rusty horseshoe might buy some cherries. Let them take care how they walked and with whom. It was difficult to keep in step with a fool. Slang was a mistake on the part of a scholar and a gentleman. It was a poor imitation, and the true blackguard could do it better. Chaff might be wit or humour; if so it might pass, but one did not often meet with that sort of chaffcutter. Sydney Smith laughed many nuisances out of the world, but he was a close reasoner and knew when to use his tools. In conclusion he expressed a hope that the Professors in the school would show the young men about them that they were students still; that theirs was a philosophy which never rested, which was never attained, which was never perfect; that its law was progress; that a point which yesterday was invisible was its goal to-day, and might be its starting-point to-morrow.

THE LONDON HOSPITAL.

The Introductory Lecture was delivered by Dr. E. Head. After giving the students a hearty welcome on this, the eighty-second anniversary of the foundation of this College, the lecturer remarked that while no institution affords more extensive relief to patients, none offered vaster fields for prosecuting his studies to the student. While speaking of their noble Hospital, it was impossible to forget what a striking exemplification had been given of the effectiveness of its organisation and resources by the manner in which they had met, and by the blessing of God retarded, the westward progress of the dire cholera wave which had so lately broken over them. The important services undertaken by this institution were given with the utmost devotion, and he did not mention it now so much with the object of restating what was well known, as to express the gratification which he was sure the authorities of the Hospital felt for the generous assistance of the generous public, whose free-will offerings visibly now as ever maintain the correctness of the phrase, English generosity throughout the world.

Dr. Head passed a high eulogium on the resident Medical staff, the House Governor, the lady nurses, and nurses, who had done their part so well, not, however, on their own account, but our own, that we in our turn may, if necessary, be encouraged to follow so noble an example, and that society may be elevated by the record that such deeds of self-sacrifice and devotion had been done in its midst. Mere love of human praise could never have induced men and women to act in this manner—the praise of God and the satisfaction of their own consciences must be their own reward; and, alas! gentlemen, if human praise were the only reward, some who have worked and suffered with us would be for ever unpaid for their labour. Of the nurses, four have succumbed to the terrible danger they dared. The lecturer referred also in appropriate terms to the death of Dr. Ansell, for many years the active Chairman of the Drug Committee of this Hospital, who fell a victim to this dire malady. Before passing from this subject, he mentioned that the Alexandra wing—the foundation-stone of which was laid by the Prince of Wales—had been completed, and was to have been opened just when the cholera broke out. The House Committee threw open the wards at once, and thus the building, which was to have been opened with congratulatory speeches and in festal array, in the presence of the rank, wealth, and beauty of the metropolis, was inaugurated (perhaps more suitably) amidst the threatenings of the pestilence and the ceaseless groans of the sick and dying.

The lecturer proceeded to address the students more especially, and observed that he would preface what he proposed saying to them by a word or two about science in general, and the only manner of successfully investigating her mysteries, and observed that although such definitions might not be necessary, yet it was a positive satisfaction in these days of scientific heresies to restate the ground on which our Profession, as indeed all other branches of science, can alone continue to stand. He then went on to state that of science our own Profession was one of the most important branches. Its subject is, next to the knowledge of God, the highest that can be contemplated, for it concerns the knowledge of man physically and psychically, his relation to nature, and the various effects which the external world, its laws, its forces, and its productions have upon him. It includes, therefore, the physical sciences of anatomy, physiology, chemistry, materia medica, and so on. It was in consequence of this extended knowledge of physics, which it is necessary for him to possess, that the Medical man is called by the name Physician, a title which in all ages has demanded respect, and which one has as much reason to be proud of as any of the ephemeral titles bestowed by kings and governments.

Dr. Head urged the first year's students to pay special attention to the subjects of their winter course, especially anatomy. He observed that an extensive and profound knowledge of this subject is not only simply desirable, but absolutely necessary. Over the wall of his academy Plato, it is said, had inscribed, "Let no one but a mathematician enter here." On the wall of the temple of Medical knowledge is engraved with a pen of iron, not only let no one but an anatomist enter, but no one but an anatomist can enter. It is the magic key, the "open sesame" which alone unlocks the portals and enables us to gaze at and enter into the temple reared by hands untold, the labour of unknown ages. In reference to the dissecting-room, he spoke strongly on the propriety of maintaining quietness and decorum within its walls, observing that this was requisite not only on account of the difficulty of the study, but also because all men in all ages who have respected themselves and been worthy of respect have respected the ashes of the dead—ruins, indeed, but the ruins of a shrine just deserted by a spirit the most wonderful of the creations of God.

With regard to the discipline of the mental powers requisite for the successful prosecution of Medical science, the lecturer strongly insisted upon the cultivation of the faculties of concentration, memory, observation, and reflection; of these, concerning the gift of observation especially, he observed that the successful study of Medicine would depend very much on the exercise of their perceptive powers, inasmuch as the elementary parts of this study, unlike some—pure mathematics, ethics, and others that can be mentioned, which have their rudiments in the human mind—derive the material on which it is built entirely from the outer world. Let no one, if he does not possess this gift to the extent he desires, and feels himself inferior to others, be dismayed, for it may be indefinitely improved by exercise; moreover, it should not be forgotten that facility in this, as in every other department of mental exertion, does not depend upon one faculty, but on many, and often principally on those developed last. A really great observer is not, for instance, one who is simply quick in his senses and active in his disposition, but one who has intellectual insight to distinguish and compare what phenomena he sees with the outward eye. Your original weakness in actual observation, though the faculty be perhaps inferior to that of other men, will in time be so assisted by your intellect, your knowledge, and other mental powers, that on the whole, and at the last, you may become infinitely greater, more successful observers of the mysteries of nature than the men that first caused you such serious discouragement.

After giving some practical advice as to the best manner of conducting their studies whilst members of the College, Dr. Head concluded his address by pointing out the advantages, material, mental, and moral, which might be obtained by the diligent prosecution of their studies. With regard to mental influence, he observed that the number of years that Medical students expend in some of the deepest and most interesting of sciences must needs enlighten and develope the powers of the intellect; and, as to the moral influence, what can be more softening, what more humanising than the exercise of our Profession, or what afford more stimulus to the common benevolent feeling of our nature?

The lecturer concluded his address by urging on the students to discharge with all diligence the duties they had undertaken; that they could only do this by beginning to work at once; by working regularly, methodically, diligently, continuously, in submission to, and in accordance with, the rules of their College and the direction of the authorities. If you do this, I shall have no fear of your ultimate success. You will raise yourselves to the position, than which few, I think, are more to be envied, that of the honoured, scientific, successful Practitioner. You will maintain the dignity of the Profession and this College. You will give your teachers the very best encouragement and reward they can obtain for their labours. You will make amends to friends and relations for the anxiety and expense they have been put to on your account. You will enjoy in your own breasts the satisfaction and peace that duty well done is sure to bring. Only, gentlemen, work, and work will be changed into interest, and interest developed into attachment, and attachment transfigured into love, and love will easily conquer all difficulties that beset your career. *Nihil difficile amanti.*

ST. MARY'S HOSPITAL.

The Introductory Address was delivered by Mr. Haynes Walton, Surgeon to the Hospital. After thanking the very large audience for their visit to the Hospital, he remarked that it was well to meet and rejoice at this Medical festival and anniversary, one of the few that the Profession possessed, and the birthday of all who have entered Medical life in London, and to introduce with proper ceremony those who are about to enter the noble brotherhood, and, indeed, to make the beginning a consecration. He had not looked back among the great men of the past for examples to set before them, neither had he gathered fragments from Medical history to amuse them, nor sought quotations from classical authors to astonish them. He gave merely his experience in a few sober truths, "delivered in plain language."

Following that rule of order which says seniors first, he addressed himself to the many Physicians and Surgeons present, and attributed the goodly gathering of them to the fellowship which the laws of St. Mary's have established between the Profession, the Hospital, and the School, adding that it deserved to be well known that the Medical governors of the Hospital take part as committee-men in all that concerns practice and teaching. In such committees they act on the same footing as the regular Medical officers. He asked them, in the name of his *confrères*, to continue to join heartily in the work, and to assist in solving the many questions that were ever requiring to be answered. He assured them that the demon jealousy would not pursue them, that many improvements may be effected readily by their assistance, and any neglect or abuse would be more quickly and smoothly put down by their assistance. The students would forcibly recognise whatever of good supervision emanates from them, as there can be no secret working among the staff, no unchecked selfishness, therefore no corroding suspicion. He thanked them for what they had done, as science, suffering humanity, and the students benefited by them.

In addressing himself to the younger part of his hearers—the pupils and new comers—he thought it well to tell them something about their educational home, to cast a retrospective eye, and to allude to the things that be. It was right that the history of the establishment be unfolded to them at this time (fifteen years from its organisation), and that the present policy be developed. There had been no failures; in the past was registered merely the difficulty of a commencement, and recorded the triumph of success. He then gave a sketch of the unprecedented success of the Hospital, and alluded to the enlargement in the new wing which is being built, and spoke also of its internal arrangements and organisation. The marked success of the School was then pointed out, and which he considered more astonishing than that of the Hospital, as the conditions necessary for its prosperity were of a different nature and more difficult to be reached. No happy accident brought this about, but causes clearly to be traced; and he thought he ought not to be debarred from alluding to the chief of these, on account of their personal nature, and because of his being associated with the actors. Justice and truth inoffensively put forth should always be admissible. The most promising feature, then, in the new Hospital was the largeness and completeness of its staff and the high reputation of the individual members for writing, teaching, and practical knowledge; also that St. Mary's was well represented in the Profession, as the Examining Boards of our Colleges and other bodies testified. It stood high in public estimation. It pleased our gracious Majesty to look there for some to attend her and those most dear to her.

He pointed out that the general proficiency of the students who had been educated there had been the subject of remark by examiners and in private life. In honour's list they had not disappointed their Professors; a large number had sought the competitive examinations and entered the public services, a fact which showed these men had confidence in their acquirements.

In all that concerns the School in the coming session in legislation and administration, all had been done that could be done for the student's welfare and to render his teaching complete and easy as possible. It need be told to the students—for it was scarcely well understood that the work was not all on their side—the teachers had a great deal of care, labour, and fatigue, and in many instances more than they. The teaching of elementary matter was always drudgery to a proficient in his subject, and he hoped the remembrance of this would be a check to any restless spirit that may be in the lecture-room. The student of the present day has everything to his hand; in his time it was not so.

He then alluded to the very long period since any change was made in the Medical staff. For years it was unaltered, and even now the old faces abound. It was not till late this year that death had entered its ranks, and now it fell to his lot, in the capacity of a public lecturer, to notice the sad calamity, and to allude to the solemn end of our nature which all healthy minds regard with instinctive dread. He then gave a short biographical sketch of his late colleagues, Mr. Alexander Ure and Mr. Joseph Toynbee.

He then turned to the youngest of his hearers—the freshmen who that day had taken the most momentous step in their life—and begged for that earnest attention which would assure to them the remembrance of some portion, at least, of this address; they needed guidance and assistance, as that which they were to master demanded a great deal of mental work, and was the harder because it was entirely different from anything in which they had been engaged. The first obstacle to be encountered was the apparent magnitude of the task; but he begged them not to be dismayed, as he had felt it as much as any one, and assured them that in three or four months the phantom fright would vanish—that is, if they began in earnest, and that they would be amused at their past fears, although then only would they recognise the amount to be done; yet there must be work, positive downright hard work, a thing difficult to be understood by youth, and still harder by those who have not had that Medical training which should be preliminary to Medical education. There are few studies more difficult than those in which they had to engage, and more would be required of them during the next three or four years in mental training and the acquirement of knowledge than at any other period of their lives; the subjects are numerous, lengthened, and intricate; the sooner they knew this, the better. The practice of Medicine is not a mere empirical art, nor a mere routine; at the present time there is no more varied or difficult curriculum anywhere established than is required in this country from the candidate for the Medical Profession. During that period their characters would have to be formed—a work of self-culture and self-development, for it could come only of themselves, a result of more importance to the man individually, and of scarce less consequence to his future patients, than the scientific instructions to be received. What is knowledge without character? I do not mean the moral and religious virtues, but the cast of mind, the force, the will, the habits of thought and feeling, which distinguish a man from his fellows in the affairs of life. Ponder well on this; remember, according as you sow, so shall you reap.

"With all your desire to learn, you must be taught how to proceed, for rule and discipline are necessary. As with physical labour, so it is with mental; sharp and severe spurts will be lost in the end, and cause damage to the living machine. In the mental exercise, it is the daily little taken in freshly that holds. A fatigued mind can never retain." The lecturer here gave some valuable hints about the hours of study, the division of time, and the surest method of proceeding.

He found it not possible, if even it were convenient, to offer advice on the several subjects of study, as the individual lecturers would address them with their accustomed earnestness and eloquence. But he selected two of them for a passing notice—Anatomy, Physiology, and Hospital Practice. Anatomy is the first they would set about, as it stands first in importance among all other subjects; for it was the foundation and framework of the Profession. All else was to follow, and to rest on it. Unfortunately it could present itself in an unattractive form, and must for a time be, except to a very few, a repulsive study. It took a long time for him to overcome it, and had it been possible he would have given it up; but circumstances obliged him to abide by his choice, and so thoroughly did he overcome his difficulty that no man of his time ever dissected more, and he was high on the prize list of the then largest school in the kingdom. He mentioned this for their example, and not for self-praise.

A knowledge of the human frame and the working of its organs is paramount. A Surgeon ought to be as familiar with anatomy as with the clothes he wears. He should be able to find any part or object without a puzzle of the memory. When he so knows it, he will be master of numberless Professional details, and be ready for emergencies. As students for the most part left their schools with a miserable stock of anatomical knowledge, he would never lose an opportunity of timely warning when he could speak with authority to those entering the Profession. Among other valuable hints, he showed that this knowledge could be obtained only by careful, well-arranged, and repeated dissection, for which the best lectures, written and pictorial descriptions, could furnish no substitute. The manner for conducting the dissections was then pointed out, and the proper use of descriptions, and the injurious use of plates and pictures dwelt on. He sketched a strong contrast between anatomy acquired by practice in the dissecting-room, and the faint trace which the memory may retain of ideas not originally impressed by the absorbing sight and the vivid touch.

He very forcibly touched on the reverential respect due to the work in the dissecting room, and stated his belief that the character of a man was more shown there than in any part of his studies. He warned them not to repress too forcibly the wholesome feelings which usually came to a man's mind when he first entered that peculiar place of learning; neither to forget the honour due to human remains, nor so dismiss their own mortality from recollection as to behave with any unbecoming or ill-timed levity.

Physiology and anatomy he considered as one.

Abernethy said that "anatomy without physiology was like an old maid without a dowry," and who would take the old hag only for herself?

Physiology was the science that taught the nature of the phenomena of health, and the interdependence of the several organs and functions—the relation of the several parts of the body to the whole—the manner in which life is sustained, so that, in the application of their knowledge to diseased states, they should never lose sight of the general and leading principles of it, which demand attention in all instances and can never be overlooked with safety. The force of this he illustrated by some examples.

In connexion with anatomy and physiology, he urged a careful study of minute structure as revealed by the microscope, and as the only means by which the great mass of pathological changes could be detected, and he assured them that the microscope had done as much for Medicine as the telescope for astronomy.

Addressing himself then to students of all ages, he besought them not to neglect the attendance of Hospital practice; and he deplored the careless manner in which this was done. He suggested rules for their guidance, and methods for assisting them, adducing some experience from his own Medical life, and mentioning things he found to be valuable and most useful.

He advised them to gather facts for themselves and gain experience. By experience he meant not the simple produce of the senses, but observation and reflection. As a strong inducement for their self-instruction, he adduced this argument. "A very great deal has been well made out in Medicine, and fixed rules established, apart from all that concerns what, for convenience' sake, may be called a mechanical part of it, that relating to the art rather than the science, of which the greater part belonged to Surgery. But at present Medicine does not entirely rest on that basis which is claimed for an exact science. This state of things must not make you heretical, because it arises not from error in the subject, but from want of more knowledge, more time to learn, and more learners. We cannot deal with animate as we do with inanimate matter, for neither is it subject to like laws nor amenable to the same mode of treatment; neither can we at will take it under our own control, since it is governed by certain vital processes of which we are mainly ignorant; and further it is under the influence of mind which will not yield itself to man's government." He told them not to be astonished that the treatment of disease in these practical days was constantly undergoing change.

It may not be long before they discovered that a large portion of the value of their attendance in the wards consisted of what they gathered of the natural history of the diseases, their phases, and their terminations, rather than what they learned from the practice of any particular man.

He enlarged on this subject, concluding with this:—"You may live to disregard things that I shall tell you about certain drugs for certain ailments, but I hope what I show you in physiology, pathology, and morbid anatomy will be worthy of recollection and will last, and last they will, if I observe correctly."

He then gave a lively description of the alteration which had taken place in Medical practice in the last fifteen years, mentioning so great was the change that the older Practitioners believed and taught that this alteration was necessary from a change in the type of disease; but, happily for St. Mary's, Dr. Markam, in his lectures before the College of Physicians, had proved that there was no change of type, but of practice.

He considered the operations conducted in the operation theatre a part of the Hospital practice from which the students should not exempt themselves, and spoke eloquently and forcibly in pointing out the danger which accrued from a Surgeon who knew nothing of operative Surgery, and yet dared to undertake operations. He strongly advised them to learn the operations first on the dead body under a good teacher before they ventured to cut living men. He regretted the lamentable deficiency of proper teaching in this department; it is a blot in our present system of education. He hoped soon there would be a move in the right direction; he would do his best to further it. The necessity for all Surgical manipulation was pointed out in detail, and in a manner that must have made a great impression on his hearers.

The clinical teaching, as an extension of the Hospital practice, was then reviewed in turn, and the students were admonished that no neglect would be allowed here, as this kind of teaching is a kind of speciality at St. Mary's, and is carefully conducted weekly by all the Physicians and Surgeons. The lecturers considered that no class of students required so much recreation and management of health as Medical students, from the nature of their studies and the great length of each Medical course; and devoting a few minutes to the subject, he gave advice which cannot fail to be beneficial.

He then endeavoured to impress on the students the responsibility and obligations of a man in practice as the most powerful incentive to induce them to work, showing the value of health and the sacredness of life.

After all he had said about moral obligations, he could not conclude without making allusion to certain duties to themselves which related to their welfare in life, and he could not refrain from this, as he had so frequently under his notice instances of pecuniary distress among Medical men and their families proceeding from age, loss of health, or absence of testamentary provision. He said, "We cannot all be rich; it falls to the lot of very few to be wealthy; it is not in the nature of the Profession to admit of it. Medicine and Surgery cannot satisfy high ambition in that direction; but we ought not to be poor—that is, we and our progeny ought not to be in want of necessaries." He proved that, notwithstanding the severe competition, the demand for Medical men was equal to the supply. His remedy against want was for the Medical man to raise himself in the social scale, by professional attainments, by general education, conduct, and manners, and thereby to increase the confidence of the public in the legitimate Practitioner and still further increase the demand for him; to be sufficiently paid for all services, and to discountenance, discourage, and destroy that rotten and damaging system of gratuitous practice when patients can pay. He estimated what was lost annually to the Profession by this description of robbery. To exercise prudence in the affairs of life, untiring industry and frugality, withal a strictly imposed system of economy, and a resolute determination to make an annual saving and investment, be the sum ever so little. In this respect the Profession must be, he assured them, worked like a trade—that is, by trade rules—or they would fail. "With us," he said, "it must be labour, labour, labour and care. There were no sinecures, no snug berths, no large incomes with little work attached, no retiring pensions; such things do not exist, therefore they cannot be obtained."

In conclusion, he begged the students to work with their teachers, adding, "Get their confidence; they will be as pleased to assist you as you to get their help. The diligence of a pupil rouses the master; for you to secure the highest attainable advantages, there must be associated a social tie, and through this will arise proper respect on both sides. Regard us, then, as friends ready to help you, and as fellow-students only a little in advance of you."

ST. THOMAS'S HOSPITAL.

The Introductory Address was delivered by Dr. T. A. Barker. This address did not pretend to be more than a very plain exhortation to Medical students to avail themselves of the opportunity afforded by an Hospital of obtaining that information which no amount of lectures or of reading could impart, and without which all other Medical studies would be comparatively worthless, no matter what might be the talent, the industry, or the powers of memory of the pupil. The lecturer stated his belief that many causes contributed to render attendance in the wards less constant and systematic than it ought to be; and he believed that some of these causes acted more on the industrious and talented pupils than upon others. A talented and industrious man, for instance, finding the descriptions of disease and rules for treatment, as set down in books, such as he could easily comprehend and remember, thought no direct personal acquaintance with them was necessary, and in this erroneous belief applied more to that reading and study which, as examinations are now conducted, are more conducive to obtaining prizes and honours at examinations at schools and colleges than is the most diligent attendance on Hospital practice. The lecturer proved by illustrations that no lectures or books could, no matter how perfect, represent disease as it occurs in nature, and that no one could, by reading alone, recognise the varying forms of disease when he met them in practice. He admitted that a pupil who had read well might feel disappointment when he first went into the wards at the differences between what he saw there and what he had read and heard as regards the appearances of disease and its treatment, and that he might also despair of being able to master, during his short period of pupilage, all the forms which disease may assume and all the change of treatment it might require under varying circumstances; but he offered the assurance of an old teacher that the pupil, if he would persevere, would soon feel himself at home where at first all had appeared doubt, difficulty, and bewilderment. The lecturer appealed to his experience on the practical examination of the College of Physicians, and stated that, although, for the most part, a good examination at the bedside was generally passed by those who passed well in other respects, it was by no means rare to meet with candidates clever and well read who were quite at sea when placed by the bedside of Hospital patients.

The first year's pupils were recommended to apply these remarks to themselves. They had been told that their later Medical studies would be almost worthless, unless, at the same time, they profited by Hospital practice; and they were now told that unless they passed their first year well they could not acquire that knowledge without which it would be impossible to understand what they saw and were told in the wards; indeed, without due preparation in their first year, it would matter little what they did in the second, so far as related to attendance in the wards. They were also told that they must not regard any portions of their studies as less important than others; and that a student who devoted nearly all his time to one favourite subject to the exclusion of others, however he might be less culpable than the idle man, would not be in a much better position when he attempted to profit by practical teaching in the wards. A few words were said in conclusion exhorting the students to discard a too prevalent opinion that fortune rather than merit presided over the success of Medical Practitioners, more than over that of the members of other professions. If a Medical Practitioner had industry, energy, and character, he was as much entitled as any man to say boldly to Fortune, "Nullum numen abest, si sit prudentia."

WESTMINSTER HOSPITAL.

The Introductory Lecture was delivered by Dr. Fincham. The lecturer, after a few words of welcome to the older pupils, proceeded to address himself more particularly to those who were commencing their Medical career; and first alluded to the higher standard of general education which was now insisted upon as preliminary to their special Professional studies. "Do not," he said, "be discouraged by the apparent multiplicity of subjects to which you will have to direct your attention. To some, I know, this seems at first almost overwhelming, and they feel tempted to sit down in a sort of despair; but this is as unnecessary as it is wrong. There is nothing so especially abstruse in the studies with which you will be occupied but that a young man of average abilities and a fair school education can perfectly master them, if he only will to do so. I say a fair school education; and I trust that the regulations of the Medical Council compelling all students to pass a preliminary examination in ordinary school subjects, before they begin their specific Medical career, will have the effect of sending up to the schools pupils who really are fit to begin their Professional studies. This has not always been the case, unfortunately, in times past; and I am sure that all who have had to do with Medical teaching have formerly very often lamented a sad want of intellectual training in many of those who have entered our schools. Some, indeed, were deficient in the very rudiments of education; it was a hard matter for them to write a piece of decent English, and their spelling was not always in accordance with the received rules of othography. But it was even worse than this. They did not seem to have the least idea of learning, much less of teaching themselves. Habits of memory, application, reflection, analysis—all were unknown, and instead of learning their profession they spent most of their time in learning how to learn, if even they achieved this. But all this is, I trust, a thing of the past. Already the standard of preliminary education is sufficiently high to keep away from the ranks of Medical students those who are manifestly unfit for any liberal profession; and by the resolutions of the Medical Council at their last session this standard will be gradually raised still higher; and this, I believe, will be found a positive boon and advantage, not only to the Profession generally, the tone and position of which will be unquestionably raised, but also to many young men who, were it not that this preliminary education is insisted upon, might have entered a profession for which they never, perhaps, could properly qualify themselves, and which, therefore, must be practised under terrible disadvantages. Many a young man whose education has been neglected, or who, from some cause or other, has an inaptitude for intellectual pursuits, has cursed the day on which he entered one of those professions for the right study and practice of which a considerable amount of intellectual training is necessary. Such an one might have made a capital farmer or a first-rate colonist; but a doctor or a lawyer he never should have been."

The lecturer then proceeded to give a rapid sketch of the various sciences to which the student would have to give his attention; showing how they all bore upon the great object of his studies, the cure of disease and the alleviation of suffering. He pointed out the unreasonableness of thinking it possible to amend derangements of the structures or functions of the human body without a previous knowledge of them as they are in health—in other words, without being masters of Anatomy and Physiology. He urged, too, the study of Chemistry, first for its bearing on Physiology, secondly for its direct help in the diagnosis and treatment of disease, and lastly in its connexion with Forensic Medicine. The study of Medicine and Surgery themselves was next considered, and the necessity of attending systematic lectures on these subjects insisted upon as introductions to the most important point the student must direct his attention to—viz., clinical teaching and study. He showed how essential was this last, and how impossible it was to become a good Physician or Surgeon without it, just as without dissections it was impossible to become a good anatomist.

Having thus touched upon the various subjects which occupy the student both in the lecture-room and the Hospital, the lecturer next alluded to his duties and occupations when at home. "First of all," he said, "I should strongly advise those of you who take notes of lectures, and a most useful practice it is, to write out these notes on your return home, with such additions as your memory can supply. This is a most valuable exercise, and tends more than anything else to fix the topics of the lecture in your minds. There is no better test of a man's knowledge of any subject than his ability to state it in definite categorical propositions committed to writing. This will show what he does and what he does not know. Ascertain, then, what you have really learnt at lecture in this way. And now as to reading: there can be no doubt that you ought to have a good work on each science upon which you are engaged. I shall leave it, however, to your various lecturers to tell you what those works shall be. I would rather remind you that just as there is all the difference between lounging about the wards and clinical study, so there is all the difference between looking at a book and mastering its contents. One of the greatest thinkers of the past century in this country, Bishop Butler, thus speaks of that shallow desultory mode of reading which is, I believe, one of the great evils of the present day. Were he living now, instead of upwards of a hundred years ago, he would doubtless have denounced it in stronger terms. He says: 'The great number of books and papers of amusement which of one kind or another daily come in one's way, have in part occasioned, and most perfectly fall in with and humour, this idle way of reading and considering things. By this means time, even in solitude, is happily got rid of without the pain of attention. Neither is any part of it more put to the account of idleness, one can scarce forbear saying is spent with less thought, than great part of that which is spent in reading.' Do not, then, read in this desultory mode, allowing ideas to pass through your minds, but making no effort to realise them and make them your own; and do not delude yourselves by supposing that, because the work you have before you is a solid one, you therefore are well and solidly engaged in reading. You may skim a solid book just as readily as you may skim a novel, and with just the same amount of waste of time and injury to your mental powers. Far better would it be for you to read now and then, positively for amusement, some good work of fiction, than habitually to read even the deepest work without making an effort to master its contents. Read, then, a few books, but read them well. Bear in mind the old proverb, *Cave hominem unius libri.* It expresses exactly what I want you to realise—that a man who has mastered a few books thoroughly is infinitely superior to one who has read hundreds carelessly; that he is infinitely more to be feared as an intellectual antagonist, because he has acquired active habits of thought, instead of being content with receiving passive impressions of subjects which have merely flitted before his mental gaze, but have left no abiding stamp behind them."

The lecturer then went on to speak of the important subject of recreation in the following terms:—"On this point the first thing to bear in mind is that habitual idleness is incompatible with the idea of recreation. For what does recreation mean? The word speaks for itself. It means a creation afresh—a renewal. Unless, therefore, mind or body or both are more or less fatigued or worn, there can be no need of, no right to, recreation. The idle boy or man has exhausted nothing; there is nothing, therefore, which wants renewal. The industrious student, however, has a full right to recreation. Nay, it is his duty from time to time to unstring the bow of mental effort in the positive interest of his professional advancement. He will work all the better for good wholesome play, just as he will play all the better for his previous work.'

In continuation of this subject, the lecturer alluded to the many sources of amusement and instruction now to be found in the metropolis, and of which the student can avail himsel without the slightest risk of deteriorating his moral character. He urged also the advantages of short excursions into the country during the spring and summer months, on the Saturday half-holiday; but above all he insisted upon change of mental occupation as one of the best means of recreation. "Artisans," he said, "who have been using their muscles all day are often by no means disinclined to some athletic sport in the evening, and really find a relief from it. So, too, the Medical student who has been working hard at his anatomy and chemistry, will be in no small degree refreshed by spending an hour or two occasionally on some totally different subject. In this way let him keep up his classical studies, or work at French or German. Let him read too instructive works—*e. g.* on history, or the biographies of great and good men. All these will be of use to him by enabling him to become the fit associate of educated persons, and also because they will help him to rise above a life of frivolity or of mere sensual gratification, by giving him an interest in something higher."

The lecturer, in conclusion, when contrasting the position of the Medical Profession with that of others, spoke encouragingly. "Of course," he said, "the Practitioner of Medicine will have to work, but so will every other professional man; but I do hope that in future years he will have less *drudgery* than has sometimes heretofore fallen to his lot. Thus I have great hopes that the position of parochial Medical officers will be greatly improved, and that the just claims of military and naval Surgeons will be no longer disregarded. Indeed, I feel sure that these changes must take place if such posts are to be filled at all; for just in proportion as the standard of education, both preliminary and professional, of the Medical Practitioner is raised, so will be his reluctance to accept underpaid and degrading appointments."

ORIGINAL COMMUNICATIONS.

MICROSCOPICAL RESEARCHES ON THE CHOLERA.

By LIONEL S. BEALE, M.B., F.R.S.,
Fellow of the Royal College of Physicians, etc.

No. IV.

ON ELIMINATION.

(Continued from page 337.)

We may now inquire further to what particular operation the term "elimination" may or may not be correctly applied. We talk of certain "poisons" being "eliminated" by the skin and kidneys, although we have not yet been able to ascertain what sort of thing the "poison" is. The desquamation of the cuticle, which almost invariably takes place after scarlatina, and the desquamation of renal epithelium, which not unfrequently occurs after this disease, as well as in acute dropsy, have been supposed to result from a tendency upon the part of the skin and kidneys to "eliminate" the scarlatina poison; and it has been held that these circumstances indicated an effort on the part of nature to remove or "eliminate" a noxious poison from the system. But it has not been shown whether the poison is capable of being eliminated, nor proved that it cannot make its own way out of the blood without the agency of any epithelial cells at all. On the other hand, I think it must be admitted that the facts—viz., the peeling of the cuticle and the removal of renal epithelium—might be explained on the supposition that the "poison" had damaged the cutaneous and renal epithelium as it made its own way out of the blood. Not only so, but if we accept this view we have a simple explanation why the injury done does not make itself evident till two or three weeks afterwards. The young growing cells, which were at the time of the fever near to the vessels, were affected, but the interruption of regular growth could not become manifest till the time had arrived when these cells should have considerably advanced in growth and arrived near the surface.

So far, therefore, from the desquamation of cuticle after scarlatina being due to an effort of nature on the part of the epithelial cells to eliminate poison, it may result from the young cuticular cells having been damaged by the poison as it escaped from the blood and came into contact with, and perhaps invaded the structure of, these young cells.

But can the hypothesis which assumes that the poisons of small-pox and scarlatina are "eliminated" by the skin and kidneys, and that it is the business of the skin and kidneys to eliminate "poisons" of this class from the blood, be sustained?

If such a view is justifiable at all, it can only be on the ground that the "poisons" of small-pox and scarlatina are allied to the soluble excrementitious substances, which it is the business of the secreting organs to "eliminate" from the blood. Recent researches do not favour this view, but lead us, on the one hand, to the conclusion that many things which were supposed to exist preformed in the blood, and to be "eliminated" by the agency of cells, are actually formed by the cells, and did not pre-exist in the blood; and, on the other hand, to the inference that these "contagious poisons" are "living," and quite distinct in their nature from anything that can, as far as is known, be "eliminated." If this be so, the term "eliminate" is at present wholly inappropriate; for if an epithelial cell can attract towards it, and then get rid of, any kind of living matter, it is an operation concerning which nothing whatever is yet known.

The facts I have adduced in my report on the cattle plague, and in papers previously published in the *Medical Times and Gazette*, render it probable that the virus of contagious diseases is living matter which is, in many particulars, allied to the living matter of which a living pus corpuscle consists. It is not more likely that the living matter of a contagious disease should be eliminated by an epithelial cell than that a pus corpuscle should be; and although it has been asserted that pus corpuscles passed through epithelial cells, it need scarcely be said that the assertion has never been proved, while many arguments that might be advanced render such an hypothesis very improbable. But even if the pus corpuscle did pass into an epithelial cell, it would not be correct to say that the epithelial cell *eliminated* it from the body, unless it was shown that the epithelial cell in some way attracted or drew towards itself the corpuscle. But we know that the pus corpuscle is itself living; it can destroy epithelium and normal textures, and can make its own way through tissues out of the body. It is opposed to all that we know of the changes effected by epithelium to conclude that it is capable of *attracting* or selecting particles of living matter from the blood and eliminating them. On the other hand, it is established that living particles of the nature of pus may insinuate themselves into the interstices between epithelial cells, invade these, and ultimately destroy them. Some epithelial cells are invaded by vegetable germs, but it would be absurd to say that these organisms are "eliminated" by the cells, for they simply make their way into the formed material, just as many of the lower animals bore their way into the old tissues formed by some of the higher animals and consume them. It would be as unreasonable to attribute destructive operations depending upon the invasion of the living particles to a tendency upon the part of the cells invaded to eliminate the particles as it would be to argue that the invasion of the organism by the germs of entozoa was due to a tendency on the part of the body to attract these germs from other bodies or eliminate them from the surrounding medium.

The term "elimination" has, then, been applied to two very different phenomena—*the removal of non-living excrementitious matter from* the blood by the agency of epithelial cells, and *the passage of living particles through the capillary walls*, in which operation it has not been proved that the cells take any part whatever. In the first series of phenomena it is reasonable to conclude that the gland cells are the active agents, and not only take up but change materials which they have absorbed; in the last it is much more probable that the particles of the poison or virus in the blood move themselves, and pass of their own accord through the vascular walls. So far from being selected or attracted by the epithelium, it is more probable that they bring about conditions which damage it, and in some cases lead to its destruction. At any rate, before we infer that these secreting cells eliminate the poisonous matter in question, it should be proved that the poison really does enter them and is attracted from the blood by them. As far as I have yet been able to learn, it is far more probable that the living particles of contagious poisons make their own way from the vessels of the infected organism in the *intervals between* epithelial cells than through their substance.

When we come to examine the seat of actual change in small-pox, so far from finding the cells imagined to be the active agents in eliminating the poison in a condition such as we should suppose would be favourable to the operation, we find them terribly deranged, many of them completely destroyed, and the particles which are probably "*contagious*" amongst them, dislocating them from their natural positions and damaging them. It would seem that the epithelial cells had been destroyed by the poison, or by the conditions resulting from its presence, rather than that they had selected it from the blood and taken an active part in removing it from the system.

But if the passage of one kind of living matter through the vascular wall be due to an eliminative act, it is difficult to see why the passage of other kinds should not be due to elimination. If the escape of the virus of small-pox or scarlatina from the blood be an example of "elimination," surely the migration of an entozoon might be referred to the same process.

In the organism certain kinds of epithelium are concerned in absorption, and certain kinds in secretion and elimination. In the first the direction of the flow must be *towards* the blood, and in the last *from* the blood. It is obvious that if epithelium ordinarily concerned in *absorption* is to take part in *eliminating* matters *from the blood*, its action must be reversed. The columnar epithelium covering the villi is a remarkable instance of the first form of epithelium, and yet not only has it been inferred that this was concerned in eliminating poison *from* the blood in cholera, but that there was actually an increased formation of epithelium in this disease, and that the detachment of the epithelium was to be regarded as evidence of a tendency upon its part to separate a poisonous material which had been accumulating in the blood. It was shown, however, in the first part of this paper, that epithelium usually eliminates without being detached or destroyed, and that we are not justified in inferring that such epithelium could under any circumstances increase so rapidly as supposed.

But is not cholera characterised by an almost complete cessation of the eliminative process? Is it not a fact that the organs which ought to be active in eliminating morbid materials are almost passive? So far from taking upon themselves increased duties, they do not even discharge their ordinary work. There is, as is well known, complete suppression of urine for a time, and, although there are often profuse perspiration and free discharge of fluid from the intestinal surface, it seems more probable that this increased pouring out of fluid is a physical process, than that it results from an effort upon the part of any cells connected with these surfaces to eliminate matters, noxious or otherwise, from the blood.

So far from the detachment of epithelium being evidence of an effort of nature to eliminate poison from the blood, it is more probable that it results from a destructive process altogether, and is due to morbid changes which have taken place in the blood in the subjacent capillaries. The villus is destroyed and incapable of absorbing or eliminating, and there is reason to think that before the epithelium is detached the circulation, but very imperfectly carried on for a long time previously, entirely ceases. Nothing, therefore, could be brought to the villus for elimination, supposing it were able to eliminate. I now venture to state briefly the principal conclusions arrived at in this paper:—

1. That the gland-cell is not, as a general rule, destroyed when it secretes.
2. That the poisons "eliminated" by the skin and kidneys are probably in a state of solution.
3. That the poisons of contagious diseases are not soluble, but consist of living germs which move of themselves, but which cannot be "eliminated" from the blood by epithelial or other cells.
4. That so far from there being any evidence of the epithelial cells eliminating contagious poisons, the living particles of the latter interfere with the action of the cells, and many cells are destroyed by them.
5. That the function of the columnar epithelial cells is to draw substances from the intestine and pass them on towards the blood, and that therefore it is most improbable that these cells should take part in "eliminating" anything whatever from the blood.

STUDENTS' REGISTRATION.—The annual registration of metropolitan students commenced at the College of Surgeons and Apothecaries' Hall on Monday last, and will close on the 15th instant.

ON CHANGE OF TYPE IN DISEASE.

A LETTER TO DR. MARKHAM FROM DR. SYMONDS.

Dear Dr. Markham,—I do not think you are likely to wish for an apology from one who ventures to express a dissent from your opinions; but were I to offer one, it would be the request in your own words. You say, at page 74, (a) "I would earnestly ask my auditors to test by serious consideration the propositions here laid down, and not hastily to consign them to oblivion, as unworthy the attention of practical men." Now, I have seriously considered, not only the propositions to which these words refer, but also the others laid down in your essay. I did so when the Lectures first appeared in the *British Medical Journal*, and I have reconsidered them after reperusing your Lectures in this second issue. The result has been by no means to think your views "unworthy the attention of practical men," but unquestionably not to adopt them. Some of my reasons I will endeavour to offer with a frankness equal to your own, though I cannot lay claim to like force and clearness of exposition.

It appears to me surprising that in this republication you should have taken comparatively little notice of Dr. Stokes' Address. In that able and eloquent production abundant proof is offered of that which you treat as a mere hypothesis—proof that febrile and inflammatory diseases have during the last thirty years assumed a different aspect—proof derived from three sources of information, viz., records of symptoms during life, investigations into the condition of organs and tissues after death, and the observation of the effects of therapeutic agents. If these are not authentic sources, I do not know where we are to look for the data of the science and art of Medicine, unless we confine ourselves each to his own limited sphere of individual experience.

Allow me to say that I find in your essay, independently of your reasonings, only one fact which seems to me to discredit the opinion held so firmly by a large body of men who have witnessed, as they think, that altered phasis of disease which you hold to be imaginary. I allude to what you say in regard to the loss of blood in casual hæmorrhage and under Surgical operations. You argue, not without plausibility, that if there be no difference in the tolerance of those accidental losses of blood, it is extremely improbable that there should be any in regard to therapeutic bleedings. Admitting, for the sake of argument, that which, however, is scarcely proved, I think you have overlooked the fact that, while in your comparison one of the terms, "loss of blood," applies to the compared cases, the other term, "subjects of the loss," involves a wide difference. Whether there be or not at a certain time a certain epidemic constitution, a person undergoing venesection in a fever or phlegmasia cannot be compared as to the effects of the loss of blood with one who in ordinary health has a bleeding wound, or a bleeding pile, or a bleeding uterus, or with one who is losing blood under the Surgeon's knife. Every one of these cases would have to be considered separately before we could be assured that persons losing blood from these various causes would be exempt from the morbid character of the time. For my own part, I do not think that I speak from erroneous observation when I say that during the time which belongs to your controversy I have noticed that bleedings, both local and general, even in cases where there was no acute disease and no febrile disturbance, were borne less easily—that is, were followed by more symptoms of depression than in former times; for example, such cases as cupping for a congestive headache, or leeching for a local rheumatic pain. I am sorry that I cannot at this moment recall the name of a gentleman who stated in one of the journals not long ago that the inhabitants of a rural district known to him had abandoned their ancient custom of undergoing a periodical bleeding because of the newly-depressing effect of that time-honoured prophylactic measure. But I do not dwell on this point; the argument stands apart from it. What I venture to press is that you cannot deny a certain alleged influence of therapeutic bleedings on persons suffering from fevers and acute visceral inflammations, merely because you believe that there is no similar influence of casual and Surgical hæmorrhages on subjects who are in cases so very different from the former.

There are two or three questions which, if I have time, I shall be inclined to consider at the close of this letter, though you ask them in the earlier pages of your essay. But what I now wish most to say is that the cause of the difference of opinion between those who think with you, and those of whose experience and observation and views I venture to make myself the humble representative, may be found in a matter which is fundamental to the whole inquiry. I mean the view which should be taken of the object of blood-letting in inflammatory disease. It is your opinion that general blood-letting is a remedy only in certain cases of obstructed respiration and obstructed cardiac action. Those who think with me would aver that while they believe with you that bleeding is a most important remedy in such cases, yet they consider your opinion most erroneous in its limitation of the efficacy of bleeding to such cases, and that you ignore certain physiological influences of bleeding which render it applicable to a wide range of cases beyond your limits.

Our opinion has not changed in all these years as to the mode of operation of the remedy, nor as to the control of the remedy over inflammation. What we have changed, mainly as the result of direct observation, is our estimate of the capability of bearing the remedy. A certain Surgical process removes a tumour. The disease is gone; but how is the patient? A large bleeding has disposed a pleurisy or peritonitis to subside more rapidly than it would have done without it; but how is the patient? That is the question of questions which through all these years has forced itself on the observant Practitioner. And the answer is—the patient is not nearly so well nor so likely to struggle through the remainder of his case as he used to be in former years. The question is not whether, after the bleeding, the swollen capillaries will shrink, and whether cells and corpuscles will adjust themselves and grow into healthy tissue all the better for the remedy, but whether the sick man is more likely to live or to die. The result of the observation of those who think with me is, that the remedy is not one whit less of a remedy than it used to be, but that in the years under discussion it has been too strong a measure for the powers of the patient, these powers having been enfeebled in what has been called the changed type in disease.

In the bleeding days we expected, as the common matter of every Practitioner's experience, that the venesection would not only relieve the pain and lessen the embarrassment of the function of the inflamed organ, by the diminution both of the cardiac *vis a tergo* and of the tension of the capillary circulation, but also that it would lessen the inflammatory fever, and especially aid in restoring the full action of the great emunctories of the body (the skin, the kidneys, the liver, and intestines) and thus favour and accelerate the changes which belong to the natural cure of such cases. Such effects were as familiar to the Practitioner in former times as was the purgative action of aloes, or the narcotic influence of opium. And they were looked for as much in abdominal and cephalic inflammations as in cases specially implicating the heart and the lungs. But the advantages during the last twenty-five years or so were gradually found to be procured at too dear a cost. The strength of the patient was too much reduced. Of course one means the organic strength, which is chiefly the strength of the nervous system, and the want of which prevents the patient from living long enough for the completion of the local repair. *You* do understand, but if any one does not understand what one means by the strength being too much reduced, he has not had bedside experience enough to make this subject in any way intelligible to him.

I feel it difficult to discuss this question with one whose views in regard to the physiological effect of blood-letting, both general and local, appear to be so different from my own. The former, you think, has no direct operation on the inflamed part other than by the inconsiderable effect of the reduction of the quantity of blood in the part in common with all other parts of the body. You overlook, or at least you underrate, the enormous difference to an inflamed part according as blood flows into it with greater or less rapidity and force. The influence of a decided venesection is to lessen the momentum of the circulation and the consequent pressure on the inflamed part to such a degree that for a time the inflammation seems extinguished, and in the earliest stage is extinguished; at all events the quantity of blood is for the time as much diminished as if you had subjected the part to a great degree of cold. The difficulty is to maintain this effect. The old rule was to visit the patient in five or six hours after the operation, and, if reaction was set up, to let the blood flow again till the same effect ensued as before; and then the disease subsided. (I say nothing of the subsidiary treatment by antimony, calomel, and opium, because

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(a) "Bleeding and Change of Type in Diseases:" being the Gulstonian Lectures. By W. O. Markham, M.D., F.R.C.P.

I wish to confine myself simply to the effects of bleeding; nor can I even do more than express in this parenthesis my earnest hope that you are in error when you intimate that the use of mercury in the treatment of inflammation is generally abandoned.) You must have observed the effect of posture on an inflamed foot. Raise it above the level of the body, and there is a marked diminution of pain, redness, and tension, because the blood flows to the inflamed part with more difficulty than usual, and from it with more readiness. Indeed, you refer to this, and you remark that general bleeding may effect the same sort of change and no more; and you imply that the capillaries are left in the same state, and with no more disposition to contract than before. But the abstraction of blood surely effects much more than the mere mechanical emptying of tubes. It certainly does notably lessen the afflux of blood to the already overcharged vessels. But do you deny that concurrently with the reduction of the heart's impulse through the influence of the loss of blood on the nervous centres, there has been a contraction of the minute arteries throughout the body, closely similar to the effect produced by shocks to the nervous centres, whether physical or moral, and without any loss of blood at all?

But the utility of bleeding is by no means confined to its operation on the vessels of the inflamed part. It is equally beneficial through what it does to the rest of the body. Under its operation the inflammatory fever, the most important element of which is the arrested action of eliminatory organs, becomes signally abated, and this gives notable relief to the inflamed organ.(b)

You almost ridicule the idea that bleeding may control an inflammation on the surface of the body. It is obvious that you have never witnessed such effect. I have in former days seen acute erysipelas of the face and head unyielding till it had been subjected to the power of the lancet. I have repeatedly seen an intense ophthalmia continue in spite of local bleeding, and begin to subside at once after a full bleeding from the arm. There is no question in my mind as to the efficacy of general bleeding on local and external inflammations. The question is only as to its being safe or necessary.

To return, then, to the inquiry. Why has this powerful remedy fallen into comparative disuse? My answer would be prompt and unhesitating: it is because, under my own observation and the observation of many of my medical brethren in various parts of the country, inflammations have become less frequent and less violent, and when they have occurred they have been accompanied by a condition of the whole body that has not borne much depletion or lowering by any measures, and has often required a speedy use of stimulants. Nearly thirty years ago the attention of the profession was directed by Dr. Stokes,(c) in words which I have never since forgotten, to that stage in inflammatory cases when stimulants must take the place of antiphlogistic remedies. Now, that stage in my early experience used to come only after a long persistence of the opposite condition. But when the "change of type" in inflammatory cases became manifest, it was, among other signs, betokened by this particular fact, that the state of depression came on much earlier than formerly—nay, that some cases began where others used to end.

You ask, why are there no records of the change in the character of inflammation? To quote your own words, "how comes it that the Physician failed to note the asthenic character of pneumonia, as well as the asthenic character of fevers? How is it that in 1857 we are told for the first time that pneumonia has been for a quarter of a century of an asthenic, nonbleedable type. If the fact could long ago be so clearly predicated of fevers, why was it so indiscernible in pneumonia?" (P. 30).

In reply to these queries I must first remind you that at the time to which you refer bleeding held a different position in regard to fevers from that which it held in regard to inflammation. Even in the most phlogistic days (whether of fact or of opinion) bleeding in fevers was regarded by the profession (excluding Physicians like Armstrong, Bateman, and Clutterbuck) as at best a *remedium anceps*. But in regard to inflammation, there was no misgiving whatever. When a patient died of an inflammation, the self-examining, often self-torturing practitioner asked himself, had the deceased been bled early enough, or copiously enough? The conviction of the utility and necessity of this remedial measure in almost every case of inflammation only gave way by degrees. If a patient appeared to fare less well under the lancet than formerly, the practitioner was naturally slow to trust his individual experience, and withhold or much abate the use of a remedy that was supported by traditional and contemporaneous authority to a degree beyond any other remedy in the hands of the profession. Men, however, noted and began to talk to each other of the change in the behaviour of their inflammatory cases; but it was only by small degrees that they ventured to withdraw what they once believed to be indispensable. This change of practice was in the course of time facilitated and hastened by two causes. One was a change in the public mind; for whereas formerly the friends of a deceased patient would cross-examine their doctor in regard to his omission or even his sparing use of phlebotomy, there came to be a general suspicion and doubt as to the remedy, begotten of new popular systems or delusions, and nursed and strengthened by eloquent reclamations for the *vis medicatrix naturæ* on the part of Dr. Andrew Combe, and Sir John Forbes, and others.(d)

The other cause was the influence exerted on Professional minds by the progress of histological researches in inflammation, and by the advance of our modern humoral pathology, and more especially by the able writings of Dr. Todd and Professor Bennett. Something, too, must be assigned to the fact that for many years before the decline of phlebotomy practitioners had learned to use with more skill than formerly such remedies as mercury, antimony, and opium. But after making allowance for these collateral influences, I for my part do not doubt that the change in the practice of men who were old enough to have lived through the altered phases of disease, was mainly caused by their experience of the change in the constitutional tolerance of bleeding.

One word, before closing this long letter, on the *à priori* argument for or against what is called change of type in disease. It seems to me that all analogy is in favour of the probability that in different eras human beings should be differently affected by such an agency as abstraction of blood. When the practice of it was most common, limitations were always kept in view as to the subjects to whom it was applicable, and the degree to which they could or could not bear it. Every Practitioner knew that there were persons in regard to whom it was necessary to exercise great caution, and others who by circumstances of age, or habits, or previous disease, or by idiosyncrasy, or by what was termed "the epidemic condition," were altogether unfit for the remedy. If this held good as to individuals or limited classes, I do not see why it might not prove true of great numbers—nay, of the majority of the community—as in late years and at the present time. If over at least two decades of years there has been a remarkable prevalence of epidemic catarrh followed by a great variety of neuralgic disorders—if there are times when boils and carbuncles become rife to a degree unknown for one or two generations—if diseases so characterised by asthenia as diphtheritis come and establish themselves as new calamities—I do not see why inflammations may not in certain periods of time assume peculiar aspects, especially in regard to the subject which we are reviewing. I cannot consent to discuss inflammations in relation to our present inquiry as if they were definite organisms, like objects of natural history. Even allowing that pneumonia, or meningitis, or peritonitis, is the same in Peter as in Paul (though this is quite open to question), yet when we have to consider the cure of these diseases, especially in their acute forms, we of course really have to consider the cure of the men, women, and children afflicted with these diseases, and in whom the local inflammations may, over various periods, be attended with conditions of the whole body as peculiar to the time as those which are presented in furuncular, and catarrhal, and choleraic or other epidemics. As to some of these, it may be alleged, with less or more of probability, that, apart from alterations in human diatheses, there have been importations or developments of new seeds of diseases, surmised germs, or cells, or ferments; but even these hypothetical agents would hardly cover all the cases in which certain disorders become rife at particular times. What successions or conjunctions of agencies from air and vapour and the imponderable forces of nature, or what malarious emanations of the earth, or what changes in food, and habits, and clothing, and occupation, may bring about certain changes in human constitutions in particular times, so that inflammatory diseases shall be more asthenic and less fit for treatment by abstraction of blood, we cannot pretend to conjecture. But there is no *à priori* improbability that such causes have been in operation. Just about twenty years ago a terrible epidemic—terrible because of the famine it brought upon a whole people—attacked the potato plant. There were suppositions of insects, or fungi, or of some morbific materies imported; but, however much or little truth there may have been in those conjectures, it is but too obvious that the plant shows at the present epoch an asthenic constitution to such a degree that if the summer and autumn prove more rainy than usual, the plant is less able to bear the evil influence of the weather than in old times, and that it sickens in its leaf and decays in its tuber. Would that we could suppose the human body to be impregnable to analogous influences?

(b) I have referred to the early editions of Sir T. Watson's Lectures and of Dr. Williams' "Principles of Medicine;" also to Dr. Alison's "Essay on Inflammation" in the 1st vol. of the Library of Medicine, and to the article in Dr. Copland's Dictionary, and I find that the *rationale* of therapeutic blood-letting set forth by these eminent men may be as fully accepted now, after all the most recent researches in cellular pathology, as it was twenty-five years ago. It is interesting to compare those writings with the able and judicious *resume* of the effects of bleeding in inflammation in the latest systematic treatise on Medicine, which we owe to Dr. Aitken.

(c) In the chapter on the Treatment of Bronchitis in his masterly treatise on Diseases of the Chest, p. 114.

(d) Those who care to look back to any discussion so ancient, will find it in Forbes' *British and Foreign Medical Review* for 1846 and 1847.

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You will observe that I have scarcely invoked the analogy of fevers. I attach so high an authority to every opinion that falls from our revered friend and chief, Sir Thomas Watson, that I will not call in question the judgment that the difference in the behaviour of fever under blood-letting, general and local, may have had to do with the difference in the species of fever, according as it was typhoid or typhus. And yet, if typhoid cases could, because they were such and not typhus, bear bleeding and leeching so well as to yield a mortality of only 7 in 100, one cannot help asking, why should not such treatment produce a like desirable result now? But who is prepared to adopt the practical corollary?

Let us, however, put these disputed fevers aside. But what shall we say of the febrile exanthemata? Have not measles and scarlatina, the latter in particular, assumed for many years so adynamic a phase that no one has dreamed of treating them with venesection or even leeching? Yet I can remember that in the early part of my professional career it was not uncommon to use the lancet in both of these fevers, and I can recall particular cases in which it appeared to be the saving of life.

One word more, and I have done. It has been my lot to observe diseases in different parts of England, and to compare my observations with those of other physicians, and one of the results of my experience (it was long before "change of type" came to be discussed) was that inflammatory cases were more sthenic in some districts than in others. If this experience may be trusted, and if, under the outward agencies operating in certain districts, diseases can be more or less characterised by strength or debility, is there not a probability that, in the ever-shifting combinations and sequences of meteorologic and other influences in successive periods of time, the whole population of a country may present varying phases of disease in general, and of inflammation in particular?

Having remarked upon an opinion expressed in the letter of Sir Thomas Watson which you have prefixed to your treatise, and in which, with that happy mixture of vigorous thought, lucid expression, and perfect singleness of purpose so characteristic of his writings, he explains the gradual modification of his practice, I venture to add that, while concurring with him in the belief that the influenza of 1837 gave one of the first checks to the heroic treatment which had prevailed for many years, yet I continue in the opinion that the change of practice which commenced about the period referred to, and which was subsequently much increased, did really correspond with a change in that which Practitioners had to observe and to operate upon; in other words, that phlegmasiæ have changed their aspects, especially in regard to their suggestion and their tolerance of bleeding. It is unwise to prophesy on this no less than on other departments of human experience; but were I to live long enough I should not be surprised to see the diseases in question reverting to old phases, and medical practice resuming old procedures.

I remain, dear Dr. Markham,
Yours very truly,
Clifton, September, 1866. J. A. Symonds.

P.S.—I hope you will not think me egoistic if I ask you to read this passage from an address which I delivered in 1851. It will serve as a statement of the belief that was not uncommon more than fifteen years ago:

"It is true that a great change is observable in the treatment of acute diseases. When and where do we witness that terrible blood-shedding which was once so familiar to us, and to which we were once so callous? Why have so many lancets become rusty? What have been the scouring ideas that have purged our officinæ of so much of their perilous stuff? This change of practice has, it seems to us, had more than one cause:—1stly, we have learned that the abstraction of blood, even in the purest and most sthenic phlegmasiæ, cannot summarily eject the disease; it can but so qualify the blood, and so moderate the *vis a tergo*, and so alter the capillary circulation, and so influence the secretory actions, and so modify the neurotic element of what, however simple, is still a composite malady, as to place the suffering organs in a better train for the resumption of their natural state. I need not say that I do not here allude to cases of mere local hyperæmia, in which the curative influence of bleeding is more direct. 2ndly, we have learned to use other antiphlogistic remedies more freely, and yet discriminatingly, more especially opium, mercury, and antimony, and also to wait more patiently for spontaneous improvement. But, 3rdly, there has been a change in the type of that which we have to deal with. Unless our perceptive faculties have changed, we do not now, or at least very rarely, meet with those stalwart menacing inflammations which used to put the Practitioner upon his mettle, and provoke him to those sanguinary onslaughts in which alone seemed to be safety, either for his patient's life, or for his own reputation as a skilful and determined Practitioner. We cannot have almost suddenly grown so very wise as to be able to do without measures approaching to the old severities. Our fathers—nay, our former selves, could not have been so very blind, and so very rash, as to have quite mistaken the characters of the cases and their exigencies. Why had their active practice superseded the expectant method of the end of the last century? Why was the Practitioner, whose lancet was not always between his finger and thumb—why was he thought feeble and timid, and belonging to the same class as the aged members of the other sex? We have more lights in the present day, but there is no reason to think that our natural vision is so vastly more penetrating. Such inflammatory cases as have been described in our Medical classics, and have been witnessed by ourselves, and which now are *raræ aves*, were, I cannot doubt, for a cycle of years, common and every-day cases. The epidemical constitution of the years has changed, and practice has changed with it. Would wary, thoughtful, acute observers of the phenomena of disease and the effects of remedies, such as were our fathers (however imperfect may have been their pathology), would they have continued to bleed and purge in continued fever, in scarlatina and measles, if such practice had been as uniformly fatal as we believe it would be in these diseases in the present day? Could Dr. Armstrong, with all his eloquence and enthusiasm, have commanded a hearing, unless fevers had been for years more phlogistic than they now are, and than they were in the latter part of his career? I think not. And it is not beyond the possibilities that we may some day have to return towards some of the old modes of procedure, though there is little reason for apprehending anything approaching to the Sangradoism which we can remember, and of which the most enthusiastic of the recent apostles was M. Bouillaud."(e)

Death of M. Mélier.—Sanitary science and public hygiene have lost one of their ablest and most laborious exponents in the person of M. Mélier, who fell a victim to cerebral congestion on the 16th September. He was returning from one of his numerous sanitary missions, which on this occasion had Corsica for its object, and was engaged in inspecting the sanitary establishments at Marseilles on his return, when he was struck by a *coup de soleil.* He was 68 years of age, and had, during the greater part of his life, been engaged in all the important sanitary movements of the day. He held the office of Sanitary Inspector-General, and was the leading member of the Consulting Hygienic Committee, which acts as an adviser to Government on all questions bearing on public health. He was a member of the Academy of Medicine, and elected President after an unusually short period of membership; and its bulletins contain many important communications from his pen.

(e) From "The Address of the President of the Bath and Bristol Branch," *Provincial Medical and Surgical Journal*, 1851.

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Medical Times and Gazette.

SATURDAY, OCTOBER 6.

◆

PROGRESS OF CHOLERA IN LONDON.

"The cholera matter," says the Registrar-General in his last weekly return, "is now diffused very equally all over London, and as the waters of the upper Thames, of the Lea, and of the wells become infected, the utmost exertions of the authorities will be required to insure its decline." By whatever mode the disease has been disseminated, we cannot help feeling that possibly, if more energy had been exhibited at the outset by the authorities, and, above all, if the population had been more intelligent and less apathetic, we should not now be lamenting a stationary, instead of a declining, course of the pestilence.

Two things are clear—first that at its birth the present outbreak was restricted almost exclusively to one locality; in fact, it was essentially a local epidemic, whose origin has been explicitly defined, and is now probably everywhere tacitly accepted as determined; and, secondly, that in the course of a few weeks the localised characteristics of the epidemic have disappeared, and it is now become general throughout the metropolis, although, happily, in a greatly modified degree of virulence. The following table, showing the distribution of the deaths during each week of the epidemic period down to the latest date, will best illustrate the nature and time of the transition in its character, and will be useful as an authentic record of the progress of the disease:—

Groups of Districts.	Weeks ending July 7.	July 14.	July 21.	July 28.	Aug. 4	Aug. 11.	Aug. 18.	Aug. 25.	Sept. 1.	Sept. 8.	Sept. 15.	Sept. 22.	Sept. 29.	Total of 13 weeks.
Cholera.														
London . . .	14	32	346	904	1053	781	455	265	198	157	182	150	177	4714
West Districts .	3	2	11	12	12	8	7	3	6	12	10	14	12	112
North Districts .	1	4	6	20	46	38	15	12	15	20	27	28	36	268
Central Districts .	1	3	1	15	32	23	16	13	9	12	20	19	28	192
East Districts. .	3	20	308	818	916	673	369	198	122	74	77	56	55	3689
South Districts .	6	3	20	39	47	39	48	39	46	39	48	33	46	453
Diarrhœa.														
London . . .	102	150	221	349	354	264	194	129	128	132	110	98	67	2298
West Districts .	16	18	37	48	46	31	28	15	12	18	14	11	9	303
North Districts .	23	37	54	78	79	51	40	21	24	19	11	19	11	467
Central Districts .	18	28	31	44	42	31	22	13	18	14	15	17	17	310
East Districts. .	26	37	60	123	125	101	63	41	43	44	35	24	18	740
South Districts .	19	30	39	56	62	50	41	39	31	37	35	27	12	478

It will be observed that in the thirteen weeks from its first serious appearance in London cholera has carried off 4714 persons, and diarrhœa 2298. The sudden increase from 32 deaths by cholera in the week ending July 14 to 346 in the next week assured us that we were in for a strong fight with the old foe; another seven days saw the deaths trebled, and in the week ending 4th August 1053 deaths were recorded, of which number 916 occurred in the eastern group of districts. This was the maximum point of the epidemic, and for the succeeding five weeks the deaths exhibited a satisfactory diminution; but there unfortunately we are met by an increase which has had the effect of throwing us back, so that we are now in about the same position as we were a month ago. And with regard to the distribution of these deaths, the facts are very striking, as showing the gradual diffusion of the disease from its original centre. In the week ending August 4 there were, as we have said, 1053 cholera deaths registered, and 916 of them happened in the East districts: this gives a percentage of 87 deaths in one specific locality. Calculating a similar proportion for the deaths in these districts through subsequent weeks, these are the results:—

Ratio of Cholera Deaths in East Districts to Total Cholera Deaths.

	Per cent.
August 11	86
,, 18	81
,, 25	75
Sept. 1	61
,, 8	50
,, 15	42
,, 22	37
,, 29	31

Pursuing the investigation a step further, we get some light on the distribution of the burden which the East Londoners have succeeded in shaking off; and taking three points of observation for each group of districts, the variation in the ratio of the cholera deaths in each group to the total indicates the gradual spread of the disease.

	Weeks ending Aug. 4.	Sept. 1.	Sept. 29.
West Districts . .	1	3	7
North Districts . .	4	8	20
Central Districts . .	3	5	16
East Districts . .	87	61	31
South Districts . .	5	23	26
	100	100	100

We have not space for present examination of the details relating to the districts comprised in each group; but the fact that within a month the ratio of cholera deaths in the West and North Districts is more than doubled, while in the Central Districts the ratio is trebled, ought to be impressed very strongly on the authorities in charge of those districts. As the Registrar-General remarks, "Each Health Officer should consider that the safety not only of the people of his own district, but of three millions of people, depends on his activity;" and a careful analysis of the published particulars of each death registered will show, by the recurrence of one form or another of preventible disease in the same streets and houses time after time, how urgent is the need for renewed exertions on the part of "inadequately paid" Medical Officers of Health.

Of the other cities and towns included in the Registrar-General's weekly return, Liverpool, as ranking only second in importance to London, merits a passing remark upon the diminished number of deaths from cholera in the last week, which were 116 as compared with 159, 182, 145, 225, and 146 in preceding weeks. From one cause or another it seems as though a general mortality rate double that of London is to be looked for regularly in Liverpool as a matter of course; and, taking the last twelve weeks, the death-rate from cholera and diarrhœa has been twice as great in proportion to its population as the death-rate in London from the same cause in the corresponding period.

In Dublin the cholera returns show a considerable increase; the deaths in the last five weeks have been 41, 52, 55, 65, and 98.

In Vienna 586 deaths were recorded in the week ending

September 22, and of these 274 were from cholera. The epidemic there is on the increase, the deaths having run up from 64 to 107 and 201 in the preceding weeks. So that wherever we look, at home or abroad, the sanitary barometer points to "stormy," and every one of us who desires to perform his plain duty as a Christian and a member of the general commonwealth should do what in him lies to strengthen the hands of those whose province it is to watch over the public health. *Dilettante* sanitarians may reasonably be allowed to clamour for Royal Commissions and the like—they must keep up the fiction of seeming to do something—but there are hosts of real practical workers who do not need to be told what is wanted, and are only solicitous for help to enable them to supply that want. Let the public, then, do its part, and strengthen the hands of these "working men" in the truest sense of the term, and it will find that more will be accomplished than would result from Royal Commissions *ad infinitum*.

A RECENT TRIAL AT MELBOURNE.

In a late number of this Journal we published a letter from a correspondent in Melbourne giving some account of a trial for criminal abortion, which seems for several weeks to have occupied a chief place in the attention of the Profession there. The case would have excited great interest anywhere, on account of the position of the accused and the doubtful circumstances surrounding it. Moreover, in its scientific aspect it raises so many questions as yet new to law courts, and presents so many points for debate, that we think we cannot be wrong in giving our readers a sketch of the whole affair, including the theory of the prosecution and that of the defence.

The following are the chief facts:—A young unmarried woman, a barmaid at an hotel, who had previously borne one or two children, and was said to have been on the last occasion delivered by instruments, believed herself to be again pregnant. She was in bad health, suffered from leucorrhœal discharge and stoppage of the catamenia. She applied to several Medical men and chemists and took various medicines, amongst which was one containing aloes and oil of savin. One of the Medical men who saw her was a Dr. L. L. Smith. He stated that on March 3, 1866, she asked him to determine whether she were in the family-way. He examined her by introducing the finger and feeling the os uteri, and he concluded that she was advanced about three months in pregnancy. She asked him if he could produce abortion for her. He at once refused. She applied to him again about a week afterwards, when he again refused and strongly dissuaded her from it. The girl left her place on account of her state of ill health on Monday, March 12, and obtained a lodging at the house of a Mrs. Cronan, a woman who had charge of her child. On the same evening she went to Mr. Beaney, a Medical man in considerable practice in Melbourne, and asked his advice. He promised to call on her the next day for the purpose of examining the womb. As to what subsequently took place we have the evidence of Mrs. Cronan's daughter.

On Monday night, after eating some supper, drinking with it some porter, and then some brandy-and-water, she went to bed; but before she went to sleep she vomited what she had eaten. In the morning she complained of being ill: she said her womb was coming down. Mr. Beaney came to see her about half-past 4. Water and a towel were placed in readiness for him. "I heard nothing while he was in the room. After he left I noticed some spots of blood on the bed where she was lying. She said she was 'unwell.' The water in the basin was not discoloured. I slept with her the next night (Tuesday). She was rather fidgety, and got up frequently to use the chamber vessel, and complained of pain in her back. On Wednesday morning she seemed very ill. Mr. Beaney saw her at half-past 4 o'clock. She still complained of pain in her back. I went for him in the evening, and he came between 9 and 10 o'clock. There was some blood and water (urine tinged with discharge) in the chamber vessel before he went into the room. He called my mother into the room. I went with her. She was then asleep. He said, 'I have given her a little chloroform.' She soon awoke, and seemed easier. She was very bad during the Wednesday night. She was very restless, and got out of bed very frequently. I observed blood in the chamber vessel the next morning. I noticed a great change in her face in the morning. It was a dusky blue colour, and her lips were purple. I noticed that her breath was offensive on the Tuesday, that it was very bad on the Wednesday, and still worse on the Thursday, and on the Wednesday that there was an offensive smell about her. I went to fetch Mr. Beaney in the morning at her request, and gave the message to the servant. He came to see her at the usual time—half-past 4. After he left I saw the chamber vessel. It contained a dark substance about three-fourths the length of my finger. There were also clots of blood in the vessel." Another woman, Mrs. O'Neil, who was in the house with the deceased, said: "After the Doctor left (on Thursday) I went into the room. I asked her how she felt. She said easier; her pains were not so bad. She turned herself in bed, and said she would have a little sleep. I left her to put some clothes on the line, and when I returned she was dying. I do not think from what I saw that the deceased lost more blood than a woman who was unwell would." She described the substance spoken of by Margaret Cronan as "a bit of skin filled with water," and she said it had an offensive smell. Mrs. Cronan described it as a piece of scum or skin. Margaret Cronan, at one of her examinations, said that she took it up between her fingers, that it was soft and slimy, and if she had held it longer than she did, the lower part would have fallen away from the part she held between her fingers.

With regard to Mr. Beaney's share in the matter, on the one hand it was proved that his first visit, on the Tuesday, was a lengthened one, that the consultation took place with closed doors, no one being present except the Doctor and his patient, and that on the Wednesday he brought and took away with him a bag. Mrs. Cronan said that the Doctor told her that the girl was suffering from "a false gathering" and disease of the womb. On the other hand it was also proved that no cries or groans were heard by persons in the house; that on Thursday Mr. Beaney also brought with him the bag, but did not take it into his patient's room; that the water in which he had washed his hands was not tinged with blood; that he directed the vagina should be syringed out; that when sent for he showed no anxiety or alacrity to go, conduct not compatible with the idea that he had attempted criminally to produce abortion; and that the girl was miserably poor, and there was no evidence of her having given him any fee, or of any one having done so for her. The other points in his conduct show an indifference which was not likely to have been feigned by a Professional man having so much at stake, if he were guilty.

A witness, who saw him shortly after the girl's death, stated that Mr. Beaney told him "he had found the inside of the deceased and her womb quite rotten, and the stench very bad." The woman Cronan informed Mr. Beaney "that reports were in circulation in the neighbourhood that the woman had been delivered of a child and murdered, and that she wished him to come down and open her, and clear her house." He promised, but neglected to do so, and when applied to he gave a certificate "that she had died of malignant disease of the womb." When informed by the police that there was to be a post-mortem examination, he treated the matter with indifference, and did not attend it, although, had he wished it, he might have been present.

The first post-mortem examination was ordered by the Coroner, and was made forty hours after death by Messrs. Rudall and Pugh (the former a Fellow of the Royal College of Surgeons of England, and formerly Surgeon to an Arctic expedition which sailed in search of Sir John Franklin, the latter a Fellow of the Royal College of Surgeons of Edinburgh and a Doctor of Medicine of the University of Giessen). The following is a summary of the observations made by these gentlemen :—The body was fat and a good deal decomposed ; the organs of generation were very much swollen and dark-coloured ; the areola around the nipples was slight ; a milky fluid exuded from the breasts when they were cut ; some pieces of rag or lint soaked in a bloody fluid were taken from the vagina ; the womb was considerably enlarged, and presented a transverse rupture or laceration near its fundus, at the back part, between the Fallopian tubes. The edges of this laceration were ragged, but neither everted nor inverted ; the laceration was estimated at about four inches in length, but it was not measured. The entire length of the womb was in the same way estimated at about five or six inches, its breadth at about four inches, and the thickness of its wall at from one-quarter to one-third of an inch, except in the immediate vicinity of the rupture, but no measurements were taken. There was no blood in the peritoneal cavity, nor between the edges of the rupture, but there was extravasation of blood in the tissues of the womb at the place where the laceration had taken place, and there the walls of the uterus were thinner and softer than elsewhere. The vagina and os uteri were so distensible that Mr. Rudall said he thrust his hand into the vagina through its external opening, " and finding that it met with no resistance, I carried my hand in through the mouth of the womb until my fingers appeared through the rupture into the cavity of the belly." He said that in this proceeding he used no force whatever. The os uteri was about the size of a five-shilling piece. The inner surface of the womb was of a brownish-red colour, and presented a villous or shreddy appearance. " It very much resembled the deciduous membrane of pregnancy." The mucous membrane of the os uteri was perfectly healthy. Dr. Pugh stated that " the parts contiguous to the rupture, half or three-fourths of an inch on each side of it, were boggy—that is, soft—and contained a thickened deposit, and the membrane there seemed thinner, running off to a sharp edge. The fundus presented a spongy-like mass inside at the point where the rupture had taken place. This mass was ragged, and appeared to be a collection of vessels and muscular substance ; it appeared to be irregular. " Mr. Rudall placed a small portion of the muscular tissue of the womb under the microscope ; it was perfectly healthy. The internal surface of the womb was placed under water, and the small vessels and the membrane floated up and became visible." The membrane, which presented the appearance of a deciduous membrane, was wanting at the fundus of the womb. The broad ligaments, Fallopian tubes, and ovaries (the latter, however, were not examined for a corpus luteum) were said to be free both from injury and disease. The lining membrane of the vagina was very deeply coloured, and there was another laceration at its juncture with the womb. This rupture was transverse, and was estimated at about three inches long ; it led from the vagina into the cavity of the abdomen. The brain and heart were healthy ; there was a little bloody serum in the pleural cavities, and some mechanical congestion of the lungs. The other organs were reported as healthy, although the cross-examination of the operators and the second post-mortem examination proved that the scrutiny to which they had been subjected was of the very slightest kind. The womb, the urethra, the lower end of the rectum, and the vagina were removed from the body *en masse* for further examination. These parts were washed in water, and then placed in a jar with vapour of chloroform. All the other organs were replaced in the coffin. Mr. Rudall concluded from this examination that the girl had been pregnant until within a short period before her death, that she was in the fifth month of pregnancy, and that her death had been caused by rupture of the womb, and accelerated by loss of blood.

We now return to the organs which had been removed from the body. Decomposition seems to have advanced rapidly, for Mr. Rudall states that the uterus soon became much altered in appearance. Examined by the microscope, he could find in it no trace of malignant or any other disease. He placed it in diluted spirit in a closely stoppered vessel, and afterwards added strong rectified spirit. The urethra, rectum, and vagina were immersed in a solution of chromic acid.

Three days after the first post-mortem examination, Dr. Pugh examined the uterus especially for the purpose of determining the seat of attachment of the placenta. He frankly avowed that he could not find it. He said, " I examined the fundus for traces of the placental mark. I could not undertake to say one way or the other ; I cannot say that it was there. I should expect to find the placental mark when a person has been recently delivered ; it is usually found. I got the womb for the purpose of looking for it, and not finding any, it deprived us of a link in the chain. Decomposition might prevent the mark from being discovered—the organ was decomposed." The womb was subsequently sent to the University to be examined by Professor Halford. By this time, however, according to Dr. Pugh, it had considerably shrunk in size. He said, " The womb was six inches long when it was removed from the body, and when I saw it at the University it was only two inches. I am sure I have not exaggerated its length originally. I account for its diminution by the contraction of the longitudinal fibres. Its shrinking in this extraordinary way surprised me, and it does so still. It had contracted considerably on the Sunday (the day after the post-mortem), but it was twice as long then as when I saw it at the University." Professor Halford's evidence in the main confirmed that of Messrs. Rudall and Pugh. He proved that the uterus was undoubtedly very much enlarged, for it weighed five and a half ounces. Its alteration in size, he thought, was to some extent due to the action of the spirit in which it had been immersed. He injected the uterine arteries, and found them enlarged. When he received the organ, its tissues were much too soft from post-mortem change to bear handling. In his opinion, the distension of the mouth of the womb which he found, had taken place during life. He was strongly of opinion that the condition of the womb betokened pregnancy, but he acknowledged that its enlargement might be due to other causes.

Five weeks after the first post-mortem examination, on an application from the defence, the body was exhumed in the presence of a number of Medical men. The important points brought to light by the second examination were that in the first examination the condition of few or none of the organs remaining in the body had been carefully tested by section, etc., and that the ovaries were missing. Mr. Rudall, however, who was present, denied that they were carefully looked for.

These are the chief points of Medical importance in the case. The theory advanced by the Crown was that the girl had been pregnant, had induced Mr. Beaney to procure abortion, and that he had succeeded in the attempt, but in so doing had ruptured the womb, and produced death. The theory of the defence was that the girl had not been pregnant, but had suffered since her last confinement from that rare affection, sub-involution of the uterus—a condition in which the organ does not return to its normal size. It must, we think, be clear to our readers that the theory of the Crown was really unsupported by any legal evidence, whilst there were several circumstances which directly contravened it. The verdict of acquittal returned by the jury was the only reasonable or possible one, even on the evidence for the prosecution. In the first place, there was no convincing proof that the woman had been pregnant at all. There was no fœtus, no placenta, and even the amount of hæmorrhage was very inconsiderable. The attachment of the placenta was not to be discovered on the inner surface of the uterus, and the membrane lining the latter might have been of the kind so frequently met with in dysmenorrhœa. The discovery of a *corpus luteum*, although it would not have conclusively proved pregnancy, would have strongly confirmed the supposition, but the ovaries were not examined, and were carelessly thrown aside. Then, admitting for an instant the existence of pregnancy, there was not a tittle of proof that abortion had been feloniously produced. Abortion might have taken place from natural causes. The thinned and softened condition of the fundus uteri suggests a diseased state of the organ—*malgré* Mr. Rudall's microscopic examination—and spontaneous rupture might take place, in consequence of the contractions of a uterus previously diseased, as readily at the fifth as at the ninth month. Then, admitting even that abortion had been artificially produced, where were the facts that connected Mr. Beaney with the crime? The girl might have been practised on before he saw her, and his part in the affair might have been merely the removal of the placenta; and the rupture of the thinned and softened uterus might have been the result of pure misadventure, and neither produced by a felonious attempt, nor, in the fair sense of the word, by malpraxis. Then, again, there were several facts which were directly opposed to the theory of the prosecution. Some of these we have mentioned in the former part of this article, and we will not repeat them. But we would draw attention especially to the absence of blood in the peritoneal cavity, the cavity of the uterus, and to the small external loss. Again, at which visit of Mr. Beaney's could the mischief have been done? Such an injury would, we should have thought, have immediately been followed by collapse; but on the night previously to her death we find the woman frequently getting up to use the chamber vessel. The theory of the defence is not a very probable one. Subinvolution is very rare; pregnancy in the unmarried female is unfortunately too common. But, without endorsing either extreme, might not a theory of false conception, or a mass of so-called hydatids of the womb, afford a more probable solution? Lastly, we regret to add that the whole case adds little to the reputation of colonial medicine. Professor Halford's evidence was the only part of the Medical testimony which satisfies us. We have no doubt that, on finding the rupture of the uterus, Messrs. Rudall and Pugh felt that they had discovered the cause of death and need not go further; but their examination, although satisfactory to themselves, neither satisfied law nor science. The neglect to scrutinise the ovaries, and the mode of guessing instead of measuring adopted, were inexcusable in a case where the character and fortune, and perhaps the life, of a Medical Practitioner were at stake. These and other defects in the Medical evidence not only damaged the case for the prosecution, but we may be certain have by no means heightened the reputation of Medicine in the colony.

THE WEEK.

CHOLERA ON THE RIVER.

The epidemic appeared to have almost completely died away on and about the river up to the 28th of last month. Since that date, however, four cases have been admitted into the *Belleisle* Hospital ship, one of which has terminated fatally. The others were of a mild character, and there is good reason to hope that the disease is now gradually passing away. We are, nevertheless, glad to learn that the Committee of the Seamen's Hospital Society have wisely determined to continue the system of ship-to-ship visitation. This work has proved so eminently successful that it should, in the sanitary interest of our port, be regularly continued until the epidemic has absolutely and entirely ceased; and there is no doubt that the Society by whose Medical staff this duty has been performed, will receive a sufficiency of financial aid from those connected with the commercial marine of this country.

CAVALRY MEDICAL OFFICERS.

The following table of the relative pay of combatant and Medical officers in cavalry and foot regiments shows more clearly than could be otherwise expressed an injustice under which one portion of the Medical officers of the army—those serving in cavalry regiments—are suffering. All combatant officers of cavalry receive higher pay than the corresponding grade in infantry, whilst cavalry Medical officers receive no such extra pay, and yet they are obliged to buy and forage horses and support all other extra expenses peculiar to that branch of the service.

Combatant Officers.

	Cavalry.			Infantry.	
	£	s.	d.	s.	d.
Lieut.-Colonel .	1	3	0	17	0
Major . .	0	19	3	16	0
Captain . .	0	14	7	11	7

Corresponding Ranks of Medical Officers.

	Cavalry.			Infantry.		
	£	s.	d.	£	s.	d.
Surgeon-Major .	1	2	0	1	2	0
Surgeon . .	0	15	0	0	15	0
Assist.-Surgeon after 6 years .	0	11	6	0	11	6

The above are the daily rates of pay of combatant officers and Medical officers on appointment to the respective ranks.

After 25 years a Surgeon-Major receives 25s. per diem.
,, 15 ,, Surgeon ,, 18s. ,,
,, 10 ,, Assist.-Surgeon ,, 13s. ,,

The above applies to cavalry and infantry alike.

THE ACCIDENTAL POISONING IN RUTLANDSHIRE.

The deplorable accident at Wardley, in Rutlandshire, has been made the occasion for a most unwarranted attack on the general Practitioners of Medicine by the *Times* newspaper. The passage to which the whole Profession will indignantly take exception is the following:—

> "The great danger is the class to whom the mixing and manipulation of our drugs is confided. It is an old remark that in this country a person suffering from any imaginable complaint goes a hundred miles to see a Physician in high practice, pays him a handsome fee, and carries his prescription, written in the hieroglyphics of an obsolete language, to a shop where a boy selects the ingredients, weighs, mixes, and divides, and, in fact, gives the last stroke upon which everything depends. That is bad enough, but it is nothing to the hazards in the surgery or the shop of a general Practitioner. In these dens everything is sometimes left to mere lads, enjoying themselves excellent health and spirits, and sceptical as to the actual difference between one drug and any other, and, indeed, as to the real existence of disease altogether, except as a mental illusion. We take, or profess to take, great pains to secure the competency of the responsible man, but meanwhile the real work is done by persons utterly irresponsible."

It would be no part of our business to defend the employment of mere boys as the sole dispensers in the "den" of the Medical Practitioner, were the above statement a true one; but we believe it in the vast majority of instances to be utterly false. It is not common for the Medical men of this country to entrust the compounding of their medicines to uneducated careless lads. Competent assistants may be employed to superintend pupils in the surgery, in the absence of the Surgeon himself, but that the great mass of dispensing is confided to persons utterly irresponsible we confidently deny. This is just one of those instances on which we commented last week. An unfortunate accident, or some error on the part of a Medical man, is seized on by the anonymous writers of the daily press to brand with evil the whole Medical Profession. We can understand the necessity for "sensation leaders" at this dull time of year, but we at least expected common fairness from the leading journal.

With regard to the terrible accident which has given rise to these remarks, there is no doubt that the unfortunate lady, Mrs. Simkin, met her death from taking strychnia that had been carelessly substituted for bismuth in a mixture which she received from Mr. Spencer, a Surgeon, of Hallaton. The coroner's jury have recorded their verdict, that the deceased died from strychnine, administered by Mr. Spencer with gross neglect. From the published evidence, however, it does not appear whether Mr. Spencer or an assistant dispensed the mixture. It was clear that Mr. Spencer had perfect confidence in its correctness, as he very nearly lost his life through swallowing part of the medicine himself to prove its harmlessness. Mr. Spencer is committed for manslaughter, and we shall not offer any commentary on the case until the full evidence for the prosecution and defence be produced at the trial. It is as well to remind our readers, however, that Mr. Spencer's narrow escape from death is not the first warning Medical men have had never in self-defence to volunteer to take a medicine which is suspected to have produced poisonous effects; fully as conclusive evidence may be obtained by experiments on animals or by chemical analysis.

FROM ABROAD.—SEPARATION OF CHOLERA PATIENTS IN PARIS —AN ARSENIC-EATER.

During the epidemic of cholera of 1865, as well as that of the present year, the Administrators of the Paris Hospitals, on the advice of the Physicians of these establishments, assigned separate wards for cases of cholera, whether these were brought in from without or occurred within the walls of the institutions. Great difference of opinion prevailing as to the propriety of this measure, M. Latour has procured from the authorities the materials for making a comparison of the mortality of the epidemic of 1865 with that of the former outbreaks. The objections which have been urged to this segregation of patients are chiefly three in number:—1. The deportation of patients seized with cholera while in Hospitals to a separate ward cannot be effected without considerable derangement of plans, and it is attended with a very bad moral effect upon the patients. They believe themselves lost and condemned to death, and it is only with great repugnance and almost by force that they submit to the translation into the cholera wards. This is, however, but a sentimental objection which should not be yielded to at the expense of the far greater number of other patients. The repugnance and unfavourable impressions of the cholera patients, too, yield under the tranquil condition of the wards to which they are brought, and especially to the assiduous attentions of which they immediately become the objects. For, in fact, this concentration of cholera cases admits of rapid attention at the hands of selected, experienced, disciplined, courageous nurses. Such an adaptation would be impossible were the patients disseminated. 2. Placing cholera patients in the midst of a cholera medium is only to increase the dose of the poison and augment the mortality. Facts scarcely bear out this assertion. In 1832 there were 13,833 patients treated, with a mortality of 47 per cent.; in 1849, 12,395, with a mortality of 55 per cent.; in 1853-4, 6951, with a mortality of 53 per cent.; and in 1865, 3606, with a mortality of 51·25 per cent. As far as it has gone, the mortality of 1866 seems to be about the same as in 1865. Separation, which only came into operation in 1865, at all events has not been attended with an increase of mortality, as compared with the two preceding epidemics. 3. The separation of cholera patients does not give rise to any diminution in the number of cases arising within the walls of the Hospitals. The figures teach another conclusion; for, excluding 1832 when this particular was not noted, we find, in 1849, such cases amounted to 23·47 per cent., in 1853-4 to 29·05 per cent., and in 1865 to 17·40 per cent.—the same diminution still continuing to hold good in 1866. Still, no positive conclusions can as yet be arrived at in relation to this subject, as facts have been observed during the present epidemic which warn us against hasty inferences. For example, while at the Lariboisière, where separation is absolute, the patients being placed in an isolated pavilion, the number of cases arising within the walls of the Hospital exceeds 20 per cent.; at the St. Antoine, where separation is very imperfect, they only amount to 2 per cent.!

A recent number of the *Boston Journal* contains an interesting case of arsenic-eating, communicated by Dr. La Rue, Professor of Toxicology in Laval University, Quebec. The subject of it is an Englishman long resident in Canada, aged 47, of lymphatic temperament and good constitution, intelligent, and well educated. About 1854, believing himself to be the subject of consumption, and having heard that white arsenic was an excellent remedy, he purchased two ounces, and began taking it without much regard to quantity, consuming the whole parcel in six or eight weeks, taking it sometimes five or six times a day, at the rate of five or six grains per dose as far as can be ascertained by his subsequent description. He also mingled arsenic with the tobacco he smoked, inducing the garlic fumes. He has six children, who are all healthy, the eldest being 21 and the youngest 11. He has read all that has been written concerning the action of arsenic, and declares that the Doctors know nothing of the matter; and as to the constitutional symptoms said to result from its use, he has never experienced them in the slightest degree, even after six weeks' constant use of the arsenic. He refrains from drinking water for some time after eating arsenic, but willingly takes a glass of wine or beer. He has always taken the white arsenic, and never the solution. He never suffers from pain in the stomach or bowels, which are regular in their action.

This individual first came under Dr. La Rue's notice in 1864, and then again in the present year, and took in his presence on the first occasion a grain and a half, and on the second four grains of pure arsenious acid, smoking also another grain with his tobacco. He remained under observation for several hours, and not the slightest inconvenience resulted.

CHOLERA LITERATURE.

The printed Reports of the International Sanitary Conference relative to the origin, endemic character, transmissibility, and propagation of cholera, upon the hygienic measures necessary for preservation from that disease, and lastly upon the measures necessary to be taken in the East in order to prevent renewed invasion of cholera into Europe, are in our hands, and we propose in this and the following number to present our readers with a general summary of their contents.

The following are the conclusions arrived at by the Commission:—

1. As regards the origin and genesis of cholera, and the endemicity and epidemicity of the disease in India.

Asiatic cholera, which on several occasions has traversed the world, has its origin in India, where it took its birth, and where it exists permanently and endemically.

The Commission consider that it is demonstrated that Asiatic cholera in its invasions is never developed spontaneously, and has never been observed as an endemic disease in any of the countries which they enumerate (Europe, etc.), but that it has always entered them from without. As to the countries bordering upon India, while admitting the probability that cholera does not exist in them endemically, the Commission does not consider itself authorised to come to a formal conclusion in this respect.

With regard to the question whether there is any reason to apprehend the acclimatisation of cholera in European countries, the reply of the Commission is that such event is doubtful, although they do not reject its possibility.

The Commission considered that the question of cholera in the Hedjaz demanded a special study on account of the frequent reappearance of the disease there in an epidemic form since 1831. The conclusion arrived at is that cholera does not appear to have an original focus in the Hedjaz, but that up to the present time it appears always to have been imported from without.

That there are in India certain localities, chiefly in the valley of the Ganges, where cholera is endemic; still, that it is not possible strictly to determine all of them, nor yet to affirm that they have the exclusive privilege of giving birth to the disease.

That we have no knowledge of the special conditions under the influence of which cholera originates in India, and prevails there endemically.

Judging by analogy, the Commission think it probable that in India, as everywhere else beyond the endemic foci, importation is the necessary condition of the development of cholera epidemically. They think, too, that they have authority for believing that pilgrimages are in India the most powerful of all the causes which concur in developing and propagating epidemics of cholera.

2. As regards the transmissibility and propagation of cholera.

The transmissibility of cholera is proved—

i. By the march of the epidemic considered generally.—All the facts at their disposal prove convincingly that cholera is propagated by man, and with a rapidity which is greater the more active and expeditious his migrations.

ii. By facts establishing the propagation of cholera by importation.—The Commission, after enumerating some of the better-known facts of this class, proceed to illustrate the same truths from those which they have elicited respecting the importation of the disease into Constantinople, Borchi, Altenburg, and Thoydon Bois, near Epping, during the recent epidemic.

iii. By the evolution of epidemics of cholera in affected localities.—Observation has demonstrated that the more dense the population of the country or locality where cholera appears, the more multiplied its relations and the more rapid its means of communication, the more rapid also are the diffusion and extension of the disease. When cholera breaks out, it does not appear simultaneously in several localities within the same territorial boundary, but it appears in one only of such localities; and the same is the case with large towns, where it does not break out at several points at once, but generally by a series of cases in one particular quarter, sometimes in one particular house, before showing itself in other parts of the town.

iv. By the efficacy of certain preventive measures, such as rigorous segregation, and especially by the interruption of maritime communication with infected places. The general conclusion arrived at is that the transmissibility of Asiatic cholera is an incontestable truth proved by facts which admit of no other interpretation. Moreover, it is a law, up to the present time without exception, that cholera has never marched more rapidly than man in his migrations; that it has radiated to, and declared itself only in, those places where there have been communications with infected places, and in no others. The Commissioners are acquainted up to the present time with no fact to prove that cholera can be propagated to a distance by the atmosphere alone, whatever its condition may be.

3. How does importation operate, and what are the agents in the transmission of cholera?

For the breaking out and propagation of cholera in a locality two conditions are necessary—viz., the arrival of something issuing from an infected place, and circumstances favouring the propagation of the disease. What may be called a choleraic issue (*une provenance cholérique*) is a complex thing; it comprehends the man and all that directly proceeds from him; then his apparel, his goods, and his merchandise, animals, and the ship which carries him—in short, all that may accompany the man.

Man suffering from cholera is himself the chief agent of the propagation of the disease, and one solitary choleraic individual may give rise to the development of an epidemic.

Certain facts tend to prove that one single individual (*a fortiori* several individuals) coming from an infected place and merely suffering from diarrhœa may suffice to occasion the development of a cholera epidemic; or, in other words, that what is termed the premonitory diarrhœa may transmit cholera.

In almost all the cases where the period of incubation—that is to say, the time elapsing between the moment when an individual has contracted choleraic poisoning and the commencement of the diarrhœa premonitory of the confirmed cholera—has been established, it has not extended beyond a few days; all the facts cited in support of a longer period of incubation relate to cases where the contamination might have occurred after leaving the infected place.

There is no fact known which establishes the importation of cholera by living animals, but it is nevertheless reasonable to regard them, in certain cases, as suspicious. Cholera may be transmitted by articles in common use proceeding from an infected place, and especially by such as have been used by choleraic subjects, and it even follows from certain facts that the disease may be carried to a distance by these same articles shut up from free contact with the air.

The Commission, moreover, consider that it will be wise to regard suspiciously everything proceeding from a choleraic focus, although they can cite no instance of the transmission of cholera by means of merchandise imported from a country where the malady prevailed.

As respects the dead bodies of choleraic subjects, they say that although it is not proved conclusively that they are capable of transmitting cholera, yet it is prudent to consider them as dangerous.

4. As regards the influence of the means of communication.

Maritime communications are from their nature the most dangerous. They are those which propagate cholera at a distance with the greatest certainty; next to these come railway communications, which in a very short space of time may carry the disease to a great distance.

Great deserts are most effectual barriers to the propagation of cholera, and there is no instance of the malady having been imported into Egypt or Syria across the desert by the caravans from Mecca.

5. As regards the influence of aggregations of individuals.

Every aggregation of men into which cholera is introduced constitutes a favourable condition for the rapid extension of the disease; and, if this aggregation takes place under bad hygienic circumstances, for the violence of the epidemic amongst them.

Again, the rapidity of the extension is proportionate to the concentration of the aggregated mass, whilst the violence of the epidemic is, other things being equal, the more pronounced as the individuals composing the mass have been the less under the influence of cholera previously—in other words, the individuals who have already been subjected to the influence of a choleraic focus enjoy a kind of relative and temporary immunity which counterbalances the untoward effects of the aggregation. Lastly, the more rapid the extension of the disease in the aggregated mass, the more prompt is its cessation—that is to say, if no new arrivals of healthy persons take place to supply new food for it, and thus keep it up.

The intensity of epidemics of cholera on board ships crowded with men is in general proportionate to the crowding, and is so much the more violent, other things being equal, when these men have not been previously sojourning in a cholera focus; in crowded ships the march of cholera epidemics is mostly rapid. The Commission add that the danger of importation by ships and that of giving rise to a severe epidemic are not wholly dependent upon the intensity, nor even upon the existence, of choleraic seizures on board during the passage.

The aggregation in a lazaretto of individuals proceeding from a place where cholera prevails, does not result in producing among those under quarantine a great extension of the disease; but yet such an aggregation is none the less very dangerous for the neighbourhood, inasmuch as it favours the propagation of the cholera.

Great aggregations of men (armies, fairs, pilgrimages) are one of the most certain means of propagating cholera, and constitute grand epidemic foci, which, whether they march like an army, or are scattered, as happens with fairs and pilgrimages, carry the disease into the countries which they traverse; and these aggregations, after having undergone, and generally rapidly, the influence of cholera, become much less susceptible of it, the disease even disappearing very quickly, at least when new arrivals do not occur to keep it up.

The scattering of an aggregated mass of people, if adopted in time, may lessen the violence of an epidemic of cholera amongst them, and even arrest its extension, but, on the other hand, there would be great danger of propagating the disease in this way, if the scattering were effected in the midst of a locality at the time free from the disease.

The part which the Mecca pilgrimage has played as an agent propagating cholera, so far as the countries bordering upon Europe are concerned, is this—that twice, at an interval of thirty-four years (viz., in 1831 and in 1865), it has imported the disease into Egypt during the hot season of the year.

6. As regards the influence of hygienic conditions.

The following are the hygienic conditions which the Commission recognise as generally predisposing a population to contract cholera, and as favouring the intensity of epidemics of the disease—misery, and all its consequences; crowding together of individuals; a general condition of ill-health; hot seasons of the year; a deficiency of fresh air, and exhalations from a porous soil impregnated with organic matter, especially with the matter of cholera dejections. Besides, inasmuch as experience appears to have shown that the dejections of cholera subjects contain the generating principle of the disease, the Commission think that it is a legitimate conclusion that the privies and contaminated waters of a town may become agents of its propagation. They add that it seems to follow from certain facts that the soil of a locality once impregnated with choleraic matter has preserved for a considerable time the capability of disengaging the morbid principle of cholera, and thus of keeping up an epidemic or even of regenerating the disease after it has become extinct.

7. As regards immunity from cholera.

The immunity which certain localities enjoy—that is to say, the resistance, permanent or temporary, general or partial, which they oppose to the development of cholera—is a fact which only goes to show that certain local conditions not yet fully determined constitute an obstacle to the development of the disease.

In the same way, the immunity, more or less complete and more or less lasting, which the greater number of the people enjoy, even while living in the midst of a cholera focus—an immunity which attests individual resistance to the toxic principle—is a circumstance which it is very necessary to keep in mind. Viewed in its relation to the development of the epidemic, it is the corrective of transmissibility; and viewed in its relation to prophylaxis, it points the way to the appropriate means of restraining the ravages of the disease.

8. Deductions as to the nature and attributes of the generating principle of cholera.

In the present state of science, all that can be done is to put forward hypotheses upon this subject. We only know that it takes its origin in certain parts of India, where it is in permanent existence; that the principle is regenerated within the human system, and accompanies man in his wanderings; that it may thus be propagated to a distance, and from one country to another, by successive regeneration; and that, apart from man, it is never reproduced spontaneously.

The atmosphere is the chief vehicle for conveying the generating principle of cholera, but in the great majority of cases the transmission of it by the air is limited to a very short distance from the focus of emission. The facts which are cited in support of atmospheric transmission to a distance of one or more miles are not conclusive. Water and certain *ingesta* may also serve as vehicles for the introduction of the generating principle into the organism.

It appears to make its way into the organism chiefly through the respiratory passages, and very probably also through the digestive canal. There is nothing to lead us to believe that it may be received through the skin.

Choleraic dejections are incontestably the principal receptacle of the morbific agent, and hence it follows that everything contaminated by them may also become a receptacle from whence the generating principle of cholera may be disengaged under favourable conditions; and it follows, further, that the seat of the genesis of the germ of cholera is the digestive passages, to the exclusion, perhaps, of every other part of the organism.

The study of the facts before them leads the Commission to conclude that the generating principle of cholera rapidly loses its activity, as a rule, when freely exposed to the air; but that, when excluded from such free exposure, it may, under certain conditions, preserve its activity for an indefinite period.

Lastly, the Commission have adopted the following conclusion, viz.:—

That observation shows that the duration of choleraic premonitory diarrhœa (which must not be confounded with all the diarrhœas which exist in choleraic seasons) does not last beyond a few days.

The exceptional cases on record only prove that cases of diarrhœa of more prolonged duration are related to cholera, and are capable of transmitting the disease when the affected individual has been kept away from every source of contamination. This last conclusion, however, was not unanimous.

MEDICAL REPORT
OF THE
NATIONAL ASSOCIATION FOR THE PROMOTION OF SOCIAL SCIENCE.
TENTH ANNUAL MEETING HELD AT MANCHESTER.

(*From a Special Correspondent.*)

MANCHESTER, Wednesday, October 3.

THE National Association for the Promotion of Social Science holds its annual meeting for the first time in this city. There is now no town or city in the kingdom which offers so many advantages for the business of a Congress. The new Hall of Assize, or, to speak more correctly, the Assize Court, situated near the Victoria Station, and on the right side of Great Ducie-street, affords conveniences of the most perfect kind for, we had nearly said, any number of sections under one roof, together with a reception-room, reading and writing hall, luncheon rooms, and all else that could be asked for. The local committee has been unremitting in its exertions. The visitors are flocking in fast, and, so far as appearances go, this promises to be the best and the most successful meeting of the nine that have preceded it. The proceedings open to-night with an address by the new President, the Earl of Shaftesbury, in the Free Trade Hall, and to-morrow the separate sections will open in full force. The business this year will be conducted under five departments. The first department, and perhaps the strongest, is for JURISPRUDENCE AND THE AMENDMENT OF THE LAW. This is subdivided into three sections—(a) International Law; (b) Municipal Law; (c) Repression of Crime. The second department is for EDUCATION, the third for HEALTH, and the fourth for ECONOMY AND TRADE, this latter being also subdivided into two sections, marked (A) and (B), but not honoured with a special title.

The first department is presided over by the Hon. George Denman, M.P.; the second by the Right Hon. H. A. Bruce, M.P.; the third by William Farr, M.D., F.R.S.; and the fourth by Sir James Kay Shuttleworth, once, if we recollect rightly, one of our body, Dr. Kay.

In the Health Department, which most concerns us, the following three subjects are proposed for discussion:—

1. How far are smoke and the products of combustion arising from various manufacturing processes injurious to health? What measures ought to be taken to prevent the contamination of the atmosphere from such causes?

2. How can the pollution of rivers, by the refuse and sewage of towns, be best prevented?

3. What legislative or other measures should be employed more effectually to prevent the adulteration of food?

There are also papers to be read on various subjects by Drs. Stewart, Bain, Richardson, Edmunds, Hardwicke, and others, and on Monday Dr. Farr, as President of the Department, delivers an address.

GENERAL CORRESPONDENCE.

DESQUAMATION OF EPITHELIUM IN CHOLERA.

Letter from Dr. Lionel Beale.

[To the Editor of the Medical Times and Gazette.]

Sir,—I had hoped that Dr. Gairdner would have replied to my request, and stated how he performed the "artificial maceration," by which he produced an appearance in a healthy intestine similar to that observed in cholera, and how he identified the epithelium from each particular part of the intestine. But he simply states what he has stated before—"The intestines after death in cholera always contain masses of coherent and perfect epithelium, bearing the anatomical impress of the section of the intestine in which they are found; but the stools contain no such masses, and only rarely any perfect epithelium at all"—*ergo, the epithelium "must have become separated after death, and not during life.*" Dr. Gairdner can see no other conclusion! Perhaps he will be so kind as to state briefly why the epithelium might not have been detached *before* death occurred, and remained in the intestine till the time when the post-mortem examination was made. I can assure Dr. Gairdner that I am as anxious to "determine exactly what is true in cholera" as he is, and I am working hard for that purpose. I have no desire "to rush into analogies" or introduce subtleties in argument, and I cannot help expressing regret that anything I may have said should have led him to threaten to pass by without notice objections to his theory which he condemns as trivial, but immediately afterwards admits to be utterly incomprehensible to him.

I am, &c.

Grosvenor-street, October 2. Lionel S. Beale.

THE ARMY MEDICAL DEPARTMENT.

[To the Editor of the Medical Times and Gazette.]

Sir,—Will you permit me to bring under your notice the following letter, which appeared in the *Army and Navy Gazette* of Saturday, the 29th of September, and which will serve to indicate the way in which matters are managed among her Majesty's forces? There can be no harm in stating at once that the person referred to is the Dr. Wills who figured in the trial of Dr. Hunter, to whom he was at the time assistant. Very remarkably, this gentleman has managed, by some means or other, to secure reappointment in the army, his name appearing in the official list for this month as "Caleb Sherar Wills," his appointment dating from August 7, 1866, the day of the last examination. It will thus be seen that his experience with Dr. Hunter has been considered quite enough at head-quarters to entitle him to a direct commission without the trouble of going through the Netley course, while, to avoid any awkward comments, he has in the meantime been sent to the Bahamas. Would it not be a good thing had we all friends among those who are at the head of affairs?

I am, &c. Prov. Prof.

"Something to be Inquired into.

"To the Editor of the Army and Navy Gazette.

"Sir,—I heard some of the Medical officers of my corps discussing something the other day which appeared to be the cause of much irritation to them, and I must say that they carry my sympathies with them. Some years ago a Medical officer retired from the service, and became connected professionally with a 'Doctor' whose letters had a run in almost all the daily journals. His name appeared, moreover, as a witness on the occasion of a criminal trial, and there were other circumstances plainly pointing to the same fact—viz., a Professional connexion between the Doctor advertising his cures and the retired Army Medical Officer. This month's Army List, they say, contains the name of the latter; he must, therefore, have returned to the service. Now, my Medical friends represent that their standard of Professional etiquette and honour would unquestionably have prevented them in civil life from holding any professional communication with the individual in question; and they cannot believe that her Majesty's uniform ought to upset the established rules for guarding the *morale* of the profession to which they belong.—I am, Sir, &c. "A Combatant Officer."

*** All our Medical military correspondents assure us that "Caleb Sherar Wills," formerly of the 83rd Regiment, then with Dr. Hunter, is now again in the army, and has been sent to the Bahamas. Their comments on the fact and on the conduct of the "authorities" are marvellously unanimous.

A CASE OF DEATH FROM THE INHALATION OF CHLOROFORM AND ETHER.

Letter from Mr. E. Ludlow.

[To the Editor of the Medical Times and Gazette.]

Sir,—Before I proceed to detail the circumstances of this unfortunate calamity, I will describe the mixture of chloroform and ether which I administered. This mixture, consisting of one part of chloroform to two parts of rectified ether, I have now administered to a considerable number of patients. It has seemed to me that, in order to produce anæsthesia, scarcely a larger quantity of this mixture than of pure chloroform is required; but I must state that I have met with a few persons upon whom this mixture did not seem capable of exerting any effect. The definite advantages of the mixture over chloroform I believe to be the following:—The administration of this mixture is not attended with so much struggling as sometimes accompanies the administration of chloroform. The mixture very rarely gives rise to vomiting during its administration, and still more rarely does any vomiting occur after its administration.

M. S., aged 40, was admitted into Bristol Royal Infirmary shortly before 11 a.m. on July 15, 1866. She had got a deep punctured wound on the outer side of the right forearm close to the bend of the elbow. Bleeding was profuse. It was plain that the radial artery was wounded. She had got the wound by accidentally dashing her hand and arm through a pane of glass. I was told that she lost a very large quantity of blood before she arrived at this Infirmary. Immediately upon her arrival a tourniquet was placed upon the brachial artery, and a compress and bandage was applied to the wound. This, for the time, stopped the hæmorrhage. But it was obviously necessary that the radial artery should be exposed at the seat of injury, and that a ligature should be placed both above and also below the wound in that vessel. I listened to the heart, but I could hear no morbid sound. The pulse was not very rapid; it was of moderate volume, and easily compressible. I then safely administered one drachm of the mixture (of chloroform and ether) on a cup sponge. The first drachm being exhausted, I administered a second drachm. At length this also became exhausted, and I held out my sponge in order that a third drachm might be poured upon it. At this time the woman was insensible, but she was still struggling lazily, and her pulse was of the same character as at the commencement of the administration. During the short moment that I was waiting for the third drachm to be poured upon the sponge, I noticed that the pulse suddenly stopped beating. The respiration also ceased almost immediately; and after this the woman gave no indication of life. I made use of the galvanic battery; I gave enemata of brandy; and I kept up artificial respiration. I continued my endeavours for more than an hour without producing any other sign of life than one or two slight twitches of the abdominal muscles at the commencement of the application of the galvanic current. I desisted from any further attempts because respiration had been suspended for a very considerable time; not the slightest movement of the heart could be detected; and the corneæ had become glazed.

Post-mortem Examination about Seven Hours after Death.—Rigor mortis slight. Brain: Very anæmic but firm; each lateral ventricle contained about two drachms of fluid; there was also a considerable quantity of fluid in the vertebral canal; no other abnormal appearance was observed within the skull. Lungs: In both there was extensive bronchitic inflammation, a considerable quantity of mucus adhering to the bronchial mucous membrane; a slight amount of emphysema in both lungs. Heart: Pericardium contained about a drachm of liquid; heart itself rather small, and the fat surrounding somewhat abundant; right auricle and ventricle quite flaccid, and containing a very small quantity of fluid blood; tricuspid and pulmonary valves quite normal; left auricle flaccid, and containing a small quantity of liquid blood; left ventricle contracted; mitral and aortic valves normal. Under the microscope it was seen that in the muscular structure of the heart fatty degeneration was present to a considerable extent. Dr. Beddoe, of Clifton, as well as myself, inspected the muscular tissue under the microscope, and he agreed with me that fatty degeneration was present. Stomach: A large portion of mucous membrane on the greater curve was inflamed, corrugated, thickened, and covered with viscid mucus; the stomach contained about five ounces of partially digested food. Intestines apparently healthy. Liver slightly enlarged, fatty, and so very soft that very slight pressure sufficed to drive the finger through the hepatic structure. Spleen tolerably healthy. Kidneys soft; capsules on peeling carried with them minute portions of the cortical structure; cortical substance pale and apparently fatty. Bladder contained a very small amount of urine. Uterus somewhat large, but otherwise healthy. A recent clot was found in the right ovary. Throughout the examination a very small quantity of blood was poured out on division of large vessels, and not a single clot was seen. The right radial artery was found to be wounded close to its origin from the brachial artery. On the one hand there was no condition of disease sufficient to endanger life, and, on the other hand, no organ was thoroughly sound. I believe that death was caused by paralysis of a fatty heart which, on account of the hæmorrhage, was insufficiently supplied with blood. I am, etc.,

E. Ludlow, M.B. Lond., F.R.C.S.,
Assistant House-Surgeon to Bristol Royal Infirmary.

POISONING BY TARTAR EMETIC.

Letter from Mr. John Gabb.

[To the Editor of the Medical Times and Gazette.

Sir,—The following case of accidental poisoning by tartar emetic may perhaps be interesting, fortunately not being one of common occurrence.

At about 4 o'clock p.m., August 2, 1866, C. M., aged 43, a gentleman's coachman, took accidentally about three teaspoonfuls of tartar emetic, supposing it to be lemon kali, as sold by chemists for making effervescent draughts.

I need not enter into particulars of the accidental way in which the poison was taken—enough to mention, he discovered his mistake immediately, and said to a groom who was standing by, "I have taken poison; what shall I do?" The groom advised him to take some salt-and-water, but this could not be had without going a short distance up to the house. A bottle of vinegar stood at hand, and of this he drank a draught, and the groom says a mouthful of this came back, but no sickness followed. After this the coachman walked a mile, as nearly as can be, and called at my house. I was not at home, so he went on to a neighbouring Practitioner and consulted him; but appeared so well, so free from any symptom of having taken tartar emetic, even in a moderate dose, that, he having walked a mile, it was believed he had made a mistake, and was more frightened than anything else, and directed to take a glass of hot brandy-and-water—the best advice, and most likely to rouse the stomach to the act of vomiting. However, before he reached an inn, pretty close at hand, to get the hot brandy-and-water, he became sick, and vomited in the street. He went on and got the hot brandy-and-water, which he said made him so sick and purged "that he felt all his strength go from him." The landlord of the inn, seeing the muscles in the neck quivering, thought him very ill, and sent him home in a fly or cab. About 8 o'clock p.m., or four hours after his taking the poison, I was sent for, and on arriving at his house found him in bed, with a lethargic expression of countenance, the eyes being somewhat fixed, with the conjunctivæ slightly congested, the general surface of the body being cold and clammy, with a bluish-pale appearance; voice weak; intellect clear; speech slow and deliberate. He had vomited and been purged very freely, the last evacuation from the bowels being merely a frothy mucus. Pulse full, soft, and steady, 70; no pain in the throat; no burning at the pit of the stomach, his only suffering being from violent cramps in the legs, so far as pain was experienced.

He was directed to drink freely of warm water, which was at hand, so as to still more completely wash away the poison from the mucous membrane of the stomach and bowels, and then to take five grains of tannin and repeat it every hour, with a composing draught at bedtime of liq. opii sed., warmth to the surface, brandy and water, milk, etc.

August 3, morning.—He passed a comfortable night, slept pretty well; vomiting and purging had ceased, and he felt better; the cramps not complained of, and the case appeared promising. Evening.—He said he felt much better, but the pulse had become small and quick (130); tongue shrunken, brownish, with red edges; surface of the body cold, and countenance depressed; tenderness over the region of the liver, and cramps again complained of in the legs, but he was neither sick nor purged. He was ordered to take milk, broth, beef-tea, and brandy.

4th, 4 o'clock a.m.—My assistant found him pulseless, collapsed as from cholera, but not so blue. Brandy freely administered restored the pulse at the wrist, and the surface of the body for a time became warm, and he seemed much better, but he became restless, and would sit up in bed, in spite of remonstrance, and very soon fainted. He was roused from the syncope, and rallied for a short time. At about 9 a.m. he began to sink again, and at 10 a.m. he died, retaining his consciousness till nearly the last moment.

I regret that more detailed notes were not taken at the time, but in treating cases of emergency, note-taking is seldom thought of till afterwards. At least two drachms of tartar emetic must have been taken, perhaps considerably more—a quantity which, if not immediately rejected, one would expect to be certainly fatal. Did the vinegar delay the vomiting, and cause more of the poison to be absorbed?

The cramps in the legs, etc., I imagine, did not arise from any direct irritation of the nerves, but from exhaustion, as general convulsions arise from loss of blood. May not the cramps in cholera arise from exhaustion also?

A post-mortem examination would have been interesting, but none was made. I am, etc.,

Bewdley, September 3. John Gabb.

MEDICAL NEWS.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to practise on Thursday, September 27, 1866:—

Thomas Davidson, Forres, Morayshire, N.B.; Francis Mears Beckett, Hitchin, Herts; Benjamin Baker, Framlingham, Suffolk.

The following gentlemen also on the same day passed their First Examination:—

Frederic Rainbow, St. Thomas's Hospital; James Howard, Manchester School of Medicine; George Arthur Woods, Liverpool Royal Infirmary.

At the Preliminary Examination in Arts, held at Apothecaries' Hall, on September 28 and 29, 1866, 110 candidates presented themselves, of whom 31 were rejected, and the following 79 passed (Mr. Walter Cornelius and Mr. H. Courtenay Fox receiving Certificates of Special Proficiency):—

Messrs. Thomas Allen, W. M. Atkinson, Edwin Barnes, J. R. Benbow, Arthur Bentley, J. E. Birch, A. M. Branfoot, F. G. M. Brittin, James Bunting, Charles Butler J. F. Carolan, Stafford T. Cass, Louis Colbourne, G. Martin Cole, S. F Conolly, E. Harvey Cooke, Walter Cornelius, E. R. Cowcher, W. E. Crowther, R. S. Davenhill, G. G. Day, C. W. S. Deakin, S. L. Dobbie, Wilson Eager, A. J. England, J. H. Ewart, Edward Flint, H. Courtenay Fox, J. A. Freeman, Arthur Graham, Richard Farleigh Grant, George James Gray, Collett Harbord, Andrew Harris, William Henry Harris, Richard Harrison, A. F. Holden, A. C. Hooner, James James, W. Pearce Jago, John Jolliffe, Joseph Kindon, T. Warner Lacey, F. G. Larkin, Frederick J. Laws, John Leyland, Wallis McDonald, A. Mahomed, E. A. Marsh, Josh. Maudsley, Henry Meadows, Michael Miller, Andrew Nance, C. H. Newby, H. Carden Noad, F. R. Nurthen, S. Holgate Owen, H. D. Palmer, W. Paulson, C. J W. Pinching, G. E. Power, E. J. Ramsay, James Reed, W. Roberts, R. Pryme Robey, Edmund Robinson, Charles Russell, William Russell, C. P. Skrimshire, Nathan Smedley, G. T. Stuckwell, G. R. Tooze, Benjamin Tubb, W. A. E. Waller, B. S. White, T. W. T. Williams, J. R. Williamson, A. Winterbottom, Edwin B. Wood.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Broughton, H. T., M.R.C.S.E., has been appointed Resident Medical Officer to the Infirmary and Dispensary, Bradford, Yorkshire.

Evans, O., M.R.C.S.E., has been appointed House-Surgeon to the Royal Berkshire Hospital, Reading.

Mercer, N. G., M.D., has been appointed a Junior Medical Officer of the Lancaster County Lunatic Asylum.

BIRTHS.

Ashby.—On September 30, at Lutterworth, the wife of J. F. Ashby, M.R.C.S E., of a daughter.

Berryman.—On September 8, at 72, Charlotte-street, St. John's, New Brunswick, the wife of John Berryman, M.D., of a daughter.

Blake.—On September 28, at Pevensey, the wife of E. H. Blake, M.D., of a daughter.

Brand.—On September 30, at Thicket-road, Penge, the wife of S. C. Brand, M.R.C.S.E., of a son.

Edmonds.—On September 26, at 27, St. Augustine's-road, Camden town, the wife of H. Edmonds, M.D., Staff-Surgeon R.N., of a daughter.

Edmunds.—On September 26, at 4, Fitzroy-square, the wife of James Edmunds, M.D., of a son.

Fitzgerald.—On September 26, at Folkestone, the wife of E. C. Fitzgerald, M.D., of a son.

Hammond.—On September 28, at Ipswich, the wife of C. W. Hammond, M.D., of a son.

Howell.—On September 24, at Blackmeadows, Llantillio, Cressenny, Abergavenny, the wife of J. M. Howell, M.R.C.S.E., of a son.

Martin.—On September 27, at Victoria House, Weston-super-Mare, the wife of E. Martin, M.R.C.S E., of a son.

Moseley.—On October 1, at 11, Upper Wesbourne-terrace, Hyde-park, the wife of B. E. Moseley, of a son.

MARRIAGES.

Goodwin—Smith.—On October 1, at St. George's Church, Llandudno, R. D. Goodwin, of Ashbourne, Derbyshire, Staff Surgeon 2nd Administrative Battalion D.R.V., to Elizabeth, second daughter of the late Rev. B. Smith, of Drax, Yorkshire.

Johnson—Sandilands.—On October 3, at St. George's, Hanover-square, E. Johnson, L.R.C.P. and L.R.C.S. Edin., to Anne Letitia, second daughter of Mrs. Sandilands, of 56, Belsize-park, Hampstead.

Maxwell—Hodgson.—On September 27, at St. George's Church, Worcester, C. R. Maxwell, M.D., of Springfield Lodge, Britannia-square, to Jane, eldest daughter of the late Joseph Hodgson, Esq., of Spital-square, London.

Orphoot—Henderson.—On September 27, at St. Paul's, Newton Abbott, P. Orphoot, M.D., of Edinburgh, to Mary Juliana, youngest daughter of the late Rear-Admiral T. Henderson, of Bellevue, Dawlish.

Ryley—Gwennap.—On September 27, at the parish church of Alveley, J. B. Ryley, M.R.C.S.E., to Sarah Louisa, only child of the late T. Gwennap, Esq., of London.

Shuttleworth—Smith.—On September 27, at St. Stephen's Church, Bayswater, R. Shuttleworth, M.R.C.S E., of Kensal-green, to Louisa Birtha Moyle, youngest daughter of the late J. W. Smith, Esq., Surgeon, of Finsbury-square.

DEATHS.

Anderson, T. A., M.D., at Springtown-cottages, Londonderry, on September 19.

Atkinson, A. R., M.D. (late of Her Majesty's Bengal Medical Service), at 2, South View, Hounslow, aged 43.

Forge, F. P., M.R.C.S.E., of Hemingborough, Yorkshire, on September 15, aged 45.

Harrison, T. D. (late of the Bengal Medical Service), at Cheltenham, on September 25.

Morley, Thomas, L.R.C.P. Edin., of Oldham, on September 20.

Petch, E., L.S.A., of Alma-square, Scarborough, on September 16, aged 65.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Depwade Union.—Mr. C. A. Mills has resigned the Fourth District; area 8584; population 2635; salary £40 per annum.

Holbeach Union.—Mr. H. G. Sturkey has resigned the Gedney Hill District; area 13,513; population 2994; salary £35 per annum.

Maldon Union.—Mr. Ringrose has resigned the Bradwell District; area 13,163; population 2616; salary £65 per annum.

APPOINTMENTS.

Bakewell Union.—Philip S. Fentern, M.D. Edin., M.R.C.S. Eng., to the Hartington Middle-Quarter District.

Bolton Union.—Frederic B. Mallett, M.D. Edin., L.R.C.S. Edin., L.S.A., to the Eastern Bolton District.

Dolgelley Union.—John Foulkes Jones, L.F.P. and S. Glas., L.R.C.P. Edin., L.S.A., to the Llanegryn District. Richard Griffiths, M.R.C.S.E., L.M., to the Mallwyd District. John P. Birch, M.R.C.S.E., to the Talyllyn District.

East Ward Union.—James F. Henderson, M.D. and M.C. Aberdeen, to the Workhouse and the Kirkby Stephen District. John W. Edger, M.D. Edin., L.S.A., to the Ravenstonedale District.

St. Ives Union.—Henry Brickwell, M.R.C.S., L.S.A., to the Somersham District.

The Hunterian Society.—In consequence of the extension of the Metropolitan Railway, the Hunterian Society has been obliged to vacate the premises in Blomfield-street, where it has been established for thirty-four years. The great demand for accommodation for business purposes in the locality would probably have prevented the Society from procuring a fresh home, had not the proprietors of the London Institution by a liberal arrangement met its requirements, and afforded convenience for the library and the meetings of the Society. Both interests will in all probability benefit by their association, and the handsome and commodious building in Finsbury-circus will be worthily employed in aiding the cultivation of Medical science.

The Water Supply of the East-end of London.—We are glad to see that the authorities of Bethnal-green and Whitechapel are bestirring themselves for the purpose of obtaining from the East London Company a purer and better supply of water. A public meeting was held on Thursday, September 27, at Bethnal-green; the chair was taken by the rector of the parish, the Rev. S. Hansard. Resolutions were proposed and seconded by Drs. Burgess, Sarvis, Liddle, and Mr. Gladding. An East London Water Supply Association was inaugurated, which is to act in concert with the Metropolitan Association, whose object is to compel water companies to furnish a constant instead of intermitting supply of water, and to provide an improved system of filtration.

Paris Faculty of Medicine.—This body is likely soon, it is said, to undergo considerable change in its *personnel*, and not before this is required, if it be true, as stated, that no less than seven Professors are incapacitated by age or illness, not to mention M. Trousseau's imminent resignation. The chair of Clinical Surgery, lately filled by M. Jobert, now hopelessly insane, is, it is said, to be immediately filled up.

Provincial Hospitals.—The funds of the Huntingdon Infirmary, or Hospital, have just been augmented by a legacy of £200, under the will of Mr. William Worthington, of Stilton, and those of the Earlswood Asylum for Idiots by a legacy of £500 from Mr. Richard Saunders, who has also bequeathed £100 to the Surrey Dispensary, Dover-road. Both these gentlemen have also left legacies to other institutions not strictly Medical.

The Bradford Infirmary and Dr. Outhwaite.—The Outhwaite Convalescent Fund.—On Tuesday last week a meeting of the subscribers to this fund, established in connexion with the Bradford Infirmary, to commemorate the services of Dr. Outhwaite, of Harrogate, was held in the Board-room of the Infirmary, to adopt measures for the investment of £1225 subscribed, to appoint trustees, and to arrange concerning the appropriation of interest. The Mayor (Mr. J. V. Goodwin) occupied the chair. A series of resolutions were passed—one expressing the obligations of the charity to Dr. Outhwaite for the services he had rendered in former times, not only as a Physician, but as an earnest promoter of its varied interests, and the desirability of associating his name with the proposed fund, and others ordering the sum of £1225 to be invested as the "Outhwaite Convalescent Fund," and appointing six trustees to manage the fund. It was stated that the handsome sum of £1225 was the result of a spontaneous effort on the part of those who, in years gone by, had witnessed Dr. Outhwaite's labours in behalf of the charity. The fund, though now ordered to be invested, was not therefore closed, but will remain open for the reception of additional sums from any gentleman who might still choose to subscribe to it. No doubt this testimonial, perfectly unknown in its origin to Dr. Outhwaite, will be most gratifying—indeed, did we need proof of such being the case, we have heard that he has added his own name as a donor of £50, in order that the name given to the fund may not be altogether inappropriate.—*The Harrogate Advertiser.*

The Hunterian Museum was re-opened on Monday last. Several interesting and valuable additions have been made to the collection during the recess.

The late Dr. Greenup, of Sydney.—The funeral of Dr. Greenup, of the Paramatta Lunatic Asylum, on July 23, was attended by a large number of gentlemen, including members of the Ministry, of the Bench, the Bar, the University, and of the Medical Profession. The Bishop of Sydney was also present. The deceased was born near Halifax, in Yorkshire, in 1803, and was educated at Queen's College, Cambridge.

The late Dr. Haines, of Bombay.—The community of Bombay sustained a severe loss last spring in the death of Dr. R. Haines, M.B., Principal of the Grant Medical College. As a Chemist and Physician, Dr. Haines was highly esteemed among the members of his Profession, who were indebted to him for several contributions to the Medical and Physical Society, and for other public services. Some valuable statistical tables on the duration of life in India, in preparing which he had laboured assiduously for many years, are about to be published by the Indian Government, for which he had drawn up many other valuable reports. As Registrar of the University, and as an influential supporter of the Bombay Education Society, as well as for the interest he showed in everything that could promote the welfare of the community, both native and European, Dr. Haines had won general respect, and he was endeared to his personal friends by a singular uprightness of character and the unassuming conscientiousness with which he discharged his public and private duties. An influential committee, containing the names of the Hon. B. Ellis, the Hon. C. J. Erskine, Rev. W. K. Fletcher, Sir Jamsetjee Jejeebhoy, and Sir Alexander Grant, one of Dr. Haines's most intimate friends, has been formed at Bombay for the purpose of raising a fund to place a marble bust of the deceased in the Grant Medical College, and to provide a sum, to be placed in the hands of trustees, for the education of his eldest son.—*Guardian.*

The now annual St. Bartholomew dinner took place on Monday last at the Albion Tavern, immediately after the brilliant address delivered by Mr. Savory to inaugurate the opening of the session. The number present at this entertainment was unusually large, and under the very able presidency of Dr. Jeaffreson the success of the evening was unequivocal. The treasurer, the chaplain, and most of the Medical staff were present. Mr. Curling and several other gentlemen dined as visitors, and the provinces were brilliantly represented in the persons of Drs. Paget, Humphry, and many others, all of whom claim the school as their *alma mater.* These prandial gatherings before the commencement of winter work are, if well arranged, particularly welcome to those who can thus snatch a few hours from the business of life to resuscitate many pleasant memories.

A Sham Sanitary Inspector.—A man named John Jackson has been brought before the magistrates at Bradford on a charge of falsely representing himself to be a sanitary inspector, and in that character levying black mail from various householders. He was committed to take his trial for fraud.

Quekett Microscopical Club.—The usual monthly meeting was held in the Library of University College, on the 28th ult., W. Hislop, Esq., Vice-President, in the chair. A paper was read by Mr. R. T. Lewis, "On some of the Microscopic Effects of the Electric Spark," detailing a number of experiments made by him between December, 1865, and the present time. They were suggested in the first instance by the circumstance of having placed a card which had been perforated by powerful induction sparks upon the stage of the microscope, to examine the raised burrs produced, when he was surprised to observe that all such holes as were clear were of a pentagonal shape. In consequence of this observation, pieces of paper and card of various kinds were procured and perforated by sparks of various lengths from different induction coils, in all of which cases the pentagonal form of hole prevailed, and the same result was also found when discharge sparks from a Leyden jar charged with frictional electricity were employed. Subsequently a contrivance (which was described) enabled these experiments to be repeated upon the stage of the microscope. The effect of sparks upon paper chemically treated, the leaves of plants, mica, thin glass, film of egg, etc., was described, from which it appeared that the perforations were generally five-sided, without regard either to the shape of the points between which the sparks were discharged or to the texture of the material perforated. The paper was concluded by a few remarks, to the effect that electricity thus brought under the microscope would be found to afford both amusement and instruction, whether in connexion with the use of the microspectroscope or in observing the effects of electrolytic action. Eight members were elected and twenty-eight gentlemen proposed for membership. The meeting terminated with a conversazione, and amongst other objects exhibited was one of very great interest, viz., the ooze from the bottom of the Atlantic, brought up with the cable of 1865, composed of very much the same elements as those found in the Barbadoes earth. Specimens may be obtained from Mr. Collins, the optician, of Great Titchfield-street. It is almost impossible to overrate the importance of a thorough knowledge of the microscope in Medicine, and at the present time, when students are making arrangements for the work of a fresh session, a good opportunity offers of directing attention to a society of recent growth which can afford material assistance to beginners, no less than pleasure and instruction to the more advanced worker. Students may spend few more agreeable and profitable evenings than at the meetings of the Quekett Microscopical Club, held in the library of University College on the last Friday of every month. Amongst the members are men whose pursuits lead them to investigate all branches of natural history, and at the meetings a very large mass of general information comes out in a colloquial and chatty way; the discussions, too, are carried on in a most friendly spirit; there is an entire absence of harsh criticism, and all seem anxious to give every possible information upon the most elementary matters. The Club is just the society where a *student* could read a paper with comfort, and the meetings always terminate with a good display of microscopic objects of all kinds. At the present time special classes for instruction to beginners in microscopic manipulation are being formed under the direction of Mr. Suffolk, and these are open *free* to all members of the club. The annual subscription to the Club is only ten shillings, and we advise students to take advantage of the opportunity thus afforded them. The offices are at 192, Piccadilly.

The Medical Club.—A preliminary meeting of the members of the above Club was held at the house of Mr. Propert, New Cavendish-street, on Tuesday, October 2. Present—Mr. Propert, in the chair; Dr. Butler, Woolwich; Mr. Lawrence; Dr. Wilson Iles, Watford; Mr. Read; Dr. Chavellier, Ipswich; Mr. Whitfield, Kensington; Dr. Webster, Northampton; Dr. McEwen, Chester; Dr. Weber and Dr. Lory Marsh; several gentlemen left before the meeting was concluded, whose names did not transpire. A considerable increase in the number of members was announced, and a satisfactory report of the progress of the Club since the previous meeting was presented. A copy of the proposed Club rules was read, and considerable discussion ensued, especially with reference to the future designation of the Club. It was ultimately decided to adhere to the title of the "Medical Club" until the general meeting, at which it would be competent to substitute any other that might then be agreed upon. Amongst the names suggested were the following:—The Brodie, the Sydenham, the Hunterian, and the Harveian. A letter was read from Sir William Fergusson expressing his pleasure to preside at a general meeting to be held in the Hanover-square Rooms on Thursday, Nov. 8, at 2 p.m., to take into consideration the best means to adopt to secure the successful carrying-out of the Club.

Curiosities of the College Calendar.—The Council of the Royal College of Surgeons of England has just published for a second year a calendar of their Institution on the same plan as those emanating from our Universities, and we think they deserve great credit for the manner in which it is produced, entailing, as appears from the profit and loss account of the last issue, a deficiency of £139 8s. 11d., the receipts amounting to only £8 18s. 4d.; then the charge to Members was five shillings, but now the charge has been reduced just one-half, at which price the book may no doubt pay its expenses. From the report of the Council, it appears that the receipts and expenditure of the College in the year from Midsummer-day, 1865, to Midsummer-day, 1866, amounted respectively to £10,993 7s. 7d. and £12,641 1s. 4d., showing an excess of expenditure over the receipts of £1647 13s. 9d. The income of the College is derived principally from the fees paid on admission to the Membership, which amounted during the past year to the sum of £8197 15s. The Fellowship examinations produced £210. The Midwifery and Dental Diplomas yielded £134 8s. The election of old Members into the Fellowship is still remunerative, having produced £189. The judicious investment of some of the College capital in the purchase of freehold property is shown in the return of £809 18s. 9d. for rent, to which there will be some addition next year. The College does not appear to possess much funded property, as the dividends on investments in Government securities only produced £1233 17s. In the disbursements, which amounted to £12,641 1s. 4d., it appears that the largest item is in fees to Council and Examiners, which is put down at £3610 5s. 6d. The salaries and wages appear next in numerical amount as £3101 14s. 10d. The Government and parochial authorities are large recipients of the College cash, as upwards of *eleven hundred pounds* was paid in the year for diploma stamps, taxes, and rates. The pensions appear to be on the increase, as £493 12s. is put down against £307 13s. of last year. Nearly £200 has been distributed by the Council in prizes and lectures for the Members of the College. And during the present and following year £136 10s. is offered for essays, on given subjects, for competition among the Members. During the past collegiate year great changes have taken place in the institution. Mr. Luke, a twice-elected president, has been displaced from the Council in favour of Mr. Charles Hawkins, the Government inspector of anatomy; Mr. Joseph Hodgson resigned his seat in the Court of Examiners, and Mr. Richard Quain was elected in the vacancy, and became a vice-president of the College. In the Midwifery Board Drs. Barnes and Priestley have displaced Drs. Oldham and Lee; in the Dental Board Mr. W. A. Harrison has been elected in the vacancy occasioned by the retirement of Mr. Thomas Bell; and the examiners in classics, mathematics, and French for the Fellowship disappear altogether, this duty having devolved on the Royal College of Preceptors. The Council, the governing body of the College, have had 13 meetings during the year; the Court of Examiners has had 54 meetings, and examined 20 candidates for the Fellowship, rejecting only one; for the primary or anatomical and physiological examination for the diploma of membership 497 candidates were examined, and 136 referred back to their studies for three months; for the pass or pathological and surgical examination 410 were examined, and 64 referred for six months. And during the year 18 Assistant-Surgeons presented themselves for examination for promotion to the rank of Naval Surgeon, all of whom were reported to the Admiralty as having passed to the satisfaction of the Court. The Board of Examiners in Midwifery have had four meetings and examined 43 candidates and rejected 7. The Board of Examiners in Dental Surgery have only examined and passed 2 candidates during the year. With regard to the Fellowship it appears that only 7 have passed the preliminary examination, making a total of 123 who have passed since its institution. Of the number of Fellows now on the list, it appears that there are 324 gentlemen who have obtained this honourable distinction after the severe examinations prescribed by the authorities, 245 honorary and 745 by election, making a total of 1314, to whom the elections into the Council are confided.

THE NEW SANITARY ACT.—The following letter has been addressed to the various Metropolitan Vestry and District Boards:—

"Local Government Office,
"8, Richmond-terrace, Whitehall,
"September, 1866.

"Sir,—I am directed by Mr. Secretary Walpole to forward you the enclosed Circular, containing a digest of the Sanitary Act, 1866, and am to say that the Secretary of State is desirous that the attention of your Vestry or District Board should be called more particularly to the 19th section of this Act, enlarging the definition of nuisances that may be dealt with under the Nuisances Removal Acts; and to the 20th section, which imposes a new duty on the nuisance authority—that of making a regular periodical inspection of its district, with a view to ascertain what nuisances exist calling for abatement under the powers of the Nuisance Removal Acts, and to enforce the provisions of the said Acts for the abatement of such nuisances.

"Till now nuisance authorities have only had imposed on them in terms the duty of proceeding upon complaints made as prescribed by the Nuisances Removal Act, 1855, though the Secretary of State is aware that, in practice, they have not held themselves limited by this view of their duty. Since the passing of the Sanitary Act, 1866, the authorities are specifically required to make regular inspection of their districts, with a view to discover nuisances which call for the execution of their authority.

"In districts so large and populous as those under the jurisdiction of the metroplitan vestries and district boards, this duty can only be discharged by distribution of their districts among a staff of properly-qualified inspectors, and the local authority will have to consider whether, in some cases, an increase of the present inspecting staff may not be found necessary for this purpose.

"Where this is the case I am to express the hope of the Secretary of State that the nuisance authority will take the expediency of such increase into prompt consideration.

"I am also to call your attention to the 21st section, which empowers the nuisance authority to give notice for the removal of the nuisance before proceeding to action by order of magistrates, which may often save time and the expense of legal proceedings when once owners and occupiers have found that the nuisance authority is in earnest in enforcing the law.

"The provisions of the 22nd section for cleansing or disinfecting filthy or infected houses, or infected articles; the powers given to the nuisance authority to provide places and means of disinfection, and carriages for the conveyance of persons suffering from contagious diseases (sections 24 and 25), and for the removal, under justice's order, of sick persons improperly accommodated (section 26); for the provision of a proper place for the reception of dead bodies, the retention of which among the living may endanger health or life (section 27); the extension of the powers of entry (section 31) to all hours during which businesses are carried on; the extension to the whole of England of the prohibition of cellar dwellings (section 42), and the enactment of penalties for disobedience of notices for the periodical removal of manure or refuse from mews, stables, etc. (section 53), are all provisions which will be found to have a special bearing on the duties of nuisance authorities in the metropolis, especially at a time like the present, when epidemic disease prevails.

"The attention of the vestry or district board is also called to the 35th section, which prescribes the mode in which such authorities may obtain powers for the regulation of houses let out in sets of rooms to lodgers, and which the Medical officer of the Privy Council considers to require regulation, in the interest both of the occupiers and public quite as much as common lodging houses. Several applications for powers to put these regulations in force have already been granted in the short time since the passing of the Act.

"In conclusion, the Secretary of State wishes to call the attention of the nuisance authority to the new duty imposed upon him by the 49th section of the Act of inquiring into appeals in cases of neglect of duty by local authorities, and of issuing orders, and even directing the execution of works, where the local authority, after the neglect of duty has been brought home to them, continue to make default.

"The Secretary of State hopes that it will not be necessary for him to exercise functions which can only devolve upon him by neglect of duty on the part of local authorities, and he will be glad to give every assistance in his power to these authorities in carrying out the law which they have to administer.

"I am, Sir, your obedient Servant,
"T. TAYLOR."

THE following are the last week's Cattle Plague Returns.

—	1. Attacked.			Back cases reported in the week ended Sept. 22, 1866.	2. Result of reported Cases from the Commencement of the disease.				
	Week ended Sept. 8.	Week ended Sept. 15.	Week ended Sept. 22.		Attacked.	Killed.	Died.	Recovered.	Unaccounted for.
Great Britain .	68	58	67	93*	253613	84912	124294	33413	10994

* 92 of these "back cases" are reported from Northwich, and refer to the four weeks from February 24 to March 24.

The Return shows that 67 attacks were reported to have occurred during the week ended September 22, being an increase of 9 on the previous return.

Fresh outbreaks took place in 20 farms or places where cattle are kept; the number of such outbreaks in the previous week being 19. The number of healthy cattle slaughtered, to prevent the disease extending to them, was 80 during the week.

Since the commencement of the disease 51 in every 1000 of the estimated ordinary stock of cattle in Great Britain are returned as having been attacked.

7 cases are reported during the week as occurring among sheep, making the total to the date of this return 6721.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

CHOLERA COLLAPSE OCCURRING IN A HOT BATH.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—While examining a "Life," finding that he had recently been employed on the railway works in Egypt, I took the opportunity of getting some information about the cattle disease and the cholera out there. He told me that one of their men was seized with collapse while in a hot bath, and was dead in six hours; that death often occurred in two hours, and that the only treatment which seemed to do any good was iced champagne during the collapse, and iced water during the fever. I think the first occurrence of sufficient importance to deserve a corner in your columns. I am, &c.

THOMAS INMAN, M.D.

EX-OFFICIO GUARDIANS AND POOR-LAW OFFICIALS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Can a county magistrate, being a guardian of the poor "*ex officio,*" legally hold the position of Poor-law Medical Officer to an Union situated in the petty-sessional division for which he acts?

Liverpool, September 6. I am, &c. IGNORANS.

⁂ The 5th and 6th Vict., c. lvii., s. 14, enacts, "That no person during the time for which he may serve or hold the office of assistant-overseer, nor any paid officer engaged in the administration of the laws for the relief of the poor . . . . shall be capable of serving as a guardian." With reference to this enactment, Mr. Glen, in the Fifth Edition of the "Poor-law Board Orders," p. 118, states:—"This, however, does not prevent a Justice of the Peace, who is *ex officio* a guardian (see 4 and 5 Wm. IV., c. lxxvi., s. 38), from being appointed to a Union office. He would, however, whilst holding such office, be disqualified from acting as an *ex-officio* guardian." Mr. Glen is a well-known authority on the subject of Poor-laws, and his opinion is entitled to great weight.

PURIFYING A SICK CHAMBER.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In addition to the mode suggested in your last number for the above purpose, it would be an additional precaution to throw forth in the air of the sick room, by means of the spray producer, a spray of very dilute carbolic acid; then neutralise that with the dilute Condy's fluid. If, as Mr. Wm. Crookes has suggested, a solution of permanganic acid could be obtained, then, in performing the above operations in a room, no trace of caustic potash or any salt of potash would be left in the air; there would be simply air, watery vapour, a trace of nitric acid, carbonic acid gas, and sesquioxide of manganese, an insoluble brown powder which would make a slight dust in the room if the spraying were carried to excess. This, and the trace of potash left from Condy's fluid, would probably be injurious to any lung disease; but some of your readers may probably be able to remove these objections if found of any importance in practice.

I am, &c.

October 1. JOHN SIMPSON.

COMMUNICATIONS have been received from—

N. C. MACNAMARA, Esq.; Dr. CORFE; HARRY LEACH, Esq.; Dr. SYMONDS; Dr. KIDD; F. C. SKEY, Esq.; Dr. RINGER; Dr. FOTHERBY; Dr. INMAN; Dr. GIBBON; D. F. TYERMAN, Esq.; G. H.; Dr. LORY MARSH; Dr. FAYRER; Dr. LIONEL S. BEALE; Mr. RICHARD BARWELL; Mr. W. S. SAVORY; Dr. HUGHLINGS JACKSON; Mr. HAYNES WALTON; Dr. FINCHAM; Dr. BALLARD; Mr. J. CHATTO.

BOOKS RECEIVED—

Crisp on the Weight of the Brain—Southern Medical and Surgical Journal (vol i., No. i.)—A Few Thoughts Concerning Infanticide, by Mrs. Baines—A Few Thoughts on Woman's Rights—Crisp on Malignant Cholera—Ure's Dictionary of Chemistry (Part 36)—Brande and Cox's Dictionary of Science, Literature, and Art—Shapter's Sanitary Measures, and their Results.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 29, 1866.

BIRTHS.

Births of Boys, 1057; Girls, 1089; Total, 2146.

Average of 10 corresponding weeks, 1856-65, 1797·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	693	725	1418
Average of the ten years 1856-65	576·7	549·6	1126·3
Average corrected to increased population ..	..	..	1239
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	3	8	6	1	3	4	9	12
North ..	618,210	—	2	8	4	6	9	11	36
Central	378,058	2	5	10	—	—	4	17	28
East ..	571,158	11	5	16	2	5	11	18	55
South ..	773,175	5	5	19	2	9	9	12	46
Total ..	2,803,989	21	25	59	9	23	37	67	177

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·677 in.
Mean temperature	55·5
Highest point of thermometer	71·0
Lowest point of thermometer	41·3
Mean dew-point temperature	52·4
General direction of wind	Calm & S.E.
Whole amount of rain in the week	0·23

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, September 29, 1866, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending Sept. 29.	Deaths.		Temperature of Air (Fahr.)			Rain Fall.	
				Corrected Average Weekly Number.*	Registered during the week ending Sept. 29.	Highest during the Week.	Lowest during the Week.	Weekly Mean of the Mean Daily Values.	In Inches.	In Tons per Acre.
London (Metropolis)	3067536	39·3	2146	1400	1418	71·0	41·3	55·5	0·23	23
Bristol (City) . .	163680	34·9	106	73	‡69	63·6	40·0	53·1	1·72	174
Birmingham (Boro')	335798	42·9	257	163	113	61·7	39·5	52·5	2·10	212
Liverpool (Borough)	484337	94·8	398	281	437	63·4	46·3	55·1	1·08	109
Manchester (City) .	358855	80·0	235	203	‡192	63·0	39·8	52·7	1·32	133
Salford (Borough) .	112904	21·8	111	57	56	63·6	39·0	52·6	1·29	130
Sheffield (Borough) .	218257	9·6	171	115	74	..	..	..	..	..
Leeds (Borough) .	228187	10·6	312	116	128	68·5	35·3	52·5	1·41	142
Hull (Borough) .	105233	29·5	63	49	52	..	..	..	..	..
Nwcastl-on-Tyne, do.	122277	22·9	145	65	85	62·5	42·0	53·5	0·91	92
Edinburgh (City) .	175128	39·6	124	84	78	61·7	38·0	51·8	0·80	81
Glasgow (City). .	432265	85·4	351	252	206	60·2	36·2	49·8	0·90	91
Dublin (City and some suburbs) .	318437	32·7	155	†156	268	64·4	31·8	51·1	0·16	16
Total of 13 large Towns . . .	6122894	34·4	4574	3014	3176	71·0	31·8	52·7	1·08	109
	(1863)				Week ending Sept. 22.	Week ending Sept. 22.		§		
Vienna (City) . .	560000	..	..	..	586	..	..	59·0	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·677 in. The barometrical reading increased from 29·21 in. on Sunday to 29·87 in. on Tuesday.

The general direction of the wind was S.E.

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* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 53·7°.

APPOINTMENTS FOR THE WEEK.

October 6. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p.m.

8. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

9. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

10. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

HUNTERIAN SOCIETY (Council, 7½ p.m.), 8 p.m. Dr. Daldy, "On Cholera."

11. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

12. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

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Vide The Lancet, *Nov.* 11*th* and 18*th*.—"A third report of cases of consumption treated with Pancreatic Emulsion at the Royal Infirmary for Diseases of the Chest."

THE IMPORTANCE OF PANCREATIC EMULSIONS of Solid Fat over Cod-liver Oil, in the treatment of Tuberculosis, must be as great as that of supplying a plant with good soil instead of putting it into water."—Page 50. "On Tuberculosis," by Horace Dobell, M.D.

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ORIGINAL LECTURES.

LECTURES ON SOME MEDICAL SUBJECTS.

By F. C. SKEY, F.R.S.,
Consulting Surgeon to St. Bartholomew's Hospital, etc.

Lecture VI.

Cases of Hysteria—*Continued.*

The cases of hysteric affections of the knee-joint I have selected for comment in the last lecture may be taken as a type of them all, each case exhibiting some peculiar feature more or less striking on which to fix the attention of the surgeon. It may well be supposed that a large hospital, such as St. Bartholomew's, would furnish examples of them in the course of years in multitudes, and with regard to which I can only refer you to the general description I have previously given of hysteric affections. They may be summed up under the definition of chronic painful affections of joints, attended by stiffness and immobility, without disorganisation, and they will only be successfully treated through the agency of the constitution.

I will now give you a few examples of hysteric disease attacking regions less common than those I have yet referred to, but not less distinct in their character:—

A young woman, aged 24, was admitted into one of my wards at the Hospital who was the subject of difficult deglutition. She was a very respectable person in character and position, and had been for several years a much-esteemed servant in a good family, and was a young woman of some education. For two months previous to her admission she had complained of difficulty of swallowing her food. As the evil appeared to increase, the family medical attendant was consulted, by whom she was treated for a stricture of the œsophagus. One or more consultations were held on her case, and the œsophagus examined carefully by means of probangs and bougies. These instruments, however, failed to pass a given spot corresponding with the base of the neck, or about one-third from the commencement of the tube. She had no local pain whatever As the obstruction increased, nothing but semi-liquid food passed into her stomach, and this was only effected with a difficult and painful effort. She became emaciated by reason of defective nutrition, and at the time of her admission into the Hospital was weak and somewhat attenuated in form. For many weeks she had taken no description of solid food, and even liquids passed the obstruction with difficulty. The malady now assumed a serious form, and with a view to additional advice she was sent to the Hospital. The case was reported to me on her arrival as that of "stricture of the œsophagus," and I will tell you the preliminary train of thought that passed rapidly through my mind before I opened my lips to the students on the subject. Real stricture of the œsophagus is at all times a rare disease. When present it is almost invariably a cancerous affection. Cancer is a very rare disease at this young woman's age. For so serious a malady as cancer she does not look ill enough; for though the presence of cancer of the breast occurring at a later period of life by twenty years may be for a time compatible with fair average health, cancer of the œsophagus stamps the constitution early. She is of an hysteric age, and though thin, she does not look absolutely ill. There is nothing of disease in her aspect, nothing that may not be referred simply to defective nutrition. The history of her case was given me by her medical attendant, who was present on the occasion, and I had no hesitation in recording her disease as that of "hysteria." I declined the use of a probang or bougie which lay on the table before me, and I simply said, "We will endeavour to remove the obstruction without the aid of instruments of any kind." Her catamenial discharge had been regular throughout. I ordered her bark, iron, valerian, wine, milk with brandy—each to be given in the largest quantities at the shortest intervals *consistent with reason and moderation;* three times in twenty-four hours, enemata of thick soup with an ounce of brandy. These various agents were absorbed into her system with the greatest advantage to her health. Within a week she could swallow finely minced animal food, and in three weeks she ate a portion of rumpsteak without difficulty, and was, in fact, convalescent. She was in high spirits at her recovery, and the only vexation she suffered arose from my refusal to pass a probang down her throat before she left the Hospital. This I peremptorily declined to do, assuring her that a probang of rumpsteak was a far more efficient test of her recovery than any instrument in surgery bearing that name.

A young lady of 18, and of slight form, was brought to me from the country with gastrodynia. For upwards of a year she had suffered intolerable pain in the stomach on taking food of any description. She was much emaciated, and her pulse extremely feeble. Neither trouble nor expense had been spared in her treatment. Her family had consulted medical men of eminence in more than one metropolis, but the severity of the pain continued in spite of treatment. On entering the drawing-room, I heard the sound of suffering from an adjoining room, and I was told that my future patient was paying the penalty of a slight meal of arrowroot, of which she had swallowed a few table-spoonfuls only. Having intruded myself into the room somewhat unexpectedly by its occupants, I saw this young lady in a condition of great suffering, in the upright position, leaning her head on her mother's shoulder and sobbing painfully. In the course of a quarter of an hour I had obtained some insight into her case, but I could not fail to observe that the mother habitually interposed replies to questions addressed to the daughter, and I explained to her the necessity of my obtaining the answers to my inquiries direct from her daughter. At my request she left the room. Up to that time I had but an imperfect knowledge of the case, but I then led the conversation to subjects which carried the girl away from her malady and all its associations. I spoke of her home and the scenery around it, of which I described the general characters, and enlarged on the beauty of the neighbourhood, the lovely rides and excursions, etc., and in all of which I was tolerably successful, considering that at that time I had never seen it. However, the description was sufficiently accurate for my purpose, for it succeeded in distracting the young lady's attention from her suffering, and during the few minutes which this conversation occupied she was to all appearance entirely free from pain. She talked freely and cheerfully, and not the slightest reference was made by either of us to her former suffering. I then changed the subject by saying, "I think your pain has flown away," when she immediately resumed her crying fit and sobbed as before. She assured me she was in great pain, and that the sensation had been but suppressed. That this was a case of severe hysteria was highly probable even had I gone no further with the evidence, relative to which the following thoughts occurred to my mind. What could be the nature of this pain if not hysteric? I was told by her family that pain followed the act of deglutition, not remotely or at an interval of one or more hours, but almost as immediately as the food could reach the stomach. This could not be dyspeptic or common gastrodynia, which waits on the process of digestion, and rarely occurs within a period of two hours of taking food. There is one disease only of the stomach in which pain follows the admission of food into it, and that occasionally only—viz., cancer. Was it probable, or scarcely more than possible, that this girl of 18 could have been for so many months the subject of undetected cancer of the stomach? If cancer, could the attendant pain, so severe as it appeared at the commencement of my visit, be suspended by conversation? It was neither gastrodynia, the result of indigestion, nor cancer; and if not, what remains behind to elucidate the case? It could be nothing but hysteria, and hysteria alone could solve the mystery. But she had been treated for gastrodynia and treated for cancer, but she had not been under treatment for hysteria, simply because these varieties of local hysteria have never yet fixed themselves on the attention of the profession. To tell a practitioner of the old school that a young lady was the subject of hysteria of the stomach would be to raise a smile at your expense.

It would be an unprofitable employment of our time were I to enlarge on the subject of the previous treatment. The remedies included, in different proportions and in varying doses, ammonia and other alkalies, under the mistaken supposition of acid secretions; opium in various forms, creosote, bismuth in small and large quantities, mineral acids, etc., etc.

How difficult it is to ascertain beyond all question the real value of many drugs in daily use amongst us! Although, in common with others, I have frequently employed the trisnitrate of bismuth, I have to this hour no conviction of its utility. This case did not terminate so satisfactorily as I hoped. That it was a case of hysteria admits of no doubt, but I had difficulties to contend with in the domestic management of the young lady. Although her symptoms remitted greatly under the use of remedies, she did not entirely recover in the brief period of three or four weeks during which she was under my care. I gave her small doses of ferrocitrate of quinine, two or three times a day a wineglass of port wine boiled with spice, and I ordered a plaster of the fluid extract of opium to be applied on the epigastrium. If, coupled with these remedies, I could have separated the girl from her family, whose sympathies with her were far too redundant for her benefit, I think she might have been cured in one month. In a case of this kind good domestic moral treatment is indispensable to success.

Hysteric affections of the ovaries are extremely common. Several of such examples I attended with my late friend Dr. Rigby. The cases I have seen have occurred in young females of between 20 and 25 years of age. They are characterised by deep-seated aching pain in the region of the ovary, about two inches above the crural arch. My own observation would lead me to say that the right organ is more frequently affected than the left, but this is probably accidental. Like other hysteric affections, its severity varies with the constitutional health, mental and bodily. It yields but slowly to remedies, and though mitigated, it often returns at longer or shorter intervals. I have applied opium locally with advantage, but an entire change of air, scene, and occupation, combined with tonic treatment, are indispensable to recovery.

There is no class of hysteric affections more interesting to the surgeon or more critical than cases involving morbid contractions of a part of the muscular system. These affections of the spinal nerves are to be found in abundance in all our public hospitals, where in times not long past, if entirely past yet, the knife has been too often called into requisition to settle the question of an obscure diagnosis, to the damage of the patient and the discredit of the surgeon. Muscles were cut asunder and limbs were amputated, and the disease yet remained behind, to develop itself in some shape yet more formidable, and now beyond the range of cure. On such cases, several of which are in my memory, I shall not enlarge. I prefer to look forward, and to discharge the duty I have undertaken by teaching you the best means of avoiding their recurrence.

A young woman, aged about 27, the daughter of a small tradesman, was the subject of contraction of the sterno-mastoid muscle on the right side of the neck, by which her head was much drawn to the side, and her personal appearance disfigured. The surgeon in attendance upon her proposed to divide the muscle at its tendinous origin from the sternum; but before the operation I was requested to see her. She was of a nervous temperament, and was out of health at the time. I considered the disease to be hysteria, and nothing beyond it. The fixed contraction of the muscle had occurred without local injury of any kind, and it had increased gradually to its then condition. I recommended such general medical treatment as we find useful in similar cases of hysteria. Failing to influence the opinion of the attendant surgeon, I suggested a second consultation, mentioning the names of one or two surgeons of experience in such cases, who, having visited the patient, expressed a similar opinion to my own.

The operation was performed, and though I was not present I will guarantee the entire division of the muscle as proposed; but it was not attended with benefit, and a second attempt to remove the deformity was undertaken with a similar result. You will not unreasonably infer that the operator in this case—a man of great knowledge and large experience—was not familiar with this class of disease; and he had the candour to acknowledge it. Need you have more conclusive evidence that we have not yet acquired all the requisite knowledge on the subject of local hysteria?

A young lady, of 17, high born, surrounded with all the comforts which wealth and parental care could furnish her, became the subject of contraction of the fingers of the right hand, which was entirely closed in flexion. Any attempt to open the hand was attended by severe pain. She was of a nervous temperament, but failed in no respect in mental power or moral force of character. Having been for some months under treatment in England, she was sent to Paris with a view both to education and to surgical treatment. At the expiration of six months her hand had undergone no improvement, and she returned to London, when I saw her. I should have supposed there could hardly be two varying opinions as to the nature of this morbid action of the flexor muscles, and that nothing but hysteria could explain a condition of the muscular system which existed in a young girl of 17, who had sustained no local injury to account for it. In this, as in many other similar cases, there was no catamenial derangement. I ordered her a full nutritious diet, exercise, and tonic remedies in the form of bark, iron, and valerian, and she returned to her home and family in the country. Some weeks afterwards, finding the condition of the hand not improved, she returned to London, and I put her under the influence of chloroform, and the flexor muscles immediately relaxed. I opened the hand without the smallest effort, and applied a well-padded splint to the front of the forearm, extending to the extremity of the fingers. The splint was retained for some weeks, and occasionally removed for a time and replaced. The muscles recovered their healthy tone, and the hand its functions, with the exception of the little finger, the movement of which still continues, after an interval of three years, in some measure restricted.

A young lady, aged 18, of nervous and susceptible temperament, was brought to me by her mother with an affection of the left elbow-joint. The joint was fixed in half-flexion by a well-made leather splint, and had been carefully bound with straps and rollers. I learnt that she had sustained no local injury to the arm, but that it had been treated for some weeks for inflammation of the elbow-joint; but as the disease did not yield to the treatment, I was consulted. Further inquiry into the history of the case led me to the belief that the affection was of an hysteric nature. I removed the splint, not without some expression of alarm on the part of the mother as to the consequences. The joint itself was neither swollen, hot, nor painful, but any attempt to straighten or move it caused great pain. I explained my views of the disease to the young lady's mother, and recommended a certain course of treatment which the lady, somewhat, as I thought, against her own judgment and inclination, promised to follow; and I was brought into communication with the medical attendant of the family in the country, to whom I explained my views, and to whose judicious charge I consigned her. Up to this time, and beyond it, I believe my opinions were not shared by either the family surgeon, by the mother, or by the daughter, and I stood alone opposed in opinion to more than one eminent authority in our profession. On the occasion of her first visit I removed the splint and placed the arm in a light sling. I advised the free application of opium, with some blue ointment, to the arm, about and around the elbow-joint, which I directed to be firmly rolled; and I advised her to be taken into the country, and I prescribed iron, bark, and wine. Some weeks elapsed without material improvement, when the young lady was brought to London for the purpose of a consultation. To this end, four surgeons of well-known eminence were assembled. Now observe, the largely prevailing opinion at that consultation was, that the elbow-joint was the seat of disease—that is, of inflammation—and that the inability to move it was due to disease of the joint, and nothing more. I pointed out the absence of local pain, the normal appearance of the joint, the hysteric character of the patient, and I ascertained beyond doubt the fact that she had not long prior been the subject of a true hysteric paroxysm. Before I left the house my views were adopted by the majority, and on the following day, while under the influence of chloroform, I straightened her arm without effort or difficulty, and fixed it in this position by means of a splint. Several weeks elapsed before she regained the entire command over the muscles of her arm, but her recovery was complete. When this morbid contraction of muscles has been once struck down, the muscles fully lengthened out, and the position retained by a mechanical impediment to further contraction of force sufficient to control the evil, the morbid tendency yields, and the employment of the splint for a week or two may suffice; but the disease may stealthily return, and the limb should be still kept under some form of restraint for several weeks.

In the year 1864 a young lady of 16 years of age was placed under my care under the following circumstances:—For eight months prior to her visit to me she had been suffering from inversion of the left foot, which was so twisted as to bring the point of the foot to the opposite ankle—in fact, at nearly a right angle with the foot of the opposite side. Her family consulted a surgeon of much experience in the treatment of distortions, and of orthopædic notoriety. The case was considered as an example of an ordinary distortion, and the foot was placed in a very elaborately made foot splint, by the force of which it was made to approach a parallel relation to the opposite foot; but it was an approach only, for no mechanism could retain it in a perfect position, the toes yet in some degree pointing inwards. Months elapsed and the disease continued unchanged. A second orthopædic authority was then consulted in conjunction with the first, and, as no new light was thrown on the disease by the combined opinions of the two, the same principle of treatment was recommended to be continued, and the mechanism was yet somewhat more elaborated. And thus the eight months of the young lady's life passed away, during which no constitutional treatment of any kind was resorted to, and loss of exercise—for she walked, it is almost unnecessary to say, with great difficulty—with other attendant evils, exercised a prejudicial influence on her health.

When the apparatus which she had so long worn was removed on her first visit to me, the foot immediately resumed its twisted form. The appearance of the limb was singular. Its attitude was that of complete inversion. I have studied the action of muscles a good deal, but I should have found it difficult to explain by what muscular agency this position of the foot was obtained, so great was the inversion. One fact was quite obvious, that it could not be due to the muscles of the foot only, but that those of the whole limb tending to inversion must be more or less involved. The very attitude of the limb was an abnormal one. The disease had appeared almost suddenly in a person hitherto healthy up to fifteen years of age. It could not be due to congenital deformity, and the limb gave no indication of disease or disorganisation. There was neither heat, nor pain, nor swelling. In this case, also, there was no catamenial derangement.

I removed the apparatus from the foot, bandaged the limb with a calico roller, ordered a full nutritious diet, with bark and iron, and, having explained the nature of the disease to the friends, sent the young lady home into the country, recommending her to rely on the kindly offices of Nature—the greatest of all doctors, orthopædists not excepted. At the end of a month some progress had been made, but not a great deal. She still walked with much difficulty, but it was obvious that she was improving in health and vigour of system. At the expiration of six weeks she accompanied her family to a ball, her foot, as she entered the ball-room, being not yet restored to its normal position. She was invited to dance, and under this novel excitement she stood up, and, to the astonishment of her family, she danced the whole evening, having almost suddenly recovered the healthy muscular actions of the limb. She came to see me two days afterwards. She walked perfectly well into my room, and paced the room backwards and forwards with great delight. The actions of the limb were thoroughly restored, and all trace of the previous malady had disappeared.

These cases, which you will meet with hereafter, show that under a morbid condition of the nerves or nervous system of a given part of the body the muscles supplied by them may become the subject of hysteric contraction or spasm, which can only be treated effectually through the constitution, whether the disease has sprung from the nervous centre or had originated in the nerve itself either in its course or in its distribution in the muscle. Where a single muscle is involved, or, still more, a portion of a muscle, as in the case of permanent contraction of one finger, one can scarcely explain the fact on the supposition that the disease extends so far back as the spinal cord, and which can implicate one filament of the nerve only and leave the rest unaffected. Still the probability of its seat in the cord is strengthened by the evidence of cases in which the nervous system of a considerable part of the body is involved, as in cases of hemiplegia or general paralysis, and of such I have seen several examples. Their true diagnosis will only be obtained on the most careful investigation. Hysteric paraplegia may sound strange in your ears, but if you will study hysteric diseases you will find no difficulty in the conclusion that hysteria, as Dr. Sydenham says, may attack any part of the body, and accurately represent the diseases of that part.

A young woman, aged 20, was admitted into St. Bartholomew's Hospital with the total loss of motor power of the right arm and leg, and partial loss of sensibility. She had been the occupant for two years of a country workhouse, where she was placed on the list of incurables. She had been treated actively for hemiplegia, with cupping and blistering and purgation, and no doubt with a rigid "attention to diet!" Notwithstanding these antecedents, the girl was florid, and presented the aspect of a moderately well-nourished person. This feature in her case struck me as remarkable—viz., that a girl of 20, who had been confined to her bed in a country union for two years, with so serious a disease as hemiplegia, should present so healthy an appearance, and so unlike what might reasonably be anticipated from the presence of a protracted disease. Then, again, we do not find examples of this form of general paralysis in young persons. Such cases must be very exceptional, and I could not remember ever to have seen one, and least of all should I expect to find such a disease in a hardworking country girl. I observed that the motor power of both hand and foot was totally lost. Volition did not reach the extremities in any observable degree, and in the cases of paralysis I had seen some power of motion, however slight, remained in the toes, but here there was none. The leg lay perfectly dead to all motive power.

With this evidence the case was recorded as "hysteric hemiplegia," and as such I treated it. The girl was ordered animal food twice daily, bark and iron, and wine in small doses, gradually advancing to large. The affected limbs were rubbed for a quarter of an hour twice daily. Within a week slight motion and increased sensibility had returned in the fingers, and shortly afterwards in the foot; within three weeks she sat up in bed. In the ensuing fortnight she walked about the ward by the aid of crutches. At the expiration of six weeks she returned convalescent into the country, and for many months enjoyed fair average health; but I believe her entire convalescence was temporary only. There are something more than mere shades of difference between a large metropolitan hospital and a country workhouse; between a school for medical instruction and an asylum for paupers; between an institution which commands the large experience of the many, and one which depends on the limited authority of an individual surgeon, and *consequently* the recovery of this girl was incomplete; but the character of her disease was, in my opinion, thoroughly established in St. Bartholomew's Hospital.

A young lady aged 22 sustained a shock in a railroad accident in the year 1863. There was no evidence that she had been actually struck, and although she was thrown down with some force she was not incapacitated, because she not only got out of the carriage unaided, but she was able to give some assistance to others who were really hurt. At the expiration of a week she was under the charge of the family medical attendant with the loss of motor power of the lower extremities. The power of sensation was somewhat impaired, but not considerably. Some months elapsed without improvement. She was treated in the mean time for concussion of the spine, followed by supposed effusion into the theca and chronic inflammation of the membranes of the cord! I wish I could entertain the faintest hope that my diagnostic powers could ever attain this amount of precision, but it is not a very unusual opinion in cases of this character expressed by medical men. These consequences of the injury were considered permanent, and an action was brought against the company for large damages. At this period I saw the case, and expressed an opinion as to the probable hysteric nature of the affection, and I advised a compromise with the company, who awarded the lady a considerable sum in compensation for the real injury she had sustained. Change of air and scene, mental occupation, tonic treatment, adopted in despite of effusion and thickening of the membranes of the cord, but which of the three membranes was never positively stated, was followed by slow, but steady, improvement, and in the course of three months the young lady was able to walk about without support, and I subsequently heard that her recovery was complete.

A young woman sustained a railway shock, but, as in the last case, not immediately on the occurrence of the injury. She had total loss of both sensation and motion of the whole of the left side of the body, and partial loss of both on the right. Some months elapsed before I saw her. She had had extreme tenderness throughout over the upper lumbar vertebræ. The loss of sensibility was so complete that she was quite unconscious of the puncture of a needle. The paralysis was referred to local lesion or disorganisation of the cord and its membranes. It was difficult to explain the severe lumbar pain at the expiration of months on the supposition of real injury, the very severity of which pointed to hysteria, and there were no circumstances in the case, in my opinion, inconsistent with that diagnosis, and for which malady she was treated.

Her recovery, which occupied many months, was, however, complete.

I have records of other cases of the same character, which I have no time now to detail.

I pray you to recollect, and to keep always before your minds in your future practice, that the human body may be the subject of a class of diseases involving the nerves or nervous system, whether of a small or a large portion of the frame, which are essentially distinct and dissimilar from diseases of the vascular system; that they carry with them so much of resemblance to real disease or disorganisation of structure as to deceive the most experienced, but that they are destitute of some of the most prominent features which characterise real disease; that the varieties of this affection, whether in situation, in form, or in intensity, are great; that the source of the affection is not a local one; that as real disease very commonly holds a relation with the functions of the heart and arterial system, that of local or general hysteria is the product of a disturbed, not a diseased, condition of the brain or spinal cord; and that, finally, in considering the entire phenomena of hysteric affections, it is difficult to deny their relation to the mind, which appears to exercise some mysterious or occult influence over them.

ORIGINAL COMMUNICATIONS.

MICROSCOPICAL RESEARCHES ON THE CHOLERA.

By LIONEL S. BEALE, M.B., F.R.S.,
Fellow of the Royal College of Physicians, etc.

No. V.

OF THE MORBID CHANGES IN THE VILLI.

Of the Specimens.

In the preparation of the specimens figured in this memoir I have followed the plan recorded in my report on the cattle plague, which has been fully described in the last edition of "How to Work with the Microscope," as well as in the new edition of the "Physiological Anatomy and Physiology of Man." It will not be necessary, therefore, for me to repeat the steps of the process of investigation followed; but I may mention that the most important points described here, and the appearances represented in my drawings, cannot be seen in preparations examined in the ordinary manner—placed in water and aqueous fluids generally, serum, vitreous humour, and the like. It would, indeed, be futile to attempt to study changes in the small arteries, veins, and capillaries in specimens examined in the media last mentioned, for neither these nor the nerve-fibres, nor any of the more delicate structures, can be clearly demonstrated even in healthy tissues. There are physical impediments to the demonstration of these structures, and the nature of these impediments, as well as the method of overcoming them, have been fully discussed by me elsewhere.

Every effort has been made to obtain the specimens as soon as possible after death. Many of them have been immersed in the preservative media I employ within eight or nine hours after the patient's death, and I think all of them within twenty-four hours. In one or two instances in which there was evidence of decomposition, the specimens were rejected at once, and I have every reason to think that the appearances I have delineated were the result of morbid change occurring during life, and were not due to chemical or mechanical changes which have taken place after life had ceased. In many instances I believe the germinal matter of the tissues was *living* at the time it was injected with or plunged into the glycerine fluid which prevents chemical decomposition from taking place.

All the figures have been drawn to a scale, and the dimensions of the different objects may be readily ascertained by the aid of the scales which are appended. The drawings may therefore be compared, not only with one another, but with the figures published in my other works and memoirs. The magnifying powers employed varied from the three inch, magnifying about 15 diameters, to the fiftieth, which magnifies 2800 diameters. As it was desirable to contrast the appearances observed in different cases of disease with healthy specimens, it was deemed advisable to study the characters of the intestine in one or more particular parts, the same being chosen in all cases. In the case of the small intestine, I selected points about 20 inches below the pylorus and about a foot from the ileo-cæcal valve. I shall append corresponding drawings of healthy tissues when opportunities occur, for it is only occasionally that they can be obtained. The investigation has not been undertaken for the purpose of advancing any particular view concerning the nature of the disease, but solely in the hope of ascertaining the exact points in which the blood, the vessels, and the tissues of the body of a person whose life has been destroyed by cholera differ from those of a person suddenly killed in perfect health. To institute such a comparison with perfect fairness is, of course, a matter of very great difficulty—perhaps impossible at this time; but an attempt to approach towards it must be better than no attempt at all, and although the object may not be satisfactorily fulfilled, some facts will certainly be learnt in the course of the inquiry, which—provided the investigation be conducted with due caution, and the natural tendency to arrive too hastily at general conclusions and definite results be carefully guarded against—it may be hoped will add to the little we already know concerning the actual nature of the phenomena occurring in this remarkable disease.

Of the Cases from which Specimens were obtained.

The cases from which my specimens have been taken were not *selected*, nor have they been arranged in any order. They are numbered according to the order in which they came, and all the specimens sent to me, except one or two which were decomposed, were examined. Most of the specimens were taken from very severe and rapid cases of the disease; and as microscopical preparations have been prepared from every one of the post-mortem specimens sent to me save those which arrived after decomposition had commenced, I have no reason for supposing that the results I have arrived at ought not to be looked upon as characteristic of the disease. No efforts have been made to select particular specimens for observation, or even to try to obtain the most diseased portions of the tissues and organs received; and I think it probable that had I received the same number of specimens from different localities in which the epidemic prevailed, I should have arrived at much the same conclusions. Most of the specimens were obtained from the London Hospital, and I have to thank my friend Dr. Hughlings Jackson for the facilities he afforded me in procuring them.

Case 1.—Female, aged 19 years, London Hospital. Died in collapse on the evening of July 26. Post-mortem two hours after death: Body well nourished; much adipose tissue. Rigor mortis fairly marked. Intestines full of rice-water fluid. *Lungs:* Left, 10½ ounces; right 11½ ounces; pale in front, slightly congested at bases, slightly emphysematous. *Heart:* Right ventricle and pulmonary arteries distended with blood, which was for the most part fluid; some soft and partly decolorised clots in the right ventricle. (Note by Mr. Nettleship.)

Case 2.—Male, aged 21, admitted into London Hospital on the morning of July 26. No premonitory diarrhœa; much cramp; much purging. Died in collapse on the evening of the same day. Post-mortem two hours after death: Rigor mortis well marked; muscles well developed. Large intestines empty; small intestines full of thick rice-water fluid. *Lungs:* Left, 12 oz.; right, 14½ oz.; slight patches of emphysema on front of lungs; intense congestion over the whole of both bases. Much dark blood escaped on cutting the lungs. *Heart:* Right ventricle large and flabby, contained very little blood; pulmonary arteries not distended; left ventricle contracted and empty. *Liver* much congested, of a dark reddish-slate colour. (Note by Mr. Nettleship.)

Case 3.—Child, aged 17 months, King's College Hospital. Died in consecutive fever. Post-mortem five hours after death: Intestines contained biliary matter. *Lungs* congested behind. *Heart:* Right side flaccid, empty, or nearly so.

Case 4.—Male, London Hospital. Died in collapse (twelve hours) at 5.15 p.m. August 1. Post-mortem two hours afterwards.

Case 5.—Woman, aged 60, King's College Hospital. Admitted in a state of collapse August 6. Died within an hour. No premonitory diarrhœa. No vomiting. Preparations examined twenty hours after death.

OF THE GENERAL CHARACTERS OF THE VILLI AND FOLLICLES OF LIEBERKUHN, AS SEEN IN A SECTION OF THE SMALL INTESTINE IN CASES OF CHOLERA.

It has been already stated, and all observers are agreed, that in cholera the villi are denuded of epithelium. This denudation of epithelium in the worst cases is most remarkable, and is frequently observed to have occurred from one end of the small intestine to the other. In many cases, not even a few cells are to be found adhering to the bases of the villi, and it is only occasionally that one or two are met with still adhering to any part of the free surface of a villus.

In the cases which I have examined, for the most part, the villi were not contracted, as is commonly the case in animals killed suddenly, but in many instances were found extremely elongated and narrow ; so that if the muscular fibres of the villi preserved their integrity, they must have been relaxed at the time of or immediately after death. I do not mean to assert that *every one* of the villi exhibited this character, for some were extremely short and stunted—not so much, however, from sudden contraction, but, as it appeared to me, from wasting and degeneration of the tissues of which the villus is composed.

The surface of the villi is frequently somewhat ragged and abraded, but in many cases the outline appears smooth, though wavy, exhibiting here an elevation and there a depression. The texture which formed the limit of the villus was in many cases of considerable thickness, and so defined was it that some would be inclined to regard it as distinct from the body of the villus, and would describe the appearance by saying that the " basement " or " limitary membrane " was " condensed " and " increased in thickness." But it will be shown that the appearance in question is in all probability not produced in this manner.

The villi of the cholera cases I have examined differ remarkably in size, and also in form. Even a cursory examination will convince the observer that many of these little organs concerned in the absorption of the food have degenerated so as to be past recovery. The appearance is such in many instances as to render it extremely probable that the characters observed have resulted from *slow, long-continued change*. Figs. 8, 9, 10, 11, 12, 13, are all magnified in the same degree, and have been prepared in precisely the same manner. These figures are merely outlines, but the black lines in the substance represent the form and size of the distended vessels. The follicles at the lower part of each drawing are Lieberkuhn's follicles. The villi and follicles of a child aged 17 months (Case 3) are represented in Fig. 8, and contrast remarkably in size with the other figures, all of which have been taken from the small intestine of *adults*. The same fact is noticed, too, with regard to the follicles of Liberkuhn. The variation in size and the degree of wasting observed in many of these secreting glands are very remarkable. This is well seen in Figs. 9, 10, 11, in which some glands are represented, of which but an indication remains. It has been observed that the glands differ very much in dimensions and form in the same intestine (Figs. 9, 10, and Figs. 12, 13). I think that the remarkable wasting of gland structure observed in these cases must have been a very gradual process, and it seems to me probable that in many instances it may have been going on even for years before death.

SCALE showing hundredths of an inch, as magnified by an inch object-glass, magnifying 40 diameters or 40 linear. The smallest divisions correspond to thousandths of an English inch.

FIG. 8.

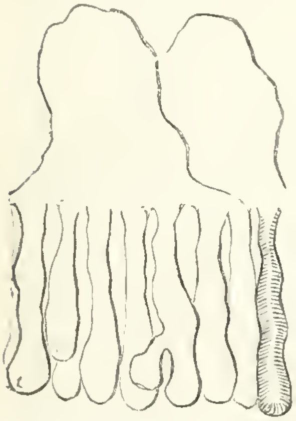


FIG. 9.

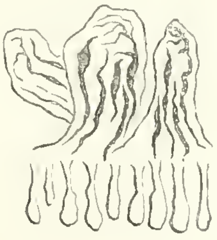


FIG. 8.—Vertical section through mucous membrane of small intestine 20 inches from pylorus. Case 3. Magnified 40 times.

FIG. 9.—Vertical section through mucous membrane of small intestine 20 inches from pylorus. Case 1. Magnified 40 times. Many of the capillaries of the villi are extremely distended. The Lieberkuhn's follicles wasted and much smaller than in health.

The outline of the glands is very irregular, and the connective tissue around them is increased in proportion. Even in some of the largest there is evidence of commencing degeneration, and the cells exhibit alterations in their characters. In many cases the cells are smaller, but more numerous, than in health. Sometimes the cells have entirely disappeared, the gland being filled with transparent glandular matter. My observations do not lead me to conclude that the cells are expelled *during* the disease, for in all cases there are follicles quite full of cells, as in Case 3, Fig. 8.

FIG. 10.

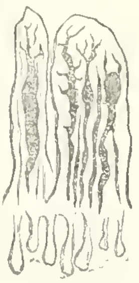


FIG. 11.

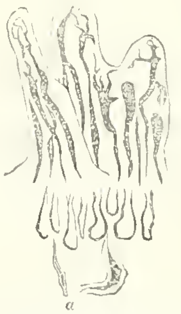


FIG. 12.

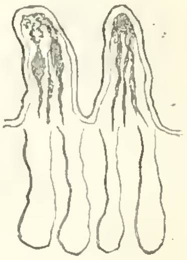


FIG. 10.—Vertical section through mucous membrane of small intestine, also from Case 1. Showing enormously distended vessels of villi and much wasted follicles of Lieberkuhn.

FIG. 11.—Vertical section through mucous membrane of small intestine. Case 2. Magnified 40 times. Showing much distended vessels of villi and wasted and shrunken Lieberkuhn's follicles. *a*, small arteries in submucous areolar tissue, containing small clots.

FIG. 12.—Vertical section through mucous membrane of small intestine. Case 5. Magnified 40 times. Showing distended vessels of villi, with complete disorganisation of capillaries and tissues at the summit. Lieberkuhn's follicles not nearly so much wasted as in the other cases.

FIG. 13.

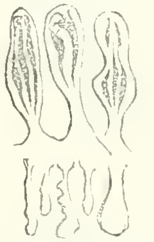


FIG. 14.

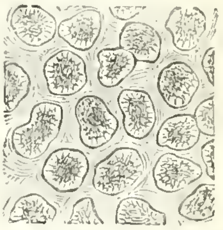


FIG. 13.—Vertical section through mucous membrane of small intestine. Case 5. Magnified 40 times. Showing irregular form of villi, with shrivelling at the base. Vessels much distended. Lieberkuhn's follicles much wasted, and varying very much in size.

FIG. 14.—Orifices of Lieberkuhn's follicles as seen from upper surface of mucous membrane. Case 3. Under a power of 40.

The wasting and shrivelling of the follicles delineated in my drawings is, I think, allied to that wasting which occurs in the gland structure of the liver in cases of *cirrhosis*, and of the kidney in chronic degeneration of this organ. In cholera, corresponding changes may be observed in parts of the mucous membrane of the stomach. Drawings of the stomach tubes will be given in other papers. As would be supposed, the degree of wasting observed differs much in different parts of the same mucous membrane, and it is not uncommon to meet with a patch of wasted gland structure surrounded by tissue which has undergone, comparatively speaking, little change. This was also noticed in the intestines of animals dead of

FIG. 15.

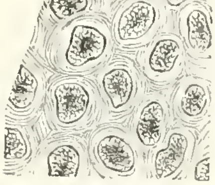


FIG. 16.

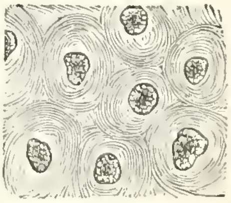


FIG. 15.—Corresponding to prep. 14. Case 1. Magnified 40 times. It will be observed that in this specimen the follicles are not very close together, although nearer than in the following figures.

FIG. 16.—Corresponding specimen, from Case 2. Magnified 40 times. It would appear as if several follicles of the mucous membrane had wasted and altogether disappeared ; thus considerable intervals existed between the remaining follicles.

cattle plague. It must not, however, be inferred from this remark that, in my opinion, there exists any analogy whatever between these two disorders.

Not only are the follicles of Lieberkuhn seen to exhibit remarkable alterations in structure when examined in vertical sections, but if we look at the surface of the mucous membrane without section we shall find that the mouths of the follicles differ very much in diameter, and the number of orifices in a given area of surface varies very much. These facts are shown in Figs. 14—18.

Fig. 17.

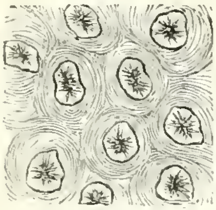
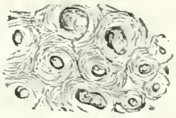


Fig. 18.



Figs. 17 and 18.—Corresponding specimens, from Case 4. Magnified 40 times. In Fig. 18, the orifices of several follicles exhibiting various degrees of wasting are represented.

These observations show that in cholera there is evidence of shrinking and wasting of the villi which *absorb* the nutrient constituents of the food, and wasting and degeneration of the follicles of Lieberkuhn, which *secrete* a vast quantity of fluid required for the solution of the nutrient matters about to be absorbed. It is probable that these changes had been going on for a long time before the patient was seized with the attack of cholera which proved fatal.

(To be continued.)

CASE OF

FATAL PERITONITIS, FOLLOWING THE OPERATION FOR THE RADICAL CURE OF HERNIA.

By JOHN WOOD, F.R.C.S.,
Assistant-Surgeon to King's College Hospital.

The interest of the following case at the present time is such that no apology will probably be deemed necessary for bringing it under the notice of the readers of the *Medical Times and Gazette.* The case, unfortunately, terminated fatally; but though the symptoms first occurred after the operation, it may, perhaps, be a matter of diverse opinion as to whether they were in consequence of the operation, or had an origin distinct from it, as I believe. It is my desire to afford such a statement of the facts as to enable every Professional man to form his own opinion thereupon.

Avery K., aged 7, a thin but apparently healthy boy, was sent up from Lincolnshire to King's College Hospital to obtain relief for a large scrotal rupture.

May 21, 1866.—The rupture was direct, on the left side, as big as a man's fist, with a large lax opening into the abdomen close above the pubis, and a thick and abundant sac. It was congenital, gradually getting larger, easily reduced, but descended when he walked about, in spite of all the trusses which had been tried.

On June 2, under chloroform, an operation with pin and wire was performed with a view to diminish the size of the aperture at the neck of the sac. At the time of the operation, I stated the probability of not being able to succeed in closing entirely so large an opening by one operation. After this operation, the patient suffered little. The discharge, at first scanty, became on the 6th more profuse, thin, and dark-coloured than usual, with more or less tenderness around the aperture.

On the 9th, the pin and wire were withdrawn, after which the discharge and soreness gradually subsided. No sickness or tympanitis occurred, the pulse was but little accelerated, and the bowels were opened easily, as usual, three days after the operation.

On the 19th both punctures had entirely healed; a truss was applied, and the boy got up and played about the ward. After some days it was found that the rupture again protruded to a little more than half the size that it was before, and that he had been playing about with his truss on and the rupture unreduced.

On the 29th a second operation was performed with wire, for the purpose of closing still further the neck of the sac and abdominal opening. In doing so, it was found that the excessive induration and toughness of the sac, and the great contraction of the hernial opening consequent upon the first operation, rendered it very difficult to pass the needle through the tissues, and to adjust the wire properly at the pillars of the ring. The usual pad and bandage were applied. At the time of the operation the weather was extremely close and sultry, with thunder. Next day a sudden and extreme change of temperature occurred—it was very cold and chill. Many of the patients in the Hospital felt it severely, and in some instances very serious symptoms (in one case fatal) followed.

On July 2, the poor boy complained of increased pain, which he referred to the middle of the abdomen; some tympanitis and tenderness on pressure were also evident. The wounds were unchanged in appearance, the scrotum and testicle free from swelling, and could be handled without pain. The tongue was tolerably clean, but slightly red at the edges. Pulse 100. Passed his water freely and without pain. The bandage and pad had been removed the day before. The wires were now carefully untwisted, and all tension removed. To have hot fomentations constantly to the abdomen, and ten minims of Battley's solution of opium every four hours. Towards night he began to vomit a clear yellowish-green fluid, and next day the stomach rejected the beef-tea and all food. Moans and complains of great thirst and pain in the stomach; tympanitis increased; tenderness great over the whole of the abdomen; face pale and anxious; respiration thoracic and somewhat laboured; tongue furred, with red edges. Bowels freely opened with a bilious motion last night, after a simple enema; scrotum unchanged; no discharge from the punctures whatever. To have a poultice placed over the lower half of belly and groins, and a turpentine stupe to the pit of the stomach; to have a teaspoonful of brandy in iced water every two hours, a piece of ice to suck at intervals, and a small enema of the strongest beef-tea with twelve drops of Battley's solution of opium every two hours.

4th.—Face and eyes more sunken; vomiting rather less; abdomen very tense and tympanitic; is evidently weaker; respiration more laboured; pulse 140 and wavering; bowels have twice returned the enemata, with a considerable quantity of feculent matter; pupils a little contracted. Yesterday a red discoloration appeared around the knees, elbows, ankles, and wrists, from congestion of the cutaneous vessels; to-day this is very marked. He had then quinine administered with the injections, and the quantity of stimulus increased. Towards night he rapidly got weaker, the breathing becoming more oppressed, and he sank and died at 11 p.m.

Necropsis (*abstract of Dr. Conway Evans' Report*).—Abdomen tympanitic; indications of recent peritonitis everywhere. Omentum and mesentery studded with minute particles of lymph, and slightly adherent to intestines. Coils of both large and small intestine adherent to each other, and more or less injected in various parts. In the lower part of the cavity a small quantity of dirty-looking fluid, with flakes of yellowish-white lymph almost puriform. Parietal peritoneum injected and ecchymosed, especially in the right iliac fossa; fewer indications of inflammation in the left iliac region than elsewhere. Colon in contact with the hernial opening (on left side) free from injection or adhesion. A small film of recent lymph closed the entrance to the sac, which was empty and contained no fluid. The liver, spleen, and diaphragm covered with patches of exudation, confined to peritoneum, the subjacent parts being free from inflammatory infiltration. Mesenteric glands somewhat enlarged; no inflammatory change whatever in the course of the iliac, femoral, epigastric, or umbilical vessels. Bladder empty, contracted, and healthy; peritoneal covering somewhat injected. Ureters healthy. A piece of ilium, about four inches long and thirteen inches distant from the cæcum, was markedly different in appearance from the rest, being deeply reddened, of almost a chocolate colour, and imbedded in copious deposit of yellowish-white lymph. On being laid open, all its coats were found thickened, softened, and intensely congested, the change being most marked in and about the mucous surface, involving a Peyer's patch; no abrasion or ulceration was found in it. This condition of the coats of the bowel ended abruptly by a well-defined border at each end, the rest of the mucous membrane of the canal being perfectly healthy. From the peculiar appearance of these four inches of the bowel, there could be little doubt that the morbid phenomena had been originally limited to this spot, and had commenced in the mucous, submucous, and muscular coats of the intestine, whence they had spread and given rise to the general peritoneal inflammation—that, in point of fact, this portion of the bowel had, at some period not long previously, been subjected to considerable pressure while incarcerated within the hernial sac. The kidneys, liver, and spleen were healthy internally. In the chest a few old bands of adhesion were found behind the left lung. The upper surface of the diaphragm on both sides, but the right especially, was more or less mottled with recently effused lymph, leading to the inference that the inflammatory process had spread through the diaphragm. The margins of the lowest lobe of the right lung were likewise slightly fringed with soft lymph. The left lung was crepitant throughout, but the lowest lobe of the right lung was nearly consolidated, of a deep red colour, and sank in water (red hepatisation). No trace of tubercle. The pericardium contained about an ounce and a half of a clear yellowish fluid. No adhesions or white spots. Walls and valves of the heart healthy. The left ventricle contained a small fibrinous coagulum and black clot. The right chambers were filled by a large white fibrinous clot, extending into the divisions of the pulmonary artery, and moulded upon the pulmonary valves. This was of firm consistence, and so tough in its structure and attachments as to sustain the weight of the heart without giving way in the slightest. In the aorta also was found a fibrinous clot. On examining the parts operated on, it was found that in the last operation the sac had not been perforated at all, but that the wire had passed through the sides of the hernial aperture altogether outside it. There was no wound of the peritoneum whatever. The membrane forming the neck of the sac was puckered up into longitudinal folds or plaits, which were glued together by a recently formed adhesion at the internal orifice. When this was pushed through, the point of the little finger was admitted. The peritoneum immediately round the inner face of the opening was normal in colour, smooth, and free from lymph deposit and adhesions, as also was the descending colon, which lay immediately in contact with it. About four inches above the hernial opening on the parietal peritoneum, there was some of the same kind of ecchymosis which was seen most extensively on the opposite side of the abdominal cavity. The femoral and iliac vessels, the epigastric and spermatic vessels, and the vas deferens, with their surrounding areolar sheaths, were quite healthy and unchanged, not even congestion being visible, throughout their whole course. The testicle and epididymis were perfectly normal. On opening the fundus of the sac, it was found to present an uncongested and generally smooth surface, with here and there a deposit of lymph, apparently not of very recent date. On its front wall was a thickened raised band, about half an inch wide, placed longitudinally down the sac, very tough and resisting, and reaching up to its neck, where it was connected with and lost in the hard indurated tissues, which bound together in one resisting felt-like mass the structures forming the tendinous openings around the neck of the sac. This was evidently the result of the first operation.

Conclusions.—The necropsis shows clearly that the peritonitis commenced at and spread from the inflamed knuckle of bowel near the cæcum in the right iliac fossa, and not from the sac of the hernia nor from any of the parts implicated in the operation. The congested loop of ilium, although only thirteen inches distant from the cæcum, had apparently been incarcerated in the sac of the hernia at no distant period, probably between the two operations, when the rupture had descended under the truss pressure. At this time most likely the inflammation had been set up in its substance, and upon its return into the abdominal cavity at the time of the second operation had spread to the whole peritoneum. This was possibly caused, or at least aggravated, by the unhealthy state of the ward at the time, as shown by the serious symptoms present in other cases of operation (from pyæmia and erysipelas) in the week following. The rapidity of the disease, the discoloration of the joints, the hepatisation of the right lung, and the clots in the heart and aorta, point also to the presence of morbid blood changes in the system. Finally, I should remark that the above is the second case of operation for the cure of hernia that has terminated badly in my own practice—the first, also a Hospital case, from pyæmia, six years ago—making the percentage of deaths during eight years, in 160 cases, about one and a half.

4, Montagu-street, Russell-square, W.C.

CASE OF REDUCTION OF DISLOCATION OF THE HIP-JOINT.

By R. E. POWER.

J. M., aged 28, very muscular, a prisoner employed on the public works at Portsmouth, was admitted into the Prison Infirmary about noon, on February 3 last. He had been thrown down by a falling mass of earth, which struck him on the left shoulder; he fell on his right side, and the lower extremities being crossed, the right femur was dislocated on the dorsum of the ileum; he was seen at once by Dr. Clarke and myself, Medical officers to the prison.

On examination the right leg was found to be shortened nearly two inches, adducted, inverted, the thigh crossing the opposite side to some extent; the head of the bone could be distinctly felt lying on the ileum, superior and posterior to the acetabulum; the muscles on the posterior aspect of the thigh were contracted into a prominent mass.

Within an hour from the receipt of the injury, the reduction of the dislocation was effected by Dr. Clarke, without any mechanical or manual assistance, in the following manner:—The patient was placed on a hard bed, chloroform being administered by me; thus, the ankle being grasped with the right hand and the knee with the left, the leg was flexed on the thigh, and the thigh on the pelvis, as completely as possible. The ankle was then drawn inwards, and the knee pressed outwards and backwards, when the luxation was reduced with a distinct jerk and snap; the whole time occupied by these manipulations did not exceed twenty seconds, and there was not the slightest mechanical or manual assistance given, even to the extent of holding the patient steady.

The first apparent result of placing the limb in the position described was the straightening out of the contracted bunch of muscle, so that the contour of the limb assumed its normal aspect; at the same time the head of the bone could be felt to have left its previous position, and to have moved close to, and just behind, the acetabulum, communicating to the hands a sensation of jerking and rolling from the moment that flexure was commenced. There is not any reason to suppose that in this case there was any condition present to render the reduction of the dislocation easier than in similar injuries; on the other hand, there were grounds for an opposite prognosis, as the patient was remarkably muscular, and in perfect health at the time of the accident. His recovery was slow, pain on moving the limb remaining for a considerable period, and he was not discharged until the end of the eleventh week from the date of admission, showing no doubt that the dislocation was caused by excessive violence, bruising and lacerating the tissues round the joint; a complication that in the old method of reduction by multiplied force might as justly be attributed to the means used to effect a cure as to the original injury.

Portsea.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

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UNIVERSITY COLLEGE HOSPITAL.

NOTES ON CASES OF CHOLERA.

(Cases under the care of Dr. WILSON FOX and Dr. SIDNEY RINGER.)

THIS Hospital has had a large share of cases of cholera during the present epidemic. Four cholera wards have been opened, and a Resident Superintendent—Mr. Joseph—has been appointed to look after the patients. To this gentleman we are indebted for the chief facts we now relate. The patients have been under the treatment of Dr. Fox and Dr. Ringer. Eighty-four patients have been taken into the wards, and of these about sixty were genuine cases of cholera. There have been thirty deaths.

The first patient was admitted on September 1; two were admitted on the 3rd, two on the 4th. On the 26th there were seven. The cases are still coming in. There were five on October 2, and on the day of our visit—the afternoon of Wednesday—two patients had been taken in. The severity of the disease is, however, now decidedly less.

At first the patients were treated without drugs, but the mortality was so great that something more was done. In one or two cases sulphuric acid was given. Dr. Fox tried the cedron bean. "The seeds of *Simaba cedron*," says Dr. Scoresby-Jackson, in his work on Materia Medica, just published, "a tree of New Granada, are used in Central America as a febrifuge and also as a specific against the bites of venomous snakes." This plant is of the same natural order as quassia. The bean in powder was tried in widely varying doses, from five grains to two drachms; or two drachms of it were given immediately, and it was repeated every hour in drachm doses. It was prescribed in about fifteen cases, but its effect was believed to be nil. Red gum was tried. This (see Scoresby-Jackson, op. cit. p. 838) is also called Botany Bay Kino, and is produced by the Eucalyptus resinifera, the iron bark, a native of Australia and Tasmania. Twenty grains of this drug were given frequently, after every fluid motion in choleraic diarrhœa and in true cholera. As an astringent, Dr. Fox speaks highly of it, and thinks it helped to restrain the discharges. Starch enemata were used occasionally. In two cases injection into the veins was tried. A pint of water at a temperature of 104° Fahr., containing twelve grains of carbonate of soda, was injected. In one of the patients two pints were thrown in. The injection quieted him—he had been delirious—but he died in about seven hours. The other patient died during the operation.

However, Mr. Joseph tells us that most of the cases have been treated without drugs. We heard no positive statement made as to the results of different methods of treatment, but we came away with the impression that the no-drug treatment was the one most in favour. Hot bottles to the feet, mustard plasters to the abdomen, plenty of fluid to drink, form part of the treatment in all cases. The drink is iced water or toast-and-water with salt.

THE MIDDLESEX HOSPITAL.

CASES OF CHOLERA.

(Under the care of Dr. GREENHOW.)

In reference to the following cases Dr. Greenhow remarks that, together with one already published in our Hospital Reports, they make five cases which have recently been treated under his care on the same plan, being all the really severe ones which he has had the opportunity of treating during the present epidemic. Four of these have recovered. He does not, however, mean to infer from this fact that the same measure of success is to be generally anticipated from the same mode of treatment, for the present number of cases is far too small to justify any such deduction. But in the epidemics of 1848-9 and 1853-4, in the earlier of which especially he had ample opportunities of comparing its results with those of other modes of treatment, he certainly found this plan very successful, as fully two-thirds of his cases in complete collapse recovered.

Case 4 was one which he at first sight regarded as hopeless, and cases 1 and 3 were about as bad cases as he had ever known to recover, the former having been 50, and the latter 27, hours in Hospital before any radial pulse could be felt. The case published in August was somewhat less severe, and case 2 was decidedly less so, never having passed into the state of perfect collapse, and the greenish hue of the vomit, one of the earliest signs of improvement, having appeared shortly after the patient's admission to the Hospital.

One unquestionable advantage of this mode of treatment, according to Dr. Greenhow's experience, is that patients rarely or never suffer from the secondary fever so common among cholera patients who have recovered from collapse after the use of stimulants and opiates. None of his cases have taken a single dose of opium or of stimulants, with the exception of a small quantity of wine used in one case for making wine whey. He attaches great importance also, as regards the successful termination of the cases, to the very cautious administration of food during convalescence. During the period of collapse he altogether withholds food, and, as will be observed from the history of the cases, for some days after the establishment of reaction allows only the blandest liquid diet in small quantities.

Case 1.—C. H., aged 36, an exceedingly stout woman, was admitted into the Hospital at 12.30 at noon, on September 24. Had been suffering from diarrhœa for four days, and, notwithstanding the use of some astringent medicine, had been purged six or seven times on the 23rd. Four hours previous to admission cramps and sickness had set in, accompanied with frequent and profuse watery purging, and had continued until she was brought to the Hospital. On admission the surface of the body was cold; the tongue and breath were also cool. The face was livid, the countenance sunken and anxious, and the hands and arms blue and shrivelled. The pulse could not be felt either in the radial or brachial artery, and was so feeble in the carotid that it could not be counted. Temperature in axillæ 95°. To be wrapped in hot blankets. Hot poultices of linseed and mustard to be applied to the loins and abdomen. Ice to suck. Haust. potass. cit. effervesc. every hour; calomel. pp. gr. j. every fifteen minutes. 9.45 p.m.—Surface clammy and cold; tongue and breath cold; incessant jactitation; lies in bed groaning from pain in the back and loins, and complains also much of the frequent cramps and of pain in the cardiac region; respiration gasping; has been once purged since admission; the evacuation resembling thin water gruel, of which the flocculent part has subsided to the bottom, leaving a supernatant, clear, slightly albuminous fluid. Pt. calomel, etc.

September 25, 8.40 a.m.—Has slept very little. Has been four times purged and has vomited twice during the night, the vomit resembling thin beef-tea, and the stools being watery, but not copious. Still has cramps in abdomen and legs. Hands remain cold, blue, and shrivelled, and face dusky, but in these respects patient varies from hour to hour, being at times notably colder, duskier, and more sunken than at others. Pulse cannot be felt at the wrist. Pt. 9.45 p.m.—Hands continue cold, and pulse at wrist imperceptible. Tongue warm and moist; feet also warm. Has several times vomited watery fluid like that already described. Has slept for an hour, and is less restless. Haust. potass. cit. effervesc. every two hours; calomel. gr. j. every hour. May have a few spoonfuls of milk or toast-and-water.

26th, 8.40 a.m.—Has not slept. No purging, but has vomited four times during the night, the earlier vomits resembling very thin chicken-broth or beef-tea, but the last being slightly greenish, and containing the milk she had been allowed to take. Tongue moist and warm. Has passed no urine since admission. Omit calomel; continue effervescing medicine. May have a few spoonfuls of beef-tea or milk. 2.30 p.m.—Has passed one small, loose, greenish, and slightly feculent stool, and has been sick several times, the vomit being watery, of a green colour, and mixed with the beef-tea she had taken. The vomitings are preceded by flatulence and pain at the epigastrium. Feet warm; both feet and legs exquisitely tender. Tongue moist. Radial pulse can be felt, but not counted. Continue effervescing medicine, ice to suck, with a little milk or beef-tea.

27th, 10 a.m.—Has slept better; face flushed. Has passed two liquid, dark-brown feculent stools, and has also vomited twice. Has passed urine twice (in small quantity) during the night. Catamenia have also appeared a week before the proper time. Pulse at wrist 90. Much thirst; no appetite.

28th.—Has slept well; pulse at wrist 84; no sickness; has passed three loose feculent stools. Beef-tea and arrowroot; two eggs; milk.

29th.—Pulse 88; bowels still loose; stools feculent; complains of hunger. Omit medicine; may have a little crumbled bread.

October 3.—Is going on well; pulse 72; face and neck covered with a roseolous rash.

6th.—Quite convalescent.

Case 2.—E. A., aged 27, married woman in fifth month of pregnancy, admitted at 7 p.m. on the 24th of September. Had had diarrhœa and pain in the abdomen from the 19th inst. Vomiting had supervened at 11 p.m. on the 23rd, and cramps at 5 o'clock on the 24th, and she had been frequently purged and sick during the day. On admission the face and extremities were cold, and the breath cool. Temperature in the axillæ 98°; severe cramps, chiefly in the legs. To be wrapped in hot blankets. A hot linseed and mustard poultice to be applied over the abdomen. Ice to suck. Haust. potass. cit. effervesc. every hour; calomel. pp. gr. j. every half-hour. 9 p.m.—Has twice since admission vomited some watery fluid of a slightly greenish hue, and has passed one copious rice-water stool. Radial pulse 100; can barely be felt. Respirations 24; hands and feet cold; tongue much injected, dry in centre; voice husky; frequent yawning.

September 25, 8.40 a.m.—Pulse 108, very small and feeble; eyes sunken; voice husky; frequent cramps in legs; has once vomited a small quantity of watery greenish fluid, and has been three times scantily purged, the evacuations being quite watery but of a greenish colour. Continue effervescing medicine; calomel gr. j. every hour. 9.15 p.m.—Has passed four watery greenish stools, and has also been sick several times. Is sleeping quietly; has not passed urine since admission. Omit calomel; may have milk or tea by spoonfuls.

26th, 8.40 a.m.—Has slept well; been twice purged; stools watery, but green and slightly feculent; no cramps nor sickness; pulse 108, thready; much thirst; tongue injected and dry in the centre; has passed urine once in small quantity with a stool; may have a little beef-tea.

27th.—Has slept well; surface quite warm; pulse 96; has been several times purged, the stools being loose, but feculent and dark-coloured. Has passed urine three times. The first passed had a specific gravity of 1012, was highly acid, and contained about 5 per cent. of albumen; the second contained a trace of albumen, from which the third was quite free. The two first specimens changed to a dark purple hue on being treated either with strong hydrochloric or nitric acid. Beef-tea thickened with arrowroot, milk and eggs.

29th.—Progressing favourably; enjoys her beef-tea and eggs; may have some bread.

October 4.—Convalescent.

Case 3.—S. H., aged 6, admitted at 10 p.m. on the 26th of September. Had been quite well until noon on the day of admission, when she was seized with headache, vomiting, and purging, and had been sick and purged six or seven times previous to being brought to the Hospital. On admission her body generally was cold, especially the hands, feet, and legs. The face was dusky, the hands blue and shrivelled. The tongue and breath were decidedly cold; the pulse was imperceptible at the wrist, but 119 by auscultation; voice weak and husky. She moaned often, and complained of pain in the abdomen and of cramps in the feet and legs. To be wrapped in hot blankets. A hot linseed and mustard poultice to the epigastrium. Ice to suck. Haust. potass. cit. effervesc. every hour; calomel. pp. gr. j. every half-hour.

27th, 10 a.m.—Still pulseless at wrist; hands, arms, and shoulders of a purplish-blue colour; cool, but not absolutely cold. Aspect much sunken; pulse by auscultation 120. Tongue moist and warm. Has been thrice purged since admission, the stools resembling very thin sago containing small brown flocculi. Has vomited several times a clear watery fluid, which on the last occasion had a slightly greenish tinge. 1.45 p.m.—Pulse just perceptible at wrist, but cannot be counted; by auscultation, 124. Respirations 24, tranquil; tongue clean and warm. She lies prostrate and apparently only half conscious, but can be roused by questions. Has been four times purged and has vomited several times, the stools and vomit being exactly of the same character as those seen at the morning visit. 8.30 p.m.—Pulse at wrist 120, thready and feeble; skin warm. Has twice vomited green watery fluid, and has been thrice scantily purged, the stools being very thin but slightly bilious. Has passed no urine since admission. Continue the calomel gr. j. every hour.

28th.—Decidedly improving. Radial pulse 112, quite distinct. Omit calomel.

29th.—Has slept badly, and been very restless and delirious. Pulse 90, thready. Has been purged four times, the stools being watery, but green and slightly feculent. Has twice passed urine, sp. gr. 1012, acid, and containing about 5 per cent. of albumen. On being treated with either strong nitric or hydrochloric acid, it changed to a purplish colour, but without deposit. Thirst continues; has taken a few spoonfuls of milk, but objects to it.

30th.—Slept much yesterday during the day, but passed a sleepless, delirious night, and often endeavoured to get out of bed. Has been four times purged, the stools being thin but more feculent. Has thrice passed urine, of which only the first showed a trace of albumen. All the specimens were acid, and of sp. gr. 1010 to 1011; they contained abundance of chlorides, and did not give the purple reaction with either nitric or hydrochloric acid. No return of sickness; skin cool; temperature in axillæ 97°; eyes sunken; complains of pain in chest; tongue furred and somewhat dry. Refuses milk and beef-tea. To have a teaspoonful of white wine whey from time to time.

October 1.—Was restless during the early part of the night, but slept well towards morning. Pulse 78; respirations 21; Countenance anxious and languid; has been twice purged; the stools still thin, but feculent. Tongue remains furred; she has taken the whey, but refuses other food, and immediately rejected some egg and milk administered during the visit.

2nd.—Has slept better; pulse 84. Has been three times purged, but stools are feculent and only semi-fluid. Urine this morning sp. gr. 1015, shows a trace of albumen. Tongue furred; much thirst, and she still craves for iced water. Two ounces of sherry made into wine whey to be given during the day, with small quantities of beef-tea, egg, or milk, as she can take them.

3rd.—Much better, and has slept well; pulse 72; skin cool. Tongue less furred, and she has taken beef-tea with relish.

6th.—Going on quite satisfactorily.

Case 4.—R. P., aged 33, clerk, admitted at 9.45 a.m. on September 29. Had been tramping about the country, and been badly fed for some months; had slept in the casual ward of the Stepney Workhouse on the night of the 27th; spent the day of the 28th in looking for work about the docks, and had slept last night in the casual ward of St. Giles's Workhouse. Had been restless during the night, but had remained free from any definite symptoms of illness until about three hours before his admission, when he suddenly became sick, vomited, and was violently purged, his bowels having acted only once, and quite naturally on the previous day: had been four times profusely purged before his admission, and had been sick about as often. Cramps had begun at 8 a.m.

On admission, the face was dusky and cold; the eyes sunken; the expression grave and anxious; voice husky and feeble; complained of exhaustion and of insatiable thirst; radial pulse imperceptible; pulse by auscultation 120; respirations 24, gasping; heart's action very feeble; surface generally cold; tongue and breath cold; temperature in axillæ, 95°. Had passed the usual quantity of urine at 6 a.m.; none afterwards. On admission, had a very copious watery stool of sp. gr. 1010, alkaline, and slightly albuminous. Calomel. pp. gr. j. every fifteen minutes. Haust. potass. cit. effervesc. every half-hour. Ice to suck, etc. 1.10 p.m.—Has been three times purged, amounting in quantity to about three pints, and has also once vomited very copiously. Countenance very dusky; features shrivelled and sunken; hands cold, shrivelled, and of a dusky blue colour; pulse at wrist imperceptible; respiration gasping; voice husky and whispering; intellect quite clear. To take the calomel every ten minutes. 3 p.m.—Less dusky; feet decidedly warmer; pulse still imperceptible at wrist; respiration continues somewhat gasping. Has neither been sick nor purged, nor had any cramps since one o'clock, but complains of thirst and of præcordial oppression. Died rather suddenly at 4.20 p.m. without any return of vomiting or purging, little more than nine hours after the accession of the first symptoms of cholera.

At the post-mortem examination made nineteen hours after death, the rigor mortis was strongly marked, and the body still slightly warm. The lungs were found to be generally congested; but anteriorly and at both apices there were anæmic patches. The heart contained on both sides dark, tarry-looking fluid blood; no clots. The mitral valve was thickened, puckered, and contracted. The liver was small and anæmic; the spleen and kidneys normal. The stomach was congested, and contained about a pint of fluid similar to that voided during life. The intestinal canal was generally pale, and contained much fluid, similar to that found in the stomach.

BIRMINGHAM GENERAL HOSPITAL.

CASE OF CHOLERA—RECOVERY.

(Under the care of Dr. WADE.)

[Communicated by Dr. EDW. CASEY, Resident Medical Officer.]

THE following case is recorded as the solitary instance of well-marked Asiatic cholera which has at present occurred in Birmingham:—

E. M., lives at Dudley-street, Birmingham, which town she has not left for some months. Aged 34, married, of stout habit. On August 31 she was seized with diarrhœa and bilious vomiting. The vomiting ceased and the purging became slight on September 1, and on September 2 she was free from both. At 5 a.m. September 3 purging and vomiting returned with great violence, accompanied with great pain in the bowels. At 6 a.m. cramps in the legs set in. By ten or eleven o'clock she had become very faint and short-breathed and scarce able to speak. After this she mended a little and was admitted. 11.30 a.m.—At this time her skin, tongue, and breath were quite cold, cheeks collapsed, nose pinched, eyes shrunken, with dark areolæ, lips blue, voice hollow and feeble, radial pulse quite absent. She was suffering very much from cramps in the arms and legs, but not in the abdomen, except in the epigastrium, from, as she supposed, the violence of the vomiting. There was no tympanitis. Diarrhœa had now ceased, but vomiting of much colourless liquid holding white shreds in suspension continued. The breathing was quick, but the breath-sounds normal. She was wrapped in hot blankets—at first dry hot, but afterwards wet—and four or five ounces of brandy was given, which was in part at least rejected.

The skin and tongue and breath soon became warmer, but the temperature of the latter varied very much. The radial pulse could now be felt, but was noticed to become almost, if not quite, imperceptible during the exacerbations of cramp. At 11.45 noon the thermometer in the axilla registered 99·3°. Stimulants were now discontinued, and ice and effervescing mixture ordered. At 12.30 p.m. temperature was 97·1°; pulse 121; respiration 28. In the mouth the thermometer rose to only 91°, but it was chilled probably by the breath. At 1.30 she passed a moderately copious motion of the colour and consistence of boiled rice. On microscopic examination this was found to consist almost wholly of very numerous cells, or rather, perhaps, free nuclei, measuring about ·004‴, mostly with bright nucleoli obscured, however, by oil granules. There was some granular matter, and several aggregations of the cells were found having the size and shape of intestinal villi. She had now in great measure recovered from collapse, and the pulse had increased in strength. At 2.30 temperature 98·9° in axilla; pulse 120; respiration 36. At 4, temperature 97·8° in axilla; pulse 118; respiration 36; medicine discontinued. At 7, temperature 96·8° in axilla, 99·4° in mouth; pulse 104; respiration 36. At 10.30, temperature 98·2°; mustard poultice applied to loins.

Sept. 4.—10.30 a.m.: temperature 98·2°; pulse 90; respiration 20. 10.30 p.m.: temperature 98·6°; pulse 80; respiration 20.

5th, a.m.—Temperature 98·2°; pulse 70; respiration 20.

On Sept. 4, at 5 a.m., urine was passed for the first time since the attack.

Convalescence was now established and proceeded rapidly.

12th.—Has passed about half a pint of blood by stool, and has now pains in the back and abdomen. It is her menstrual period.

ST. GEORGE'S HOSPITAL.

AMPUTATION AT THE SHOULDER-JOINT FOR A TUMOUR, PROBABLY MALIGNANT, CONTAINING CYSTS—DEATH.

(Under the care of Mr. HOLMES.)

THE patient, a widow, aged 59, very stout, but of healthy appearance, applied at St. George's Hospital as an out-patient in June, 1865, presenting a large swelling of only six weeks' known duration, situated at the back of the left arm, underneath the triceps muscle, about three inches below the head of the bone. It was tapped with a grooved needle, and about three ounces of clear yellow serum, exactly like that of an enlarged bursa, flowed out. This, however, still left a good deal of enlargement, deeply seated in the arm. She was directed to come again when the tumour had refilled, and it was then determined to tap the cyst with a common trocar, and if the swelling was due to a cyst only, to inject it with iodine. She was accordingly admitted as an in-patient in July, the tumour having become much larger and harder, and on July 11 she was brought under the influence of chloroform, and a common hydrocele trocar was thrust deeply into the tumour in three different parts. As not a drop of fluid flowed from any one of these punctures, it became clear that the previous cyst was only an incidental and insignificant part of the disease, and that there was a solid, and probably a rapidly-growing, tumour deep under the muscles. At that time, however, she was not suffering sufficient inconvenience to render her willing to submit to any serious operation, or even to justify the proposal of such a measure. The tumour grew, however, after this time at first gradually and afterwards more rapidly, and she reapplied in the early part of September, anxious to submit to anything necessary to get rid of the disease. The tumour was now of very large size, extending quite up to the head of the bone, and projecting to a great extent in the axilla, so as to come round to the situation of the vessels. The triceps and deltoid were much raised by it. There was much pain, and the arm was useless. The pain was not only in the part, but also shot down to the fingers. On consultation, it was decided that the only prudent course would be to amputate at the joint. It would, on the one hand, have probably been feasible to reduce the bulk of the tumour by tapping, as a good part of it now seemed fluid, but the experience of the former tapping showed that this would do no permanent good. On the other hand, to attempt to extirpate so large a mass in so deep a situation, and so close upon the nerves, vessels, and shoulder-joint, would probably only end in disappointment, or in fatal injury to the arm. In this opinion Mr. Adams, of the London Hospital (whom the patient had consulted privately), was said to concur. Accordingly, on September 21, the arm was amputated at the shoulder-joint. As the tumour spread so high up into the axilla, no flap was taken from the inside. In cutting the first flap out of the deltoid, a large cyst was opened, a portion of its wall, as large as a half-crown, having been shaved off. No great quantity of blood was lost, the subclavian artery being securely held by Mr. Brodhurst. As many as thirty vessels required the ligature. After the completion of the operation, the remains of the cyst were dissected out of the flap. The parts came together without any tension, forming an ample soft covering. She had no subsequent hæmorrhage, and went on well for the first day; then the pulse began to increase in rapidity and decline in power, she suffered a good deal from vomiting, became excited, and at last a little delirious, and died four days after the operation. No post-mortem examination was permitted. It had been noticed, when she was previously under chloroform, that the pulse had failed suddenly, and it was probable that the heart was in a condition of fatty degeneration. The tumour consisted of some lobes of soft solid matter, presenting the usual characters of encephaloid cancer, surrounding, but not connected to, the humerus, a few small cysts, and one much larger one, on the walls of which the axillary artery and nerves of the plexus were spread out, and which extended so far upwards as to be in actual contact with the capsule of the joint. It would, therefore, have been quite impracticable to dissect out the whole of the disease.

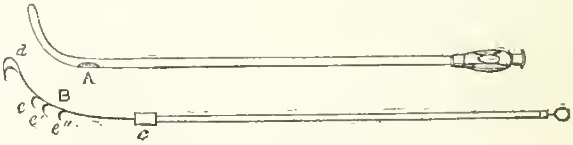
KING'S COLLEGE HOSPITAL.

NEW INSTRUMENT FOR REMOVING THE SMALLER FRAGMENTS OF CALCULUS AFTER THE OPERATION OF LITHOTRITY.

(By Mr. JOHN WOOD.)

WE have had lately the opportunity of examining an ingenious instrument devised by Mr. Wood, at King's College Hospital, with which he proposes to remove the detritus remaining in the bladder after the calculus has been crushed.

The instrument is represented in the annexed woodcut:—



A. Opening in the silver catheter for the passage of fragments.
B. A piece of watch-spring carrying the scoop *d* and catches *e e' e''*.
C. Piston.

It consists of a silver catheter (of which several sizes have been made), having a large oval opening on its convex surface at A. Within this works a stout piston-rod packed with cork at C. Attached to the extremity of this rod is a piece of watch-spring, which moves in the bend of the catheter and carries at the end the scoop *d*, and in the middle the small catches *e e' e''*, the object of these being that when the sedimentary water in the bladder is pumped out by the piston, the small fragments and particles of stone being thus brought by the suction to the opening in the catheter, they may be caught and withdrawn by the scoop and catches placed on the flexible termination of the piston.

DR. BARNES has, owing to his increasing Professional engagements, resigned the appointment of Medical Officer of Health for Shoreditch. The vacancy will take place at Christmas next, as Dr. Barnes did not think it right to retire during the prevalence of the cholera epidemic.

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Medical Times and Gazette.

SATURDAY, OCTOBER 13.

THE LATE INTRODUCTORY ADDRESSES.

That printed matter requires space, and is not indefinitely compressible, and that a journal of a given number of pages affords only a certain amount of space and cannot contain more than a given quantity of matter, are stern hard facts perpetually and peremptorily hurled at us by our printer, and their 'inexorable logic" is never more unpalatable than at the opening of the Winter Session of our Medical Schools. It is with real regret that we are forced to admit that it is out of our power to give our readers more than sample extracts from the various able addresses delivered on that occasion. We would willingly give a full *résumé* of each address, and some we should be only too happy to print in full. But the necessities of weekly journalism prescribe our limits, and we are reluctantly compelled to devote to the subject only a very inadequate number of columns, and that gained by the sacrifice or postponement of other important matter. We regret this the more because, though many, if not all, of these addresses will certainly be published separately, they will not thereby attain the amount of publicity that would have attended their appearance in a Medical journal. And they are always noteworthy and interesting on many accounts; they emanate from men of mark and position in their Profession and their respective Schools, and are the result of no light expenditure of time and thought in their preparation. It is interesting to note the various ways in which such men will use an opportunity so well worn and, as some may think, so exhausted as the giving of an October Introductory Lecture. And these addresses are of special interest as serving to indicate the set of the current of opinion on the subject of Professional education, and as showing the manner and degree in which that tendency is governed or modified in the several Schools.

Most of the addresses this year appear to have been sound, practical, more or less eloquent exhortations to diligence. "Whatsoever thy hand findeth to do, do it with thy might" is their text, and we are glad to observe that, after anatomy, clinical study, bedside work, is that most generally and forcibly urged upon the student. This must lead to clinical teaching being more fully and systematically carried out in the several Schools. At the Charing-cross School the lecturer thought it necessary to relieve occasionally the strain upon the attention of his audience by the introduction here and there of remarks which might perhaps raise a smile; and at St. Mary's an apt use was made of the opportunity to glorify the School and the staff. Generally speaking, the addresses were well worthy of, and an honour to, the occasion, and Mr. Savory's was a most able and eloquent exposition and defence of the position that Medicine holds among the sciences. At Guy's the lecture was given by the distinguished President of the Hospital, Sir Lawrence Peel. This is not the first time, we believe, that the introductory address at that School has been given by a layman, and it is to be wished that the other Schools would now and then follow the example thus set them. It could not fail to be highly instructive as well as interesting to ourselves to obtain sometimes in this way the opinions of able laymen on our Professional position, studies, and Schools; and their judgment and advice would on some points probably have greater weight with students than the opinions of their daily teachers. Sir Lawrence Peel's address was a most admirable and useful one. His text may be said to have been "Work and pray," and while giving excellent advice to the students on their conduct and studies, he eloquently and generously defended the Profession from some of the absurd charges at times made against it.

Very little allusion seems to have been made by any of the lecturers to the subject of preliminary education. Dr. Fincham, however, spoke in terms of high approval of the regulations lately passed by the Medical Council on this point. He does not regard with any fear or regret the fact that the requirement of a somewhat high standard of preliminary education will keep some men out of the Profession; but, on the contrary, and we think very justly, considers that this effect will be a boon and advantage to the Profession generally, and to those young men themselves. His concluding words on this subject are well worth quoting—"Many a young man whose education has been neglected, or who, from some cause or another, has an inaptitude for intellectual pursuits, has cursed the day on which he entered one of those professions for the right study and practice of which a considerable amount of intellectual training is necessary. Such an one might have made a capital farmer or a first-rate colonist; but a Doctor or a lawyer he never should have been."

With reference to this subject, and to the necessity and value of what is usually understood by the term "a liberal education," we must say that we have been much struck by the tone of an address on "Pharmaceutical Ethics," delivered by Mr. Joseph Ince during the late sitting of the British Parmaceutical Conference.(a) Mr. Ince is most earnest and eloquent in praise of a classical education; and while we are being treated every now and then to tirades against the "gerund grinding" of our Schools, and to recommendations to substitute physical science and natural history for Latin and Greek, Dr. Foster, of Birmingham, being one of the most earnest and able advocates of such a change, it seems that the pharmaceutists are hoping for the time when they may make "Virgil and Euclid the touchstones" for a preparatory examination. For ourselves, we must confess that, though we do not love physical science and natural history less, we are old-fashioned enough to love Greek, Latin, and mathematics more; and while we heartily wish that the pharmaceutists may realise their "good time coming," we must also express the hope that it will never happen in such a case that the preliminary education required of the chemist is more "liberal" than that demanded from the Medical student.

PROGRESS OF CHOLERA IN LONDON.

In accordance with an intimation publicly given by the Registrar-General last week, the issue of daily returns of the deaths from cholera in the metropolitan districts, which was so judiciously commenced at the beginning of August, is now discontinued.

While, in common with the Mansion-house Committee and the press generally, we cannot but regret the cessation of the returns, which have been invaluable to the Health Officers of London, we hesitate to join in the censure which has been somewhat unsparingly administered to a public department, the head and front of whose offence amounts to this—that, having voluntarily accustomed us to the regular knowledge of the progress of cholera day by day, it now retires from its self-imposed office of daily monitor, leaving us bewildered by the sudden lapse of a certainty to which we have become habituated.

(a) *Pharmaceutical Journal and Transactions*, September, 1866.

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We are, like other people, of course unaware of the reasons which have influenced the Registrar-General's decision; but those of us who have been brought into communication with his department officially at ordinary seasons know that there is abundance of work always going on there, and it may be it has now been discovered that the additional labour involved in a daily return was retarding the progress of the regular business of the office.

The fact is that the Registrar-General has done so much to advance public hygiene that it is taken for granted he is the proper person to look to for information on all emergencies, whereas in reality the Privy Council is the department specially charged with the functions pertaining to sanitary administration, and its Medical officers should be the medium of communication on all points necessary for the guidance of the local authorities, Mansion-house committees, and so forth.

The Privy Council, however, contents itself with elaborate reports long after date, and leaves to another department duties which are not fairly chargeable thereupon; and it is undeniable that in the worst periods of the present epidemic the Medical Officers of Health have had to rely almost exclusively for assistance upon the information always freely accorded by the Registrar-General. And it is precisely because we know the willingness of the Registrar-General on all occasions to meet the wishes of the Health Officers that we venture to urge him to reconsider his decision and continue his daily return. If his staff is not sufficiently strong to bear the extra pressure, we submit that the Government ought to reinforce him to any extent rather than that, through want of timely intimation of its presence, cholera should be allowed again to make head amongst the inhabitants of this city. The Registrar-General and Dr. Farr have done such good service hitherto that we cannot hear of their abandoning the field which they have occupied as voluntary substitutes for those whose duties are left unfulfilled.

It must be admitted that the course which the epidemic is taking is calculated to excite grave misgivings. The habit of epidemics is to follow a tolerably uniform law of increase and decline, but this cholera seems to be following a new law of its own; its increase was quite *en règle*, but its vitality will not allow it to die easily, according to precedent. Thus, running back for a few weeks, we had first 198 deaths, then 157, next an increase to 182, then an abatement to 150, followed by an increase to 177, and in the last week a rise to the same number as three weeks ago—182. And, as has been remarked, the most disquieting feature of the present stage of the epidemic is its evident tendency to spread. Last week we showed how the pressure of cholera had passed gradually from the Eastern districts and become distributed over the other groups; and we still further illustrate this diffusion as exhibited in the return for the subsequent week:—

	Weeks ending			
	Aug. 4.	Sept. 6.	Sept. 29.	Oct. 6.
West districts . .	1	3	7	9
North districts . .	4	8	20	20
Central districts .	3	5	16	17
East districts . .	87	61	31	28
South districts . .	5	23	26	26
	100	100	100	100

Here we can note the rapid development of cholera in parts which two months ago, when the epidemic was at its height, were comparatively free. Judging by the difference in the ratio of the last two weeks, the Western districts are now in the greatest danger. Six deaths occurred last week in one sub-district (St. Paul, Hammersmith), two of them in one house—4, Lavinia-terrace—and three others in Wharf-road. In St. Margaret, Westminster, four deaths from Asiatic cholera have occurred in Pear-street-house during the last three weeks. The Northern districts have altered but slightly, the increase in one part being balanced by a corresponding decrease in another. And indeed it is difficult to trace very satisfactorily the course of cholera from one district to another. Hospitals and other public institutions create a number of exceptional cases which would require great care and trouble in adjustment, and on so small a number of facts the difference of a unit becomes of exaggerated importance. But we glean enough to satisfy us that if the snake is scotched it is certainly not killed, and the relaxation of stringent measures in any parish would be a source of public danger as long as the germs of cholera exist actively amongst us. Whether the epidemic will subside and altogether disappear before Christmas, or whether it will simply lie dormant during winter, it is impossible to foretell. It is abating in Liverpool, Dublin, and Manchester, and we shall look hopefully for a speedy decline in London, especially now that the temperature steadily indicates the futility of anticipating a warm autumn. Yet, whilst we are thus hoping for the best, it will be well to remember the sage old Puritan maxim, "Trust in God, and keep your powder dry."

THE MICROSCOPE IN PULMONARY DISEASE.

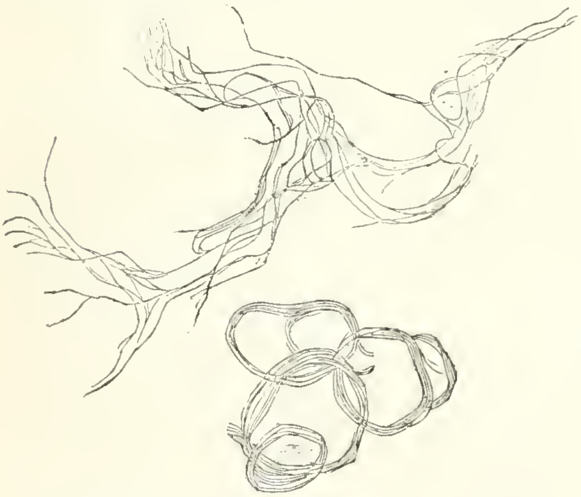
We have been recently directing the attention of our readers to the application of the thermometer as a very practical and reliable aid in the diagnosis of disease, and particularly in the diagnosis of tuberculous disease. We must now say a few words about the use of the microscope. Every practical man is aware that a good deal may often be gleaned from an ordinary examination of sputa, but there are probably very few who know how much information a microscopical examination may give, the great delicacy of the test, and the important nature of the evidence afforded. It has been known for some time that elastic fibre was occasionally present in the expectoration of patients labouring under ulcerative disease of the lung. Van der Kolk, Dr. Andrew Clarke, and Dr. Bennett have directed the attention of the Profession to this subject; but there were many difficulties in the way, and the examination was so tedious, and often so unsatisfactory, that the microscope is rarely used. Physicians preferred to place all their reliance on the stethoscope, and seldom indeed employed the microscope, although it is at all times a very useful adjunct, and occasionally the evidence it affords will be very decisive where the stethoscope fails.

The attention of the Profession has been directed to this subject by Dr. Fenwick, and we would strongly urge our readers to peruse the abstract of his paper read before the Medico-Chirurgical Society. Dr. Fenwick has investigated the subject with great care and labour, and he has hit upon a process for examining the sputa which appears to be both easy and satisfactory. Although our experience is a limited one, it has been sufficient to assure us of the value of Dr. Fenwick's observations, and to corroborate the accuracy of his description.

Every one has met with cases in which the physical examination of the chest fails to afford *decisive* evidence of tubercle, in persons whose symptoms were very suggestive of its presence. Among such cases are the following: 1st, where the amount of tuberculous deposit is small, seated towards the posterior aspect of the apex, and leaving a comparatively insignificant cavity on breaking up; 2ndly, when the symptoms of tubercular disease become engrafted upon an old bronchitis, the patient bringing a history of chronic cough, recurring every winter and ameliorating every summer, and bronchial râles overwhelm all the other sounds; 3rdly, where emphysematous disease overlies the tuberculous, and counteracts or conceals the dulness it induces; 4thly, where pulmonary phthisis becomes superadded to, or grows out of, the symptoms of a pneumonia. It would be tedious and unnecessary to detail instances of these complications, but we recently witnessed an example of the last-named in the person of one of our most accomplished provincial Surgeons.

Hæmoptysis and consolidation of a whole lung followed an injury of the chest; the dulness was gradually clearing away from base to apex, but persisted in the latter region, and the evidence of breaking up of the pulmonary tissue became clear. The question came, was this disintegration due to ulcerative tubercular, or to pneumonic, softening? Dr. Fenwick was kind enough to examine some of the expectoration in our presence, and there could be no doubt whatever about the presence of several small portions of elastic curly fibre in it, in addition to a portion of a small bronchial tube, and the casts, as Dr. Fenwick surmised, from some of the follicles in the pharynx. The patient, curiously enough, remarked that he thought his cough was in part reflex, and due to the irritation caused by a sore place in his throat. He died about five weeks afterwards.

The intra-cellular lymph present in pneumonic consolidation, under ordinary circumstances, undergoes a liquefactive, fatty, or semi-purulent transformation, and the permanent structures of the lung may never be involved in disintegration. Under other circumstances, these structures undergo such disintegration, in the form of an acute or chronic ulceration; but when tuberculous deposits soften, the tissues in which these are placed would appear to be invariably involved, and we may obtain evidence of the fact by the detection of the yellow fibre constituents of the pulmonary cells in the expectoration when examined with the microscope. We hope that Dr. Fenwick will continue his labours, and tell us the characters of the expectoration in other morbid processes, and when, and under what circumstances, pulmonary tissue is to be found in it.



Minute fragments of pulmonary tissue, as seen by the microscope.

On the one hand, it must be allowed that the microscope does not avail us in that most anxious stage—the primary depositive stage of phthisis; but on the other, softening and molecular disintegration are more frequently present than is commonly thought where the stage of deposit only is supposed to exist, and the microscope then becomes the only instrument capable of demonstrating it. Dr. Fenwick says lung-tissue was discovered in the sputa in 13 out of 24 cases where the earliest stage of phthisis was suspected.

We must remember that the second and third stages of this disease are artificial creations in reality. There is no actual and natural separation, save one of degree, between the stage of softening and cavity. They form very practical and very necessary divisions for a description of the progress of pulmonary tuberculosis; but still, where a single tubercle becomes softened and expectorated, a solution of continuity has taken place in the organ. Now, it is in the stage of softening that the microscope is so useful, because it gives us the earliest intimation of its existence. Although portions of yellow elastic fibre may be commonly detected in the case of a chronic cavity, yet it is during the formation of such cavities that these elements of the pulmonary tissue are most abundantly, and most certainly, present in the expectoration.

The process followed by Dr. Fenwick is the following:—A solution of pure caustic soda should be kept of the strength of about 15 grains to the ounce of distilled water. An equal quantity of this and the sputa to be examined should be employed. The mixture is then to be boiled for two or three minutes in a wide beaker over a rose gas-burner or spirit lamp. It is then to be poured into a large conical-shaped glass, three or four times its bulk of cold distilled water gradually added, and the whole set aside, in order that all the particles not capable of solution in the soda may subside. The deposit may then be placed in shallow cells for examination.

A word as to the delicacy of this test, because it will serve to remind us of the precaution and care required. As a test increases in delicacy, the necessity for accuracy in its performance increases in a direct ratio.

One-tenth of a grain of lung-tissue was divided by needles into ten parts, and the 100th of a grain thus obtained was placed in the expectoration of a person affected with bronchitis, and treated in the way we have described. The piece of lung-tissue was easily discovered by the microscope, the expectoration having been proved by previous examination to contain none. But as $\frac{1}{100}$th part of a grain of lung-tissue consists of from twenty to thirty cells, and as the presence of elastic fibre can be determined with certainty by means of the microscope in even half a cell, it is evident that it might be possible in this way to detect the $\frac{1}{4000}$—$\frac{1}{6000}$th of a grain of pulmonary tissue in sputum. Such minuteness is, however, never requisite, as we no more expect to meet with part of an isolated air-cell than to be consulted by a patient with a single tubercle in his lungs.

The hollow tubes to be employed as pipettes must of course be perfectly clean. To prevent the adhesion of anything to the glass, a current of water ought to be made to run through them from a tap, and it is also well to pass one of the small wire brushes used by smokers for cleaning the stems of pipes down the tube.

The fluid which is in contact with the sides of the conical glass near its bottom should be selected, for it is here that the minute portions of lung-tissue are more frequently found. It is very important, also, that a large surface and a very thin layer of fluid should be used for examination—the first, in order to secure a larger field of observation; the second, to insure that the pieces of delicate fibre be detected, and not overlooked by reason of their floating in a thick layer of fluid.

The soda solution injures brass and dissolves marine glue and Canada balsam. A piece of flat glass should therefore be placed on the stage of the microscope. By using a very thin sheet of "vulcanite," about the thickness of a visiting-card, one can punch out large cells very easily and quickly. These may be made to adhere to the slides by means of a cement used by philosophical instrument-makers; then a thin glass cover is placed over the fluid, and all is ready for the microscope.

The Queen's University, Ireland.—The Senate of the Queen's University met on October 6 for the consideration of the supplemental charter granted last July for the purpose of enabling students of the Catholic University and others not educated in the Queen's Colleges, to obtain academical (including Medical) degrees. The Senate accepted the supplemental charter by a small majority.

THE WEEK.

THE ADDRESS OF THE PRESIDENT OF THE HEALTH SECTION AT THE MANCHESTER CONGRESS.

We are happy in being able to give in another part of the Journal a full report of the admirable address delivered this year by the President of the Health Department or Section at the meeting of the National Association for the Promotion of Social Science. It would be difficult to find any one more fitted to preside over that department, or to discourse on public health, than Dr. Farr ; and his address is, as would be expected, a weighty contribution to the general knowledge of the subject of which he treats, and a clear and forcible exposition of its inestimable importance and value. It will give to many, perhaps to most, a wider and fuller idea of the scope and aim of the science of public hygiene than they have as yet conceived, and by all it will be found full of interest and instruction. We commend it to the careful attention and study of all who are interested—and who is not?—in "the development as well as conservation of life."

THE WATER ON BOARD SHIPS.

The Sanitary Committee of the Dublin Corporation have set a good example in overhauling the water supply of ships. The ship *Olive* put into Dublin in distress on Friday, for the master and mate had been seized with cholera during the short voyage from Liverpool, and were sent to the Mater Misericordiæ Hospital, where they died. The water tanks of the *Olive* were examined by Professor Cameron, and found to be mere ditch water, full of visible animalcules, and containing 10 grains of organic matter to the gallon. It will be worth inquiring who was responsible for putting this water on board.

HOW NOT TO POLLUTE RIVERS.

We are not at all insensible to the cleanliness and benefit of well-kept water-closets, yet it must be confessed that, managed as they are, they are often very great nuisances, and more insidious and dangerous as causes of disease than the ancient cesspits they have replaced. And there is this unfair and objectionable about them, as they commonly are—that they do not actually suppress, or dispose of, the fæcal matter committed to them, any more than the cesspool does. A country gentleman may be heard deploring the savage condition of his poor neighbours, who store up their excreta in cesspits, forgetting that his water-closets, of the refinement of which he boasts, do the same thing in another way ; for in nine cases out of ten their discharge-pipe goes into an open ditch, whence, after poisoning the air, it dribbles into and pollutes the nearest stream. Still worse, the fetid liquid may be conveyed to a closed cesspool, which, if impermeable, will give off many a refluent whiff of gas ; and which, if porous, simply allows the sewage to poison the water-bearing strata of the neighbourhood. There is is no one point of public or private conduct that exhibits greater want of knowledge, conscientiousness, and foresight than the plans for getting rid of water-closet sewage. We have heard of persons boasting that the soil was so porous that their cesspools never needed emptying ; and as for the water of neighbouring wells !—that was no concern of theirs. Their own was out of harm's way.

The truth is, that a water-closet is a mere sham, and it has more than the perils and nuisances of the old privy, unless it be connected with some definite system for deodorising the sewage, and applying it to levelled well-drained land.

The substitute, the earth closet, appears slowly but steadily rising into favour in the country. Its first cost is much less ; there is no need of a heavy plant, of raising pump cistern, leaden pipes, valves, discharge pipe, and cesspool, or apparatus for irrigation. The only thing required is a little trouble once a week in taking in dry earth, and sending away that which has been charged with excreta. This last is the most efficient manure, applicable in all seasons, and able to be kept till wanted ; not an offensive, seething, bulky liquid that must be got rid of whether wanted or not.

Most decidedly the project of introducing earth closets into any densely-packed town already provided with water supply and drainage is useless. The closets answer in perfection in every case where a house stands in its own grounds, in country houses, in villages, and on the outskirts of towns. For field and village hospitals they are admirable. They have for a long time been commended in our pages ; they are sought after in New Zealand and Melbourne ; they have lately been commended by Dr. Hawksley and others in the *Times*, and will, we hope, ere long be so general as to be considered the main causes of that decay of pythogenetic fever which ought to follow.

It must be remembered that the kind of earth suitable for this purpose is vegetable mould or dried clay. Sand is worthless. The erection of a water-closet ought to be an offence at law, unless there be also an efficient and inoffensive way of using the sewage.

CHOLERA STATISTICS OF BELGIUM.

(*From our own Correspondent.*)

Statistics of Cholera in Belgium from the Commencement—May 15—*to Sept.* 15, 1866.

Provinces.	Cases.	Deaths.	Population.
Antwerp . .	8,310	4,413	476,287
Brabant . .	11,403	6,993	852,624
East Flanders .	2,143	1,278	656,489
West ,, .	8,513	4,722	821,003
Hainaut . .	6,931	2,804	856,801
Liège . . .	8,820	5,544	561,899
Limburg . .	317	165	199,705
Luxemburg . .	1,579	762	207,246
Namur . . .	1,342	629	308,516
Totals . .	49,558	27,310	4,940,570

It may be observed that since the above date cholera has reappeared in several provinces with more severity, and the cases have been in general more fatal.

Cholera Statistics of the Capital Towns of each Province in Belgium.

Towns.	Cases.	Deaths.	Population.
Antwerp . .	4,800	2,265	122,665
Brussels (City) .	3,665	2,732	187,155
Do. with Faubourgs	7,183	4,847	
Bruges . . .	1,157	603	50,503
Ghent . . .	3,889	1,988	124,141
Mons . . .	528	263	27,331
Liège . . .	4,061	2,380	102,888
Hasselt . . .	53	15	9,964
Arlen . . .	177	105	6,098
Namur . . .	699	398	26,525

Up to Sept. 15, 1866. The first cases date from about the middle of May.

FROM ABROAD.—AMERICAN REGISTRATION RETURNS—SEA-SALT IN THE AIR OF THE SEASIDE—THE PARIS INTERNATIONAL MEDICAL CONGRESS.

The twenty-third annual Registration Report of the State of Massachusetts for 1864, recently published, discloses a state of things very unusual for the other side of the Atlantic—viz., a stationary condition, or even a diminution, of the population. There were 30,419 children born alive during the year, and 28,723 deaths took place. The number of marriages was 12,513. Comparing these numbers with those of the previous year, there is an increase of only 135 births, while the number of deaths has increased by 972. Compared with 1860, there are 5602 fewer births, 109 more marriages, and 5655 more deaths. The natural increase of the population was in that year 12,983, but now it is only 1726, although the increase of inhabitants is estimated at 30,000. From a tabular view given for the years 1857-64, it results that the difference between the births and deaths has gone down from 1·19 to 0·14 in 100 persons living. At the last census the population was 1,267,329, or only 36,263 more than in 1860, whereas the gain in the five years before 1860 had been 98,867. The losses from the war will only to some extent explain this diminution. Of the 30,449 living children born 15,634 were males, and 14,745 females. Of 856 still-born, 503 were males, 290 females. There were 297 plural births, of which 3 were triplets. The 28,723 deaths comprised 14,964 males, and 13,698 females. In the first year 223 males died to 100 females, and about 116 to 100 under 5 years, while between the ages of 20 and 30 only 91 males died to 100 females.

A highly valuable document has also just been published — viz., the concluding volume of the census of the United States for 1860, containing the statistics of mortality compiled by Dr. Jarvis, displaying the causes of death in the nine regions into which he has distributed the country for statistical purposes, according to their geographical position and climatic character. The classification of diseases followed in Dr. Farr's reports has been adopted as a basis for obtaining the returns. The death-rate has diminished since last census, the deaths in that of 1850 having amounted to 323,023 in a population of 23,000,000, while in 1860 it was 394,153 (males 207,943, females 186,219) in a population of 31,500,000. It is calculated, with the death-rate at 22 per cent., and the increase of population at 35½ per cent., the population of the States will by 1900 amount to 107,000,000.

M. Gillebert-Dhercourt read a memoir at the last meeting of the Academy of Medicine on the "Presence of Marine Salt in the Maritime Atmosphere," founded upon a long series of investigations conducted at Monaco. From these he concludes that—1. There exists at the seaside an atmospheric zone which is constantly impregnated with saline particles. 2. The distance from the shore at which these particles are met with at Monaco justifies our assigning this zone a horizontal extent of at least 400 or 500 metres, and an elevation of at least 70 metres. 3. The proportion of such particles is larger in proportion as the portion of the atmosphere in which they are sought for is near the sea. 4. This results from the pulverisation of the water, which takes place on the crest of the wave, and for this it is not necessary that the sea should be very rough. 5. The transport of saline molecules may take place through the winds to such distances that very apparent traces of sea salt are found in rain water far from the coast. 6. This must not be confounded with the droplets of water which the winds raise from the surface of the waves. —*Gazette Méd.* No. 40.

The Committee appointed to organise the Paris International Medical Congress for 1867 has just issued its conditions and programme. The Congress, which is to last a fortnight, will be opened on the 16th of August under the auspices of the Minister of Public Instruction. National members will contribute each 20 francs, but foreigners who announce their wish to take part in the Congress will be exonerated from all contributions. The Committee, in its programme, proposes seven questions for discussion, and members wishing to propose other subjects than those contained in the programme must communicate their essays to the Committee at least three weeks before the time of meeting. No communication must occupy more than twenty minutes in reading. The Committee proposes the following questions, and has published in the *Gazette Hebdomadaire* for October 5 an elaborate commentary on each in order to illustrate the indications of the points sought to be brought out. 1. The anatomy and pathological physiology of tubercle; tuberculisation in different countries and its influence on the general mortality. 2. The general accidents which lead to a fatal termination of Surgical operations. 3. Is it possible to propose to the various governments some efficacious measures for restraining the propagation of the venereal disease? 4. The influence of the alimentation employed in different countries in the production of certain diseases. 5 On the influence of climate, race, and the different conditions of life on menstruation in different countries. 6. On the acclimatisation of European races in hot countries. 7. On the entozoa and entophytes which may be developed in man. All communications respecting the Congress to be addressed to M. Jaccoud, Secretary, 4, Rue Drouot.

MEDICAL REPORT
OF THE
NATIONAL ASSOCIATION FOR THE PROMOTION OF SOCIAL SCIENCE.

TENTH ANNUAL MEETING HELD AT MANCHESTER.

ADDRESS ON PUBLIC HEALTH.

By W. Farr, M.D., F.R.S.

PUBLIC health is the subject of inquiry in your third department. Every life here, the life of every community is surrounded by dangers, which it is the business of science to study and of art to avert. These dangers are of various kinds and spring from various sources. Enemies abroad and criminals at home are dangers to which every government is alive. There are other dangers not less formidable. Famine now ravaging India, cholera in Europe, early deaths, sufferings in Hospitals, fevers in homes, are instances of a class of dangers that we seek to investigate, avert, and disarm.

Health implies more than existence; it implies energy in strength and in intellect. In Anglo-Saxon one word—*hael*—designated healthy man, hale man, brave man, hero; and *hàelend* was healer, saviour. These simple but noble conceptions it is our business to bear in mind. Development, as well as conservation of life, is the aim of public hygiene—the name by which our science is known in the Continental schools. Private hygiene deals with individuals, public hygiene with communities; but, inasmuch as nations are aggregates of men, it is evident that the division into two parts is only made for the convenience of study and of administration. Some things a man can do himself, others can only be done by town councils and imperial governments. It will be an advantage to confine our discussions to the field of public health.

As political economy rests upon the idea of value, so our science rests upon the idea of health, and it is as important to us to find a measure of health, as it is to the economist to find a measure of value. That measure must be simple, and applicable to all countries. Now, the measure that is in universal use is the rate of mortality: a unit of life loses a certain fractional part by death every moment, and the amount of loss in a unit of time expresses the rate of mortality. The unit of time is always a year, and the rate of mortality is found by dividing the deaths by the mean numbers living multiplied into the time. The rate varies from ·020 to ·040 in England —that is, in one place the deaths are 20, in another 40 to 1000 living. Indeed, the range is still greater without a correction to which I will shortly advert.

In a normal community constituted of persons of all ages by an equal number of annual births, there is a fixed mathematical relation between the rate of mortality and the duration of life. Thus, if the average rate of mortality in two cities is 2 per cent. and 4 per cent., then the mean duration of the lives of the inhabitants is 50 years in the one city and 25 years in the other. Therefore, in saying that rate of mortality measures, it is conversely affirmed that length of days measures the health of nations. As the population fluctuates, certain corrections are necessary; the rates of mortality are determined at various ages, and from these the probabilities of living year by year are calculated and set forth in a life table that determines the path every generation passes over from rising to setting.

The mortality is really a life measure, for the people living to a given sum of births increases in exact proportion as the duration of life increases.

If it is only an indirect measure of some of the elements of health, according to our larger definition it expresses in masses the sickness, measures very accurately the influence of a variety of causes on life, and is a safe guide in practice.

Public health now engages the attention of every civilised state ; so we can pass in review the principal populations of Europe, and from the researches of their own statists learn by this measure their comparative health.

I take the population in the lowest stage of health first, beginning with Russia. That empire is emerging from barbarism ; and its condition enables us to conceive the state of the population of Europe in the dark ages. The people of various races between the Caucasus and the Arctic Ocean, the Oder and the Ural Mountains, die at all ages, from birth up to 140 years it is said, but their mean lifetime is only 25 years.(a) The marriage rate is 10, the birth rate 45, the death rate 36 (per 1000 is always understood unless another scale is mentioned). Thus birth, marriage, death, succeed each other rapidly among the sixty millions of people diffused over nearly two million square miles of steppes, forests, farms, and river-side pastures. In Archangel, where the greatest extremes of cold are experienced, the mortality is nearly the same as it is in England ; in Esthonia and Courland, on the Baltic, the rate is low ; so it is in Finland ; while about the Caucasus, the Black Sea, and the Caspian, it ranges from 40 to 52.(b) Whenever the mortality is excessively high in any place, its causes can now almost always be discovered ; they are familiar enough to us in England, but as they take different forms in different countries, and are the subjects of inquiry in Russia itself, it is not my intention to dwell on them. Russia has emancipated her serfs. Russians have taken a conspicuous part in the international statistical congresses ; they are frequently inquiring into what is doing in England ; and if I mistake not, English engineers are now engaged in the water supply of one of their capitals.

Italy, extending from the Alps across the middle of the Mediterranean, offers a strong contrast to Russia ; it is divided by the Apennines, breathes the air of the sea, is not frozen by hard winters, is the home of the arts, and inherits the renown of the empire of the world. But the Italian people suffer much ; few live to their natural term ; the death rate is 30.(c) I speak now of the new kingdom of Italy. The death rate in Piedmont and Lombardy, and in the islands of Sicily and Sardinia, is 29 ; south of the Po, in Parma, 35 ; Modena, 31 ; Romagna and the Marches, 31 ; Tuscany, 33 ; Naples, 35 ; Umbria is the healthiest province of Italy, rate 27 ; and Rome, thanks to her aqueducts, is perhaps the healthiest city in Italy. Venetia, under the Austrians, was in health on a par with Tuscany, 33. It is a peculiarity of Italy that the population of the country is as unhealthy as that of the towns. This low standard of health is the fruit of the former state of things, as the new Government has had little time to do more than bring the evils to light, which luxuriated under small paralysing despotisms. As the science of Italy reveals the evils and their causes, the people will find remedies ; and among the first will probably be the restoration of the great drainage works and the magnificent aqueducts of their ancestors. Improved health will increase the military power of Italy.

East of Italy is Greece, which holds only a fraction of the Greeks, about whom little can be said ; and Turkey, Syria, Egypt, North Africa. All known about these fine regions of the world is that they are desolated by diseases, are unhealthier than Russia or Italy, and are nurseries of the plague that subjects Europe to the vexatious oppression of quarantine.

Spain, lying west of Italy, between the Mediterranean and the Atlantic, mountainous, and divided by deep-cut rivers, was perhaps, when she colonised South America, the healthiest country of Europe. The death rate of Spain is now 28.(d)

Between Italy and Russia, on the Danube, extending from the Carpathians to the Adriatic, lies the Austrian empire, full of natural resources and pervaded to a considerable extent by the industry and science of Germany ; yet the death toll of Austria is high ; it is 30.(e) The mortality of Prussia is not quite so high ; it is 29 ; in Bavaria, on the Upper Danube, it is 29 ; in Saxony, on the Elbe, 29. At such rates 72 millions of Germans and their associated races die. In none of these countries do the people live on an average 30 years.

We now enter a healthier region of Europe, of which England is the centre ; where the people live, on an average, 35, 40, or 50 years, and where a fuller life is enjoyed. Take Norway for example, with its Udal proprietors along fiords and streams ; there the mean lifetime of the people is full 50 years. The death rate is 17 ; the birth rate is 34. They are, as the old sagas teach us, at home on the ocean, and emigrate freely. In Sweden as well as Denmark the mortality rises to 22 ; and the mean lifetime of the Scandinavians is about 44 years. Sweden, I may remark, is famous in our science for furnishing Dr. Price with the data from which the first national life table was constructed. In Hanover the death rate is 23 ; and in Holland, on its canals and river deltas, where the greatest natural sanitary difficulties are found, the mortality is 26 ;(f) the mean lifetime is 35. In Belgium other difficulties have sprung up ; the population is the densest in Europe, thanks to its industry ; but the death rate little exceeds 22. If we ascend the Rhine to Switzerland, we there find several healthier cantons.(g)

In France, that various and beautiful land, lying between England and Italy, Germany and Spain, the death rate was 23 ; in the last year or two it has fallen to 22, as low as that of England.

No variation in the health of the states of Europe is the result of chance ; it is the direct result of the physical and political conditions in which nations live. This is so well understood, that the people of every country are associated with you in these inquiries, and are watching the progress of the great question of public health in England. Yet its vital importance is nowhere fully recognised ; its influence in the history of mankind is lost sight of in the din of war, and in the terrors of revolution. With what just eloquence have Burke and the historians of all nations denounced the furious executions of Paris. But in Germany, including districts under paternal well-intentioned sovereigns, some 300,000 men, women, and children are killed every year by diseases, in excess of the numbers dying of the same diseases in France.(h) Under the indolent princes of Italy, the annual life-loss in excess exceeded 150,000 lives annually. Not to save in some circumstances is to destroy. Can we wonder, then, at the feverish uneasiness of those great populations, whose instincts have led them at last to coalesce in powerful states?

I now ask you to consider the sanitary state of the United Kingdom. The rate of mortality is 22. The rate is nearly the same in Scotland, England, and Wales. But how fares it with Ireland? Well, as far as official documents go, the death rate of Ireland is 17 ; and, after every allowance for defects in registration, which has only been recently established, I do not think the death rate of Ireland can be set higher than that of Scotland.

From the English Life table we learn that the mean lifetime of the nation is 41 years (40·85),(i) and this implies a corrected mortality of 24 (exactly of 24·47) annually, whereas by the ordinary method the mortality is 22 (or 22·45). The difference arises from the increase, which throws into the population a mass of young persons at ages when the mortality is below the average. The average age of the dying is reduced from the same cause—it is 29·4 years. Similar corrections of the mortality are required, and will ultimately be made, in other countries.

The mean age of the population by the Life Table is 32 years ; the mean age of the enumerated population in 1861 was 26½,(j) the difference of 5·5 years arises from the same cause. If a normally constituted population has lived 32 years, it will live 32 years under the same law of mortality ;(k) but in England, the age of the people is now 26·5 years ; and they will live 35·6 years on an average. As they are younger they have an ampler prospect of life before them than a stationary population.

You are aware that more boys are born alive than girls, and the boys dying in greater numbers, this provision of nature brings the sexes nearly to an equality of numbers at the age of marriage. Thus, of 1000 children born in England,(l) 512 are boys, 488 girls ; 334 men, 329 women, live to the age of

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(a) Reg. Gen. 6th Report, p. 327.

(b) *Ibid.*, p. 330.

(c) Three years, 1862-4. Reg. Gen. 27th Report, p. xxxviii. The mortality of provinces is for the year 1862.

(d) Four years, 1861-4.

(e) Eight years, 1857-64.

(f) Sweden, 1841-55, males, 41·28 ; females, 45·60. Holland, 1850-9, males, 34·12 ; females, 36·43. Berg and Baumhang. See paper by Hendrick, F. Stat. Soc., vol. xxvi., p. 423.

(g) 1857-64.

(h) The mortality in France 1853-62 was at the rate of 23·82 ; Prussia 1851-60, 29·00 ; Austria 1857-62, 30·38 ; Italy, 1862, 31·28.

(i) "English Life Table," p. 22, based on returns of population, 1841 and 1851 ; and 6,470,720 deaths in 17 years, 1838-54.

(j) "Report on Census," 1861, p. 110.

(k) See this curious law demonstrated in "English Life Table," Introduction, p. xxxii.

(l) See "Life Table," p. 24.

20. The excess of boys is reduced from 24 to 5; and if there was no emigration and foreign service, the men of the age 20-40 would exceed the women in number. An unchanging 1,000,000 of annual births will produce, according to the law of vitality in England, a population of 41,389,940, consisting of 20,426,138 males, 20,432,802 females, large numbers differing quite inconsiderably.

The births registered in the United Kingdom in 1865, exclusive of the islands in the British seas, amounted to 1,006,223, and this is below the actual number, as all the births are not registered in Ireland or England. The population of the United Kingdom, including the islands, is now estimated at 14,775,810 males, and 15,553,397 females. England differs from the other countries of Europe in this respect;(m) it has 250,356 men in the Army, Navy, and merchant service abroad, on the seas, and in English possessions. This leaves 14,525,454 males at home, against 15,553,397 females. The females exceed the males in the United Kingdom by 1,027,943. After deducting the men abroad having English homes, the number is reduced to 777,587 women. The proportionate number is greatest in Scotland, least in Ireland.

Nevertheless, if our calculation is correct, the men must be somewhere in existence; and, in fact, in America and in Australasia alone, at the last census, the males found exceeded the females by nearly a million (972,530). Allowing for the share of other nations in the surplus, there can be no difficulty in identifying the men of which the 777,587 women at home complete the calculated couples. The men are in Newfoundland, New Brunswick, Canada, Australasia, and the United States, whither the women have hitherto hesitated to sail from home across the ocean; but with constant magnetic communication, commercial intercourse, and the intimate union of the people on both sides of the seas, the equilibrium of the sexes cannot fail, in the end, to be re-established.

It is gratifying to find that the health of the English race on the other side of the seas, so far as we can judge from imperfect documents, is not worse than it is in England; and that those rising communities are eager to adopt all the sanitary improvements of Europe. In some respects they have gone ahead of Europe; I may refer to the magnificent aqueduct pouring the fresh streams of a mountain river into New York since the year 1842, when Paris and London were drinking polluted waters from the Seine and the Thames.

A word on the growth of population in England, which is unquestionably one of the weightiest of all our hygienic problems. The population of the United Kingdom was 16,302,410 in 1801; it is now 30,329,207. Population naturally increases in geometrical progression; and in this country the rate of increase was very uniform during the fifteen years of war down to 1815 and the fifteen years following. After the reform of Parliament and Catholic emancipation, so well calculated to content the people, the rate of increase decreased slightly down to 1841; and then rapidly, after the potato blight and the repeal of the corn laws, during the exodus, down to 1851; and since more slowly. The decennial rate of increase was 15 per cent. (1821-31), 11 per cent. (1831-41), and in the last decenniad (1851-61) it was 6 per cent. Thus our population increases at a decreasing rate. In the first thirty years of this century the addition to the population was 8,121,178, in the second thirty years it was 4,935,339. The rate of increase was 50 per cent in the first and 20 per cent. in the second period.(n) The great perturbation took place in Ireland, where the population rose 2,000,000 in the first, and fell 2,000,000 in the second period. In England the population increased steadily 5,000,000 in the first, and 6,000,000 in the second period.(o) The change in the rate of increase is due to no decrease of energy, but to the flood of emigration, for the population, like a mighty river, flows into America and Australasia. The population of the American colonies, of the United States, of Australasia, and of the United Kingdom was 20,000,000 in 1801, 38,000,000 in 1831, and 65,000,000 in 1861. Here is an increase of 18,000,000 and of 27,000,000, or in the aggregate of 45,000,000 in sixty years; and after deducting sufficient numbers for the increase of alien races, a residue of increase is left equal in its multitude to the present population of France. The English race thus unites Europe with America, and attains, while multiplying freely on both sides of the Atlantic, nearly the same standard of health.

I have, in this rapid survey, necessarily treated the health of nations collectively; but each nation consists of parts differing widely in health. Thus, in Prussia the death-rate is 25 in Pomerania, 36 in Posen; 25 in the Rhine provinces, 36 in Prussia proper. France presents similar disparities. And in no countries are the disparities greater than in England. Districts of this kingdom, more populous than Norway, are as healthy as Norway; whilst several of our cities, teeming with industry, intelligence, wealth, and population, pay a death-toll as high as Russia. I enter into no details, because this subject has been discussed in the section by gentlemen deeply interested in these districts, who have developed the facts, and have been able, after laying bare the causes, to say that they see the way to effectual remedies; so that in city and village alike the health of the people may increase faster than their numbers.

In the great Arsenal at Woolwich, the other day, I was much struck by the vastness of the operations: there you see the latest inventions of chemistry and mechanics turned to account; children, stalwart smiths, engineers, and men of science are all engaged in casting bullets, making cartridges, filling costly Armstrong shells, building up ordnance of terrific power to arm iron ships, or inventing new explosives. I confess that the thought that every bullet was cast with the deliberate intention of killing a man, made an impression on my mind; and this was deepened by the reflection that the Arsenal is necessary, as similar operations are going on all over Europe. Nations are passionate rivals in the art of destroying life in war. Why should they not throw the same ardour into the art of salvation in time of peace?

Life can be saved by studying the causes of its destruction—injuries and diseases. Lightning had no sooner been identified with electricity, than Franklin invented the lightning-conductor. With his knowledge of flame and gases, Davy invented the safety-lamp, to save men from the terrible effects of explosions. The same object is secured now effectually by the improved ventilation of mines. Fire-escapes and fire-guards save hundreds of lives from the flames. Lifeboats rescue mariners from the waves. Chemistry finds antidotes for poisons. Surgery, armed with Harvey's discovery, ties bleeding arteries. From Jenner, Medicine has learnt by vaccination to prevent small-pox. And this brings us to the class of zymotic disease, over which new power has been acquired recently, by the discovery in England of the laws of its propagation.

A Surgeon dips a lancet into the pustule of a small-pox patient; on its point is a drop of transparent lymph; and that lymph, mixed in the blood of a child that has not before had the disease, reproduces the lymph in new pustules, which will again propagate the disease among other children. The matter is volatile, and other children, brought into the same atmosphere, are said to catch small-pox. If the lymph is derived from a cow-pox pustule, it reproduces cow-pox. In large Lying-in Hospitals it has been found by repeated experience that childbed fever, or what I call *metria*, is generated: one woman falls ill, other women take it; every fresh patient that enters dies; and if the Hospital nurse attends a lady out of doors, that lady will probably die of childbed fever. Erysipelas, pyæmia, and gangrene are generated when you crowd wounded soldiers in military Hospitals; and the specific matter of each of these diseases produces the same specific diseases in other soldiers.

Typhus has been generated in gaols, and has infected the judges in courts as it infects Physicians in Fever Hospitals. Here is a large number of diseases which we know how to produce; and a second group equally numerous we know how to propagate—such as measles, scarlatina, whooping-cough, and small-pox. In the statistical nosology I classed all diseases of this kind together, under the head of zymotic diseases; and in the analysis of morbid phenomena gave names to the different species of matter generated in each malady. Thus, selecting a few, the matter of small-pox (variola) is called *varioline;* of cow-pox, *vaccinine;* of erysipelas, *erysipeline;* of scarlatina, *scarlatinine;* of syphilis, *syphiline;* of typhus, *typhine;* of dysentery, *enterine;* of cholera, *cholrine*(p). These matters introduced into the blood directly by inoculation, or by air, or by water, only induce their transformations in a certain number of the persons exposed to their action. They vary from day to day in strength. Cases of small-pox, for instance, occur every week in London: few children die of small-pox for weeks together; when suddenly the *varioline* becomes active, is multiplied with redoubled velocity, destroys large numbers, and after a time again becomes quiescent. All zymotic diseases follow this law, and are hence called epidemics, endemics, plagues; which, as their cause is not evident, have often been referred to supernatural agency. In their course they are generally influenced by atmospheric vicissitudes; but the zymotic stuff probably acquires its extreme diffusiveness in some wretched families under hygienic conditions that favour its creation. Asiatic cholera thus originated in the delta of the Ganges, in spots where the huts are on mounds, surrounded with pits, which are the receptacles of dejections and of the stagnant water the natives drink. Jameson says, "Bad water no doubt sometimes immediately induces the disorder."(q) In India they had advanced scarcely any further in the etiology. The English reports on the epidemic of 1832 and the elaborate official French report(r) discussed all the conditions except one likely to influence its course, and their results were purely negative. They stated, but did not solve, the problem of the disease. The English system of registration was established in 1837, and in the epidemic of 1848-49 the age, profession, date of death, and the place of death of each person by cholera was published by the Registrar-General in the London weekly tables of mortality. These tables were freely distributed among men of science, who had thus an opportunity of studying the facts. London presents a favourable field for the analysis of epidemics. It has a vast population, spread over a large area at different elevations, rising from ground below the Thames level to Hampstead and Norwood. The population exists in every degree of density, in every degree of poverty and wealth. It was supplied in 1849, by eight companies, with unfiltered water, some of it drawn from springs, the rest from different points of the Thames and its tributary the Lea. At that time the sewers of London poured their contents into the Thames at different parts of its course, so that the waters of the companies differed very much in impurity. At Hungerford Bridge it was charged with soil, and higher up the tidal stream the water was comparatively pure. It was immediately found, on examining the returns, that cholera was much more fatal on the south side of the Thames than on the north; and at the close of the epidemic, calculation showed that the mortality had been at the rate of 41 on the north, and 120 in 10,000 on the south banks. The two populations differed in many respects, and further analysis was necessary. The population in 38 districts, each (s) a large city in magnitude, was variously grouped according to (1) wealth determined from rated value, (2) density, (3) elevation, and (4) water supply. It was shown that density and wealth in their different degrees had an influence on the mortality of the epidemic; but that the effects of these influences were completely overwhelmed by the influence of water and of the elevation of the soil. Thus, the six districts supplied with the least impure water lost, in every 10,000, 15 by cholera; the fifteen districts getting still more impure water lost 48; those getting the water from the parts of the Thames saturated with sewage lost 123. The air and the water of wells, and the water containing impurities in suspension, running along tubes underground from the river up the sides of heights, contain different amounts of such matter in suspension at different elevations; and it was found that the mortality ranged from 174 deaths by cholera in 10,000 people on a level with the Thames, to 99 among those living on ground 10 feet higher, and thus the mortality fell to 53, to 36, to 27, to 22, to 20, to 8; as you ascended, 30, 50, 70, 90, 100, 350 feet above Trinity high-water mark. In the epidemic of 1853-4, and in the epidemic of 1866, the same laws prevailed.

(m) Census Report, 1861, p. 5.

(n) The first ratio $r = 1{\cdot}4981$, the square root is $1{\cdot}2239$; which is nearly the second ratio $= 1{\cdot}2021$.

(o) 4,933,467 in 1801-31, and 6,124,854 in 1831-61; or 51 per cent. and 44 per cent. on the population.

(p) Registrar-General's 4th Annual Report, 1842, pp. 186—216.

That was all that could be rigorously determined in 1848-9, and the experiment was incomplete, as the drainage of the ground and other conditions in which the people of South London lived differed in many respects from the corresponding conditions on the north side of the Thames. South London is supplied chiefly by two companies. In the interval between 1849 and 1854 one company supplying South London was driven higher up the Thames, and got above Teddington Lock water uncontaminated with London sewage, while the other company still drew its water in 1854 from the impure stream below. Here was an experiment on a grand scale. Asiatic cholera was epidemic once more, and retained its full power of destruction in the districts still supplied with impure water; but it was immediately discovered in the returns of the weekly tables that the mortality in the districts supplied with the better water was diminished. The difference was striking in houses of the same street supplied by the two companies, and it was observed every week in every district. After the epidemic was over the two companies furnished lists of all the houses which they supplied, and when the deaths by cholera in these two classes of houses, both in 1849 and 1854, were taken out at the General Register Office and tabulated, the result satisfied the Committee for scientific inquiries of the Board of Health (t) that the diminished mortality was due to the change in the quality of the water.

This reasoning involves no theory. The result is arrived at by induction drawn from a vast number of instances all concurring. But I am bound to notice here an important theory which was advanced in 1849 by Dr. Snow, a London Physician, who died young, but whose name will not perish. This, in a few words, is Snow's theory:—The rice-water discharges are to cholera what the lymph (varioline) is to small-pox; the matter is generated in the body, it is multiplied in the intestines, and diffused by direct handling or by water and, I should add, by air in certain states carrying it suspended as dust—cholera-dust.

Dr. Baly, in his admirable but cautious report to the College of Physicians, decided against the theory, and, in fact, the evidence then in its favour was not conclusive. But Dr. Snow persevered; he collected instances of the communication of the disease through pumps, wells, and rivers: and, in 1854, inquired at every house of certain districts where deaths from cholera occurred in Southwark. Thus he collected many new confirmatory facts. Some links had been left incomplete in the verification of the law that cholera matter (cholrine) is diffusible through water; these have been supplied in the present year partly by what I cannot but consider a deplorable accident.

South London, it will be recollected, was still supplied with impure water in 1854 by one company (the Southwark), and it suffered severely in the epidemic of that year. In the field of the other company (Lambeth), the mortality was much reduced, but was not inconsiderable. In 1866 South London was supplied with water by the two companies from the purer source; the shallow wells were dried by the metropolitan drainage, and the deaths by cholera in all the districts, holding 873,548 people, were not so numerous as the deaths had been in 1854 in a single district. Thus you have these sequences, in the Lambeth field, impure water, 1849, cholera terribly fatal—pure water, 1854, cholera much less fatal; in the Southwark field, impure water in 1849 and in 1854, cholera terribly fatal in both years; in 1866, both fields with pipes interlaced, in South London, supplied with the purer water—mortality from cholera comparatively slight, but sufficient to remind us that the water is not yet perfectly pure.

Cholera had been epidemic in the continental cities since 1865, but London rested secure, expecting to escape with comparative impunity, when lo! in July, the weekly deaths by cholera sprang up from 6 to 14, to 32, to 346, to 904, to 1053, with an unexampled velocity, and threatened to renew all the horrors of the former plagues. The weekly returns showed that multitudes of men, women, and children, spread over an area of about ten square miles, were indiscriminately struck down by diarrhœa or cholera.

In East London 3613 people perished in six weeks. The great destruction of life occurred in every district, nearly every sub-district, supplied from the Old Ford reservoirs of one of the eight London companies, and to the same extent nowhere else. These reservoirs are close to the Lea, which is a tidal river, polluted with the sewage of West Ham and of East London. In Manchester the water is immediately under the control of the Town Council, and you can know all about the supply; but in London that is not the case, as the water is supplied by private companies on strictly commercial principles. The directors are not bound to tell us precisely what their servants do, and they have not done so; but circumstantial evidence irresistibly shows that polluted water was distributed over all the area of extraordinary mortality during a certain number of days, with the same result as in previous epidemic years. The source of mischief was no sooner pointed out than the plague began rapidly to decline; it appeared to be under control, and the mortality by cholera in East London is now as low as it is in the rest of the metropolis.

When zymotic matter or any impurity is thrown daily into the mains, pipes, butts, houses, and, I may say, bodies of a population, it is irregularly distributed, and requires many successive daily changes to eliminate it; thus, when impure water is supplied for three days only, it may take thirty days to eliminate it. This may be demonstrated mathematically, and be illustrated by experiment.

(q) Cholera Report to Reg.-Gen., p. lxxvi.

(r) Rapport sur la Marche et les Effets du Cholera Morbus dans Paris, 1834.

(s) Registration Districts of London, 36; two were subdivided.

(t) The Committee consisted of Arnott, Baly, Farr, Owen, Simon. The subsequent report by Mr. Simon gives the final results of the Committee's investigations.

I may add that, although the distress from the loss of thousands of children and parents in an epidemic is never wiped away, yet in East London it has been mitigated; the people behaved with courage and patience; they helped each other in danger, and they were helped by enlightened English charity. The Queen herself came to their relief; Mrs. Gladstone, Miss Marsh, Miss Sellon, and Miss Louisa Twining, treading in the steps of Miss Nightingale, administered relief to the sufferers; the Bishop of London and the Lord Mayor upheld the honour of their high offices by indefatigable services. The Medical men, and, it is right to add, the clergy, nobly did their duty; the local authorities, to a greater extent than they ever did before, carried out the judicious recommendations of the Privy Council. House-to-house visitation was in many cases in use for a time.

By these means, by the exertions of the engineers of the companies, and by the early discovery of the source of the terrific mortality in East London, the plague has been stayed; we now know how Asiatic cholera can be subdued. In London twenty thousand lives have been saved. This is an achievement of the science of health which reflects some glory on England, and of which all the world will enjoy the advantage. It is due to many years of labour—to the labour of Jameson, Scott, Orton, Balfour, Martin, Parkes, in India; to Sutherland, Smith, Baly, Gull, Simon, and especially to Snow, in England; to the English registration of deaths, which enabled us to demonstrate by several experiments in the largest city of the world, the fatal effects of water tainted by impurities.

How did it happen that the disastrous effects of the diffusion of this matter through water were not discovered in Paris or elsewhere? For this simple reason, that when the observer has under his eyes a population all supplied with impure water, he cannot logically refer the effect to the specific cause. For this happens in cholera, as in all zymotic diseases, only one individual in a given number is susceptible; for the sake of illustration, say 1 in 4. Only one in the number susceptible (say 1 in 5), by chance comes in contact with the stuff; and only one vessel of water in a given number (say 6) contains a dose strong enough to induce Asiatic cholera, as it is called. Then, by the doctrine of chances, only 1 in 120 (that is, $\frac{1}{5} \times \frac{1}{6} \times \frac{1}{4}$) will be attacked, and about 1 in 240 will die of the disease. Great numbers will be attacked by diarrhœa and milder forms, but 119 will not be attacked by cholera while 1 is attacked. Here are 119 instances in favour of and 1 against the water.

In the worst district of the East London field 193 in 10,000 people died of cholera. Say that 386 were attacked, then 9614 were not attacked, and the health officer might reason thus: 9614 persons in this district exposed to the cause—water—were not attacked, therefore the disease was not caused by the water; and of the 386 attacked some drank no water, the fact being that they were tainted in other ways. This logical difficulty is the origin of the greater part of the disputes on contagion. We overcome it by comparing the mortality of cholera in all the East London districts, the Lambeth districts, the Southwark districts, with the mortality of all the districts—many of them similarly situated as to condition—supplied with water from other sources. As the difference is uniformly enormous in successive trials at distant dates, the conclusion is irresistible.

In Manchester the people have, with great credit to their intelligence, secured a supply of pure water; in fact, the system of Manchester and of Glasgow are models to other cities. But Manchester retains the excreta of the sick from all zymotic diseases, with other impurities, close to the dwellings and under the faces of the people. By comparing the mortality of the city so organised with that of London when the metropolitan drainage is in full operation, and with that of other cities where such matters are now carried off by water, you will be able to analyse the effect of your system of arteries without veins, and I suspect that it will be decisively condemned by the result. The effect of a multitude of other causes on health, such as overcrowding, uncleanliness, and drunkenness, can be tested by the same methods.

To render our investigation of causes affecting public health complete, there should be a public registration of every form of sickness and infirmity, as well as tests of strength by the quantity of work performed, either mental or muscular. The conscription and recruiting examinations are the only tests now in use.

The sanitary society in Manchester has commenced some work of this kind, and will, I hope, persevere. In the diffusion of sound practical sanitary information, the Ladies' Sanitary Association in London has already rendered services which we are bound to recognise. The Universities of England will, I hope, teach, as the Continental Universities do, the doctrines of public health, and by recognising the doctrines in granting degrees, as suggested by Mr. Rumsey, they will promote the health of their country. Manchester and all our cities will, like Liverpool, Glasgow, and some districts of London, have accomplished officers, educated in the end specially for the purpose, keeping incessant watch over their health, like tutelary geniuses, and doing good not only to the inhabitants, but to mankind.

For what good has been done hitherto by hygiene, however striking in building up healthy generations, is nothing compared with what remains for it to accomplish in times to come.

Let there be a small ratio of improvement among the millions born every year in the successive generations of our own race —in the races of Europe—and under that law of geometrical progression even with which the world has been sometimes terrified unreasonably, mankind will attain a degree of excellence of which we have now no conception. Healthier, happier men may become as by miracle only a little lower than the angels in the golden age, the paradise of the future.

How far we are from this consummation we are reminded by the losses of our friends and fellow-labourers. Since we met last year, Sir Charles Hastings, president at York of the Health Department, is dead. He was a man most friendly in his nature, and devoted himself to the organisation of a great Medical Society for the promotion of science. His life was crowned with success; and he had the supreme felicity of seeing his son lay the foundations of this Association, in conjunction with some of the greatest and some of the best men of the age.

OPENING OF THE PROVINCIAL MEDICAL SCHOOLS.

QUEEN'S COLLEGE, BIRMINGHAM.

The opening of the Winter Session took place on October 2, when the prizes and certificates were delivered to the successful students. Dr. David Nelson then delivered an inaugural address, which he commenced by saying that the College seemed to aim at becoming more and more of the nature of an University, not only from the mental instincts of the founder and the vast extension of wealth and intelligence in the neighbourhood, but also from that tendency to a coordination of all the sciences which characterised the present age, and made it view nature as a totality, and not in separate parts. In 1853 he urged to the same purport that, however separate the various portions of creation and of the sciences might seem to be, yet were they all blended in nature with one cosmic philosophy. The founder, Mr. Sands Cox, had begun the College on a Medical system alone, but had taken pains to base the Medical department on a preparatory department of literature and general science. Besides this, the Medical sciences of themselves comprehended a very wide field of varied learning, including mathematics, mechanics, botany, anatomy and physiology, natural philosophy and chemistry, besides those subjects of inquiry which are more purely Medical and appertaining directly and exclusively to the arts of conservation and curation of the body. Dr. Nelson proceeded to dwell specially upon the benefits which the microscope had conferred upon those who pursue such researches, and said of Medicine that it was the discriminative art, which, under the guidance of those faculties called by the general name of judgment, employed the subsidiary sciences as a means to an end—namely, the prevention and cure of disease. He drew special attention to the advances of chemistry, as one of the principal handmaids of Medicine, more particularly in the success which had attended some of her efforts to build up from simple inorganic molecules materials of a nature almost identical with those that had hitherto been produced under the vital principle alone. This proved that the expectation of further discoveries of that kind was based upon established facts; and that they who were now striving in their secluded laboratories to attain such ends were not to be viewed as idle dreamers, but as pioneers of future discovery, useful to the world even by their failures, and in their success glorious. Medicine, being a composite science, is necessarily complicated. Attempts to simplify it so as to make one process of cure serve for all purposes, and thus bridge the difficulties thereof by a sort of juggle, have been made in all times and under manifold forms, but such efforts had always diminished the more science had advanced; and at the present day not a single philosophic Physician believed in any panacea. He next reviewed the departments of law, engineering, architecture, and theology. With regard to the latter he said:—To understand aright the accepted Word of God, it was necessary to study His works; and to study them properly demanded an acquaintance with the natural sciences. Scripture was constantly recurring to illustrations of the attributes of God drawn from the magazine of creation; and so much knowledge of nature was equivalent to so much knowledge of God and His attributes. He thought, from his arguments, that it would be seen that one of the principal functions of a teacher in things divine was to trace to their final fountain-head all those various rills of distinctive knowledge the channels of which have, no doubt, been worked out by the keenness of the human intellect, while pursuing this or that particular track of inquiry; but the original source of which was traceable to, though hidden within, the bosom of the Deity. Dr. Warneford, he said, recognised this truth practically by founding the Warneford Prize Essay, the object of which was to multiply proof upon proof of the stamp of God upon nature. Besides these special and ordinary courses of Professional study, he went on to recommend the College as a means of instruction in various parts of literature and science, interesting to the general scholar and private gentleman, who, he said, might attend with advantage upon sundry courses of instruction, such as chemistry, botany, or natural history, according to their tastes or objects in life, without tying themselves to all the courses of any special department. Under such rightly guided efforts for the good of the community at large, assistance might be expected from the friends of sound education as well as the Government, so as to improve the library and add to that museum, which already contained such valuable treasures. He alluded to the fact of so many former students of the College being in positions of high public utility here and elsewhere; and founded thereon a claim for public support to the institution which had trained them so well for their present duties. The Doctor concluded by giving some excellent advice to the students.

SYDENHAM COLLEGE, BIRMINGHAM.

Dr. Foster, in commencing his lecture, observed that he should confine his remarks to the scientific aspects of that branch of knowledge on whose studies some then present were about to enter, and for whose progress all must feel anxious. In making an attempt to lay before the new comers some notion of the nobility and magnitude of the service for which they volunteered, and some notion of the manner in which they might best use their powers to advance Medical science, he believed that he should pay the best tribute to the intellect of his audience. A preliminary inquiry into the stages through which the human mind had travelled in its endeavour to acquire scientific ideas, led the lecturer to point out that Medicine, as every other branch of knowledge, had passed through two stages, the theological and metaphysical, before it reached the scientific. In the two earlier stages the mind was endeavouring to gain knowledge of the origin and nature of things, but in the last it attempted to free itself from inquiries into final causes, in order to concentrate itself on the study of facts. The great object of any science was to investigate the invariable laws to which all phenomena were subjected, and the perfection of a science was greatest when those laws were reduced to the smallest number. The sciences with which they were acquainted might be divided into two classes, according to their methods—sciences of observation, and sciences of experiment. In the first, the investigator simply studied the laws which governed phenomena; he made no attempt to modify or control them. In the second, he not only sought to know the laws, but by experiment he had the power to modify and control the phenomena which he studied. Astronomy was the best example of the first class, chemistry of the second. With that distinction in mind, Medicine was considered in reference to the problem it had in view: "To preserve health and cure disease." In the earliest periods of Medicine the solution of the second part of the problem was only attempted by the empirical method. Afterwards, by careful observation, men came to doubt the curative action of drugs, and to rely in the treatment of their patients on assisting that tendency to recovery, which they named the *vis medicatrix naturæ*. A science of observation taught only the subjection of phenomena to invariable laws, and by a knowledge of these laws it gave prevision with regard to the appearance of phenomena, but no power to modify them at will. In navigation, they recognised an art based upon that kind of science, and entirely dependent upon the exact observation of phenomena, over which man had no control. Such a position for Medicine could never be accepted: generations of Physicians had been struggling to raise it to something more than that. Medicine long remained under the control of its earlier methods, and only sought to solve the second part of the problem, "to cure disease;" for men were long in freeing themselves of the notion that disease resulted from supernatural interference, and had only recently been able to appreciate the higher and nobler view, that every disordered state was the consequence of definite antecedent conditions, which, under the same circumstances, invariably produce the same results. To solve the Medical problem in its entirety required a knowledge of physiology, pathology, and therapeutics. The late development of physiology as a science, due to the complexity of the phenomena with which it had to deal, had retarded the evolution of the other branches of Medical science. The difficulty which attended physiological investigation constantly baffled the attempts made by the earlier investigators to fathom the origin and purpose of life; consequently they clung at first to theological explanations, and afterwards adopted and long retained metaphysical notions. Medicine could only become scientific by the application of experiment to her fundamental sciences, a recognition of the futility of inquiries into final causes, and the substitution of the study of phenomena in order to discover the invariable laws which determine their succession and resemblance. In order to raise Medicine to the rank of an experimental science, a combination of the three methods—observation, experiment, and comparison—must be followed. The earlier advance was made by observation; the application of experiment had already given them the great discoveries of their immortal Harvey, the achievements of Haller, Bichat, Bernard, and a host of others. When applied more extensively to the study of pathology, it would unveil truths equal to its greatest triumph in physiology, and give a sure basis to therapeutical investigation. Comparison had effected grand results in the hands of its great masters, Cuvier and Owen, by the study of organs throughout the animal kingdom, from their simplest manifestation to their greatest complexity. Comparative physiology would form the foundation for the erection of that great study of the abnormal throughout the organic world—comparative pathology—which the prophetic genius of Hunter first unfolded. The progress of therapeutics, which was the most complex of the three component parts of Medicine, depended on the evolution of physiology and pathology, and could only be investigated with success by those who had mastered the details of the latter sciences. Its slow advance, while it might be a source of regret, could not be wondered at by the thoughtful, for all scientific progress was ever from the more simple to the more complex. Chemistry was referred to as a science which afforded the best example of the results of a sound method of investigation; and the preliminary study of physics and chemistry was pointed out as the best means of fitting students to work with success at the more obscure phenomena of life. To train a class of students of Medicine in a manner to fit them for unveiling the obscure phenomena of life, they must make a great change in their preliminary education. They must have men grounded in the truth of physical science, and familiar with the methods of scientific research—men who, before they entered on their special task, had worked well in the laboratory of the chemist, had mastered researches in experimental physics, and comprehended the great truths of the sciences of observation. What nobler mission could their old and rich universities have than the development of such a class of workers? How much more effectually would the hoarded wealth of centuries thus employed hasten on their knowledge and perfect their civilisation? They would never have such aid, however, until their views of education were sounder, until men realised the great truth in the proposition—

> "To know
> That what before us lies in daily life
> Is the prime wisdom."

It was infinitely more important for coming generations to acquire this prime wisdom than to have the most profound knowledge of a dead language, or the most vivid conception of the thoughts and acts of men who lived 2000 years ago. As the duty of the Practitioner was to apply to his daily work the laws of the sciences which form Medicine, as from a knowledge of these laws comes prevision, and from prevision comes action, so in the future the duty of the Practitioner would be to collect the facts and study the laws discovered by his colleagues, and analysing them with that cautious spirit which his daily work engendered, to arrange them in such a form that generalisations useful to the concrete might spring from a study of the abstract. Too wide a severance between the specialities cultivated in Medicine had lately been the cause of eloquent regret. Those divisions were essential to progress, but the tendency in the pursuit of special study was to lose sight of its connexion with the general body of their science. In their eagerness to collect facts, they had cultivated the inductive spirit too exclusively; the advance of their knowledge was encumbered by a formless mass of unclassified facts. To discover the resemblance and relation of the unconnected particles which composed the bulk of their observations was the task which must engage attention in the future. The work had been commenced by some illustrious labourers, and the construction of the Cellular Pathology was one of the most recent results. On generalisations of that kind the immediate progress of Medicine depended, and afterwards, when the field was better divided, and the workmen more skilled, the facts collected in each centre of activity would be reduced to order by a special class of students, whether practical Physicians, or simply students of the abstract portion of their science, to whose lot would fall the task of ascertaining the connexion and mutual relations of new facts, in order to form laws which might be applied to our practice. Then Medicine, no longer dependent on the blind gropings of empiricism, no longer subjected to personal dogmas, would apply to the solution of her problem the invariable laws of her science. As their knowledge burned more brightly, its rays would illumine the general intelligence, and disclose in all their grim emptiness the shams which gained credence in the present. To hasten the coming of that time was the task before the students who were there for the first time that day. He hoped the nobility of the service would sustain them in the face of difficulty, that the love of truth would cheer them on to effort, and when obstacles seemed greatest and reward most distant, they must remember that honest work was never done in vain. And as they went forth to clear unreclaimed tracts in a new world of knowledge, the golden aphorism of the founder of modern science must be ever in their minds—"Homo minister et interpres Naturæ: quantum scit, tantum potest."

LEEDS SCHOOL OF MEDICINE.

The winter session at this school was commenced on October 1, the opening lecture being delivered by Mr. Samuel Hey, F.R.C.S. There was a large attendance of the lecturers and of the pupils. Mr. Hey dwelt at some length on the objects of a good Medical education, on the mode in which such an education should be communicated, and on the means at the disposal of the Leeds School for imparting such an education, and afterwards forcibly referred to five things that were necessary to constitute a successful school of medicine. The first thing was a building adapted to the pursuits of Medicine, and in this respect the school had been especially fortunate. The next thing was a supply of those means for prosecuting practical anatomy, and here also there was no reason for supposing that there would ever be a lack of subjects for dissection. The third necessity was a large Hospital. He need scarcely say that a school would be useless without an Hospital, and that an Hospital would be almost equally useless for the purposes of education without a school. They looked earnestly forward to the completion of the new Infirmary. It was, indeed, a disappointment that some delay would take place in the opening, but they were in hopes that that delay might in a measure be compensated for by an increase in the perfections of the Hospital. He would rather recommend an inspection of its arrangements than attempt to describe them. Let him, however, take the opportunity of referring to the courtesy and kindness the Medical Profession had received from the Building Committee, and especially from its chairman, in all the suggestions they had made with regard to the Hospital in its secondary but still most important aspect, as an educational establishment. The fourth essential was an efficient staff of teachers. A considerable infusion of new blood had lately been made in that department, and he trusted that by a judicious mixture of young, fiery, energetic lecturers with the grave, grey, and experienced ones, the teaching might both be excellent and profitable. (Applause.) The Medical men of Leeds were more united and friendly than those of any other place with which he was acquainted. (Hear, hear, and applause.) Let them hope that the sympathy which existed between the Medical Profession and the school had contributed to such a result. (Hear, hear.) Having attained these four things, all that was wanted to secure their success was the fifth—viz., a large number of good diligent students. The last topic on which he would touch was the ultimate end of the education given at the school. Their business was to get knowledge and good judgment. Knowledge was the perception of truth; therefore, as Mr. Paget said in the course of his eloquent opening lecture last year, "Get all you can." Good judgment was the practical application of knowledge to some useful end. To obtain and apply knowledge was indeed the work of their lives; in youth, in middle age, and in old age. Let them not forget that youth was the preparation for manhood, manhood for old age, and old age for eternity; and if they took this wide view of their position and duties, professional and religious, surely they should look for Divine assistance, and frequently utter from their hearts the prayer of David, "Teach me knowledge and good judgment." (Applause.)

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.

The Introductory Address was delivered by Mr. Reginald Harrison. The lecturer commenced by remarking that this day was one of particular interest to the Medical Profession, as it found the various lecture-rooms and theatres throughout England well thronged both with busy Practitioners and eager students, and to whom may be added that portion of the general public who take a special pleasure in the welfare of the rising generation, and are ever ready with a helping hand and an encouraging word to smooth a course that is not without its difficulties and dangers. To the busy Practitioner the day has its own peculiar pleasure, for he puts aside the cares of his calling and revisits benches which, if not the same as he used to occupy, are still pregnant with the same associations. He remembers, also, that this is the anniversary when he commenced his struggles of life. He knows well the severity of the contest, and by his presence here to-day he desires to stimulate those wishful to follow in his footsteps, that by perseverance and industry they may escape dangers on which, maybe, some of his own competitors were hopelessly shipwrecked.

To the student, however, entering for the first time a Medical School, the pleasures are prospective. To him the future is everything, and he takes his place amongst us as one commencing a new existence, which is to fit him for admission into a profession where by his own independent industry he may command a position he may well indeed be proud of. Mr. Harrison then alluded to some changes that had occurred amongst the lecturers, and the addition that had been made by the institution of a class on comparative anatomy and zoology. He not only welcomed the students, both old and new, but he congratulated them on becoming recruits for filling the ranks of a profession that can confer both honour and distinction on those that diligently follow it; for within the pale of the Profession ambition can be fully gratified, not the ambition which wealth can satiate, but the ambition which is the mainspring of inquiry, that will lead from one mystery solved to another more abstruse, opening up at the same time new sources of gratification for our fellow-creatures, and resting content with the rewards that naturally follow. With regard to the rewards it was not necessary for him to speak, as there were plenty of examples, past and present, of those who have achieved fame as men of science and received substantial marks of gratitude as benefactors of their race. In our profession patronage alone availeth but little; the gates of fame are open to all—to the plodding and industrious man as well as to his more brilliant competitor. Rewards will generally be found in proportion to deserts, but to obtain them he would proceed to inquire the nature of the studies required, and these were comprehended in life and death. But death must first be contemplated before the student could fully appreciate all the wonderful workings constituting life. Death must be studied in the dissecting-room, where the various structures would be displayed, which, combined with mechanical adaptations the most exquisite and complete, constitute man. But should the student wish to realise fully the perfectness of man, he should go to the animal kingdom, and see how admirable are the arrangements for the different modes of life—how each is enabled to maintain its individual existence, fulfil its purpose, and contribute to the service and gratification of man. But in man will be found perfected the designs which, as it were, are only faintly sketched out in animal life—designs imitated by mechanics, but never surpassed—designs traced out before a hand existed—designs, combined with an unity of purpose, constituting man at once the ruler of the world and the glory of his Creator. But if the interest that was attached to anatomical studies was not sufficient to arouse their energy, he would remind them that without this knowledge they would be unfit to practise a profession they were desirous of entering, as a sound anatomical knowledge was the keystone of success. But the study of death naturally led to that of life, as the dead body must be regarded specially in its relation to movement and other phenomena indicative of life, so that physiological studies would almost at once imperceptibly commence, and the study of life would be much assisted by other collateral sciences, such as chemistry and botany, which were necessary to the extent indicated by the respective lecturers. And this study of life was the preparation necessary to enable the student to appreciate the deviation from the standard, and which we recognise as disease.

The field was a large one—from the slightest deviation from health to the opposite existence, where, with our pity, wonder is excited how life can be carried on under so much destruction and distress. And the study of life in these altered conditions was for the student most conveniently carried on in our Hospitals. The lecturer then earnestly impressed upon the students the importance of availing themselves fully of the opportunities for study that would be afforded them, for no amount of "cramming" at the last can supply that knowledge which is alone to be gained at the bedside.

Mr. Harrison then pointed out that the Profession they had chosen differed materially, with an exception, from other occupations, for their direct tendency was to facilitate generally the acquirement of wealth or other gratifications, and for this purpose we find science applied in its varied branches, be it either through the subtle power of electricity to bring into immediate union two far distant nations in the face of almost superhuman difficulties, or by the application of steam in its varied forms to effect deeds which without it would be impossible.

We may say that up to a certain point we go with others, but our real work commences where they leave off. We are the instruments on whom depends to a great measure that maintenance of health by which man is enabled to fully appreciate the fruits of his labour. As preventers of disease much could be done; and Jenner was instanced as one who by scientific deduction had been enabled to save more lives than the armies of Europe and America had ever destroyed. The most interesting duty, perhaps, was to guide to a successful issue a disease or injury. To Henry Park, for many years Surgeon to the Liverpool Infirmary, we are mainly indebted for the operation of resection of joints, which may be regarded as one of the greatest triumphs of conservative Surgery. But much could be done where cure was not possible—much suffering saved, and even existence sustained beyond that limit which unchecked disease would have allowed. These are some of the more important offices you will be called upon to perform, and how you succeed entirely depends on the manner in which you now prepare yourself.

The lecturer concluded by wishing them health and strength to pursue vigorously a profession which includes amongst her sons some of the noblest and most distinguished in this highly gifted land.

REVIEWS.

Rhinoscopy and Laryngoscopy: their Value in Practical Medicine. By Dr. F. Semeleder, Physician in Ordinary to His Majesty the Emperor of Mexico; formerly Member of the Medical Faculty of the University of Vienna, and Surgeon to the Branch Hospital at Gumpendorf. Translated from the German by Edward T. Caswell, M.D. With woodcuts and two chromo-lithographic plates. New York: W. Wood and Co. 1866.

This volume comprises two separate monographs published by Dr. Semeleder in 1862, translated and combined into one work by his friend and pupil Dr. Caswell, who has also added "a few brief notes and an Appendix," and has enlarged the bibliographical list.

Both of Dr. Semeleder's treatises may be very acceptable in America, as Dr. Caswell states that in that country "Medical literature offers but very little on these subjects," but to us the first part of the work, that devoted to rhinoscopy, will be much the most interesting, as since Czermak's visit, and incited by his able teachings and demonstrations, laryngoscopy has been diligently and successfully cultivated in this country by Gibb, Johnson, Mackenzie, Walker, and others; while rhinoscopy has been comparatively neglected. Its practice is undoubtedly more difficult than is laryngoscopy. Dr. Semeleder fully and frankly owns this; he says:—"Although Voltolini now practises it so easily, he forgets how great patience he had, and how many useless attempts he made, in order to arrive at this facility. The many practical courses which the author has given show him clearly that the rhinoscopic method is far more difficult than the laryngoscopic; and such, indeed, is naturally the case;" and "yet," he remarks, "the results accomplished show that this method has its own indisputable, though limited, value in Medical practice."

Chapter I. contains "the history and literature" of rhinoscopy, the anatomy of the naso-pharyngeal space, illustrated by a woodcut, and descriptions of the apparatus required, the modes of illumination, the method of practising rhinoscopy, the difficulties to be encountered, and the ways in which these may be overcome. As regards the mirror, the author says:—"When we are compelled from the relations of the space to use the smallest mirrors, the author prefers those made of metal, especially of steel, because they reflect more light in proportion to the surface than those of glass, in which also the metallic rim, although narrow, still diminishes the size of the reflecting surface. Still the metallic mirrors are more sensitive and more difficult to retain in good condition: they rust easily, become scratched in cleaning, are easily discoloured by warming, and are more difficult to restore. The size of the mirror which the author uses is from one to two centimètres (0·39 to 0·78 inch) in diameter. The mirrors ought to be thick, in order that they may remain warm longer. . . . Latterly, glass mirrors have been coated with quicksilver, and these excel in point of beauty and durability."

After describing the method of examination, he goes on to say:—"With regard to the facility of execution of this method, it may be observed that the nasal septum, the openings of the posterior nares, and the posterior surface of the middle portion of the soft palate, are easily seen. The lower portion of the openings of the nares, the floor of the nasal cavity, and the inferior meatus are nearly always concealed by the velum. The upper portions of the baso-pharyngeal space may also be easily seen; the lateral portions are more difficult, including also the opening of the Eustachian tube; indeed, this last was not recognised for a long time; the posterior wall is seen incompletely and much foreshortened. . . . The image in the mirror is reversed laterally; that which is above is also in the reflected image above (and behind); what is below, is also below (and in front); the image of the right opening of the nares appears in the mirror at the left of the observer, and that of the left at his right. It should be mentioned, moreover, that such reflected images never give with entire accuracy the true size of the object. A single consideration will convince every observer why it is so. The reflected image could only correspond exactly to the size of the object, were the corresponding axis of the object and the mirror in a right line with each other. Even with a respectable amount of anatomical knowledge, the majority of practising Physicians will hardly be sufficiently clear upon the details of the naso-pharyngeal space to be able to forego preliminary exercises upon the cadaver and upon good models."

Chapter II. is upon the "Practical Application of Rhinoscopy," and contains sections on "Catheterisation of the Eustachian Tube, and Rhinoscopy;" "Pathological Conditions of the Mouth of the Tube;" "Neoplasms in the Nasal and Pharyngeal Cavities;" ulcerations in, and abnormities of, the naso-pharyngeal cavity; and on instruments for therapeutical applications.

The author dwells on the valuable aid rhinoscopy affords in the efficient examination and catheterisation of the Eustachian tubes, and observes that, "if it is true that three-quarters of all diseases of the ear proceed from the Eustachian tube, or must be treated through this tube, no one will deny the importance of rhinoscopic investigations to aural Surgery." He gives a series of pathological cases and observations showing the difficulties attending the "rhinoscopic method," its usefulness, and the good results obtained in some cases, and the disappointment and absence of benefit in others. We cannot say that much seems to have been gained, but, as Semeleder remarks, "there is however still, in special cases, a wide field left open to the acuteness of individual observers for new inventions and alterations."

The second part of the work is on Laryngoscopy, and contains, we think, nothing that will be new to the workers at the subject in England.

The book closes with a graceful and well-merited compliment to Czermak.

The mode of expression is sometimes rather awkward and unpolished, and the language not always clear; but whether these faults are due to the translator only, or lie partly with the author, we know not, as we have not had the advantage of seeing the original work.

GENERAL CORRESPONDENCE.

OXALATE OF LIME IN ALVINE CONCRETIONS.

Letter from Dr. W. D. Moore.

[To the Editor of the Medical Times and Gazette.]

Sir,—So far as I am aware, oxalate of lime has not as yet been described as a constituent of alvine concretions. I therefore hope that the following note of its occurrence as such may be deemed worthy of insertion in your columns.

On the evening of the 6th inst., I received by post from a lady residing in one of the eastern counties of England, with a request that I would inform her as to its nature, a quantity of a hard, greenish yellow granular matter of which the writer gave the following history:—

"It is passed frequently by an infant of ten months old, in pieces of about the size of half a pea, and as hard as it now is, being of quite a dark colour, and different from the rest of the motion, which is quite natural, but rather relaxed, as has been the case ever since the child was born.

"The child is, however, very fat and in good health, and nursed entirely by myself. My children, when a few months old, have generally become extremely confined in their bowels."

The substance above described, reduced to powder, was found to be almost wholly insoluble in water of caustic potash; it dissolved freely, without effervescence, in dilute hydrochloric and in dilute nitric acid, leaving only a little fatty-looking matter floating on the surface of the fluid. Exposed on a platinum spatula in the flame of a spirit lamp, it swelled up, became incandescent, and was reduced to the state of a white, strongly alkaline ash. Water of caustic potash, chloroform, and boiling alcohol dissolved a certain amount of greenish fatty matter. The alcoholic solution, when filtered and cooled, did not yield any plates of cholesterin.

From the foregoing experiments it would appear that the substance in question consists of oxalate of lime in combination with a small amount of fatty matter. As to the source of the former, I have suggested that it would be well to submit a few specimens of the mother's urine to examination, with a view to ascertain whether she is labouring under habitual oxaluria. It would also be interesting to examine the renal secretion of the child. Should I be correct in my suspicion as to the source of the oxalate, I should be inclined to suggest that the frequent occurrence of calculi in very young children might be due to the formation of a nucleus during nursing. If this should be so, the examination of the urine would be an important element in deciding on the qualities of a nurse. The examination of the child's urine in this particular instance would be of interest in order to ascertain whether the oxalate of lime passes off by the bowels instead of by the kidneys, which would be for the child a much safer mode. Whether these suggestions be well founded or not, the occurrence I have related appears to me to be not devoid of interest.

I am, &c. Will. D. Moore.

Dublin, October 8.

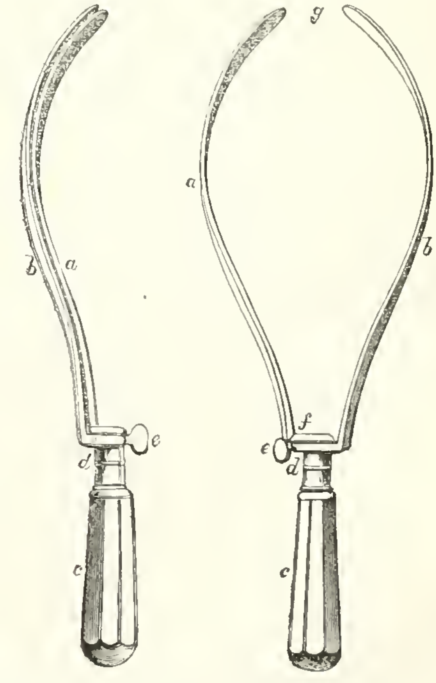
PROFESSOR DYCE'S FORCEPS.

Letter from Dr. R. Dyce.

[To the Editor of the Medical Times and Gazette.]

Sir,—I observe in a recent number of the *Medical Times and Gazette* (July 21), under the head of New Inventions, an instrument called "The Steel Fillet of Dr. Sheraton," intended to supersede the forceps and vectis, etc., in difficult labour. As to the utility of such an instrument, and its presumed advantages over the instruments it is intended to supersede, I, for the present, make no comment. My object in now addressing you is to show you that this is no new invention, as I possess an instrument, though in some minor particulars differing from Dr. Sheraton's steel fillet, yet possessing precisely the same principle, viz., its being introduced like a single blade of the forceps or vectis, and its power of rotation, so as to form an ordinary forceps. This instrument, which illness at the time prevented my sending to the late exhibition in London of surgical and midwifery instruments, has been in my possession between thirty and forty years. I found it along with numerous other unfinished surgical and philosophical instruments amongst my father's (the late Dr. Wm. Dyce) effects. Whether it is his own invention, I cannot positively assert, as I have no manuscript description; but from his acknowledged mechanical and philosophic turn of mind, I have great reason to believe that I might claim this for him also. I may mention that for his various papers on philosophical subjects, and suggestions on mechanics, as well as for his discovery of a rich mine of manganese in this neighbourhood, he was awarded the gold medal of the Royal Society.

I enclose a drawing and brief description of his instrument—the swivel forceps—the similarity of which to that of Dr. Sheraton is very striking. The swivel forceps consists of two curved blades (*a*, *b*) of steel. One of these (*a*) is fixed to the handle (*c*). The other (*b*) is fixed to a swivel (*d*), which allows it to be moved freely round into any position relatively to *a*, in which position it may be clamped by the bending



screw (*e*). The distance, *f*, *g*, is $7\frac{1}{8}$ inches, and the greatest width apart of *a* and *b* is $3\frac{3}{8}$ inches. I am, &c.

Robert Dyce, M.D., F.R.S. Edin.,
Professor of Midwifery, University of Aberdeen.

Aberdeen, September 8.

ON THE USE OF IRON IN CASES OF PHOSPHATIC URINE.

Letter from Mr. Edward T. Blake.

[To the Editor of the Medical Times and Gazette.]

Sir,—Would you allow me to ask your readers whether they have had any opportunity of observing the effect of iron upon phosphatic urine? I append some notes of one experiment which is not perfect enough to be conclusive, and which as yet I have had no opportunity of repeating.

A male adult, fairly healthy, of bilious temperament, has, in addition to professional duties during the day, for the last few weeks been studying until unusually late hours.

September 11, 1 a.m.—Pulse 60; respiration 23; temperature 98°; urine sp. gr. 1036, slightly acid, becomes much more so on standing; free precipitate of phosphates. Tinct. ferri sesquichloridi gtt. xxx. 7 a.m.—Pulse 70; respiration 17; temperature 97·8°; urine 1026, more phosphates. Repeat iron. Midday.—Urine 1026; phosphates greatly increased. Repeat iron. 9.30 p.m.—Pulse 62; respiration 21; temperature 98·4°; urine 1009; less phosphates. Repeat iron. 11 p.m.—Urine 1012; no phosphates.

12th, 8 a.m.—Pulse 64; respiration 18; temperature 98·4°; urine 1032; a mere trace of phosphates. Repeat iron. 1 p.m.—Pulse 75; respiration 26; temperature 98·6°; urine 1019; no phosphates. Repeat iron. 7.30 p.m.—Pulse 62; respiration 22; temperature 98·4°; urine 1027; no phosphates. Repeat iron.

The bowels were confined for two days after this.

Pokrowsky, in some very interesting observations made in the Hospital of St. Petersburg,(a) has recorded a definite rise of temperature and an increase of urea following the use of ferruginous preparations; but I am not aware that he observed if iron had any effect upon the excretion of phosphates. It would be interesting to know whether that mineral has any primary action on nervous tissue, as my experiment suggests.

I am, &c.

Wolverhampton, Oct. 6. Edward T. Blake.

ANENCEPHALOID FŒTUS.

Letter from Mr. Robert Oke Clark.

[To the Editor of the Medical Times and Gazette.]

Sir,—The following case possesses several points of physiological interest. I have therefore noted it down carefully in order to lay it before my Professional brethren. I was sent for in hot haste to attend Mrs. ——, taken unexpectedly in labour during the early part of her ninth month of gestation. The pains were strong, and all was progressing favourably, but I was somewhat puzzled at the presentation, which seemed more like nates than any other, though I felt convinced that it was not really so; then what was it? I was not long kept in doubt, for a fœtus was born with the following peculiarities. I may add here that it was very strong, the heart's action was quite normal, that it cried out lustily, and lived eleven hours and forty minutes, the cries becoming weaker, and the breathing slower, as time advanced; fæces and urine were both passed before the child died. Next morning I made a very careful examination of the child. The inferior extremities, pelvis, abdominal walls, and the contents of the abdominal cavity, the thorax and its contents, as well as the upper extremities, were all natural, well developed, and healthy. The neck was very short indeed, the head seeming to rest on the clavicles; the face had rather a compressed appearance, but the various parts were perfectly formed, all the facial bones (proper) well made, and the orbital cavity perfect; the internal ear was also perfect. On the superciliary ridge of the frontal bone the cuticle ceased with a very smooth edge. The cranium was entirely wanting, and it appeared as if the "top of the head" had been cut off almost obliquely from the superciliary ridge to the centre of the foramen magnum of the occipital. The roof of the orbit, the petrous portion of the temporal bone, and all the sphenoid bone, were perfect. The squamous portion of the temporal bone down to the zygomatic arch, both parietals, all the occipital bone (except the small portion forming the anterior half of the foramen magnum, and the basilar process, with portions of the condyles), were absent. A natural-looking dura mater, with patches of arachnoid and pia mater, covered the portions of the bones remaining. The various foramina of the sphenoid and frontal bones were filled with a tissue exactly corresponding microscopically with nervous matter. The lateral sinuses on both temporal bones were filled with blood, and there were several large arteries, including the carotid, lying empty in various positions, as if the brain had been forcibly removed and these vessels torn off. Of scalp, cerebrum, cerebellum, and medulla oblongata, there was not even a trace remaining; the three upper cervical vertebræ were wanting, and also the spinal cord down to the fourth pair of nerves, which were very imperfectly developed. The question naturally arises, how was this child enabled to cry so lustily, how was the heart's action kept up so regularly, and how was life sustained in this case for eleven hours and a half without cerebrum, cerebellum, or any important portion of the spinal cord? The peculiarity in diagnosing the "presentation" I imagine to have arisen from the fact of the finger coming first in contact with the petrous portion of the temporal bone.

I am, &c.

Farnham, September, 1866. Robert Oke Clark.

HÆMORRHOIDS TREATED BY NITRIC ACID.

Letter from Dr. W. Cooke.

[To the Editor of the Medical Times and Gazette.]

Sir,—Great diversity of opinion exists as to the most successful, and least painful, method of removing the disease in question.

The instance of imputed scalding in an attempt to bring down internal piles by the patient's sitting over hot water, leads me to publish the following case. It has a bearing on the object for which vapour was employed, whilst it shows the successful treatment of a distressing disease.

In the *Medical Times and Gazette* for April, 1853, I published a series of cases of hæmorrhoids treated by nitric acid, and since then other cases have undergone treatment with equal success.

Miss A. B., aged 24, a rather delicate young lady, residing a few miles from town, had suffered much pain about the anus for many months, especially at the time of passing dejections. When travelling with friends, this had not only proved very painful, but was additionally annoying from her being obliged occasionally to delay the party for some hours, with unwillingness, from delicacy, to mention the cause.

The delicacy under those circumstances was excusable, but scarcely so that which led to an objection for Medical advice, and more especially, when advice was sought, to an examination.

On the 23rd of March last I first saw her in reference to this state of suffering. From the description given by the young lady of the pain in passing motions, often accompanied with bleeding, and of the protracted uneasiness afterwards, especially in the sitting posture, I inferred the existence of piles, and prescribed mild aperients and the application of the ung. gallæ comp. From these means she derived little relief, and much had not been promised. She could not tell whether or not any swelling came down at the time of stool.

By appointment on April 6 I found the patient in bed, and made an examination. At the posterior part of the anus there was an ulcerated pile, extremely sore and irritable; it was partly external, but extended somewhat within. The introduction of my finger to examine the state of the rectum occasioned severe pain. I did not detect anything wrong, and therefore hoped the described pile was solitary. In this belief, and in the absence of information as to the descent of any swelling, I omitted the opening draught I have usually advised to be taken in the morning of applying the acid.

I had taken with me the acid, and therefore made the application to the pile described. Of course, there was sharp pain for a few minutes, but it was borne with great fortitude.

April 9 I called again, and found the patient in great distress. She had recently passed a copious motion, and the mother reported "something had come down." I found a pile nearly as large as a pigeon's egg, very painful and tender to the touch. Nature had done what I ought to have done. I immediately applied the acid over the whole surface. The pain very soon subsided. From this period there was nothing untoward; there was discharge, sometimes tinged with blood. The parts were sponged daily, and on my visit some mild ointment on the finger, or on lint, was passed into the bowel. The pain suffered on passing motions soon abated, and by the 28th she was nearly well. During the healing of the sore the bowels were kept open by small doses of castor oil or senna electuary; but when soreness had ceased, and there was need of a tonic-aperient, a combination of quinine with a very small dose of the watery extract of Barbadoes aloes in a pill, taking one daily or occasionally, answered extremely well.

(a) Virch. *Archiv*, xxii., 5, 6, 1861. Schmidt's *Jahrb.*, vol. cxiv., p. 18.

On relating this case at a meeting of the Hunterian Society, a very intelligent member objected to the treatment by nitric acid that the disease was not permanently cured; that the acid, by coagulating the blood, or in some other way, produced temporary relief, but the disease, he said, returned. He believed that removal by knife or ligature alone could be relied on. I take care to use a concentrated acid—one application usually suffices—and instead of merely coagulating blood, it produces sloughing of the surface where applied to. Several years have elapsed since this method of treatment was adopted, and I have never met with an instance of the affection having returned.

I am, &c. W. Cooke, M.D.

39, Trinity-square, E.C., July 25.

MEDICAL NEWS.

Royal College of Physicians of London.—At a General Meeting of the Fellows held on Tuesday, October 2, the following Members of the College were duly admitted Fellows of the same:—

John Braxton Hicks, M.D. Lond., 9, St. Thomas's-street; and Peter Wallwork Latham, M.D. Cantab., Cambridge.

At the same meeting, the following gentlemen, having undergone the necessary examination, were duly admitted Members of the College:—

Hermann Beigel, M.D. Berlin, 3, Finsbury-square; William Lomas, M.D. St. Andrews, 28, Harley-street; and Edward John Waring, M.D. St. Andrews, 3a, Talbot-villas, Westbourne-park.

The following extra Licentiate was also admitted a Member of the College:—

John Forbes, 77, Addison-road, Kensington.

Royal College of Surgeons of England.—The following Members of the College having been elected Fellows at previous meetings of the Council, were admitted as such at a meeting of the Council on the 11th inst., viz.:—

John Hammett Collins, Jumalpore, East Indies, Diploma of Membership dated July 26, 1839; Samuel Marsden Hallsworth, Atherstone, Warwickshire, October 2, 1840; and Robert Butterfield Cumming, M.D. St. Andrew's, Malpas, Cheshire, June 16, 1835.

Apothecaries' Hall.—On Thursday, October 4, the following gentleman passed his Examination in the Science and Practice of Medicine, and received a certificate to practise:—

Henry Smith, Blackrod, Chorley, Lancashire.

The following gentlemen also on the same day passed their First Examination:—

Thomas Fawsitt, Manchester Hospital; Arthur Waller, St. Thomas's Hospital; William Anderson, St. Thomas's Hospital; Richard Henry Prior, King's College Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Axford, W. H., M.B. Lond., has been appointed Medical Officer to the Bridgewater Infirmary.

Brown, D. Dyce, M.A., M.D., has been appointed Assistant-Professor of Materia Medica in the University of Aberdeen.

Cookson, A. N., M.R.C.S.E., has been appointed Assistant House-Surgeon to the Stockport Infirmary.

Donkin, Arthur Scott, M.D. Edin., M.D. Durham (Dipl.), L.R.C.S. Edin., Lect. on Forensic Med. to the University of Durham Coll. of Med., Newcastle, has been appointed a Physician to the Sunderland Infirmary and Dispensary.

Edwards, H. N., M.R.C.S.E., has been appointed Surgeon to the Shrewsbury Dispensary, vice H. Fenton, M.R.C.S E., resigned.

Howells, T., M.B., M.R.C.S.E., has been appointed House-Surgeon to the Westminster General Dispensary, Gerrard-street, Soho.

BIRTHS.

Adams.—On the 6th October, at 1, Ottoman-villas, St. James's-road, Croydon, the wife of R. Adams, M.D., of a son.

Fair.—On the 5th October, at Arduarna, Oughterard, co. Galway, the wife of Campbell Fair, M.R.C.S.E., of a son

Hadden.—On the 6th October, at Clonakilty, Ireland, the wife of H. R. Hadden, M.D., of a daughter.

Hill.—On October 4, at 60, George-street, Portman-square, the wife of F. A. Hill, M.R.C.S.E., of a daughter.

Meikle.—On September 29, at Loch Head, near Aberdeen, the wife of T. H. Meikle, M.D., of a daughter.

MARRIAGES.

Cooper—Dailey.—On September 29, at St. Matthias, Stoke Newington, V. M. Cooper, M R.C.S.E., of Bow, to Emma, third daughter of John Dailey, Esq., of Manchester.

Horne—Cleeve.—On October 2, at Cholsey, Berks, E. Horne, M R.C.S.E., to Maria, second daughter of H. Cleeve, Esq., of Greenhill.

DEATHS.

Banbury, R., Assistant-Surgeon Her Majesty's Bengal Service, Superintendent of Gaols at Hazarebagh, India, on August 25.

Freeman, J. H., M.R.C.S.E., at 361, Mile-end-road, on October 3, in his 54th year.

Gordon, J. C., M.R.C.S.E., at Primrose-hill, Hulme, Manchester, on September 27, in his 59th year.

Johnstone, R., M.D., at Caldera, Chili, South America, on August 11.

Lyon, H., M.D., at Hong Kong, on August 12.

Macconechy, James, M.D., at 20, Eton-place, Hellhead, Glasgow, on October 3, aged 70.

Murdoch, William, M D. Paris (Medical Officer of Health to the Parish of St. Mary, Rotherhithe), on October 9, in his 61st year.

Power, James Joseph, L.R.C.P. Lond., at Maidstone, on October 5, aged 59.

Pring, F. B, M.R.C.S.E., of Grassington, Yorkshire, on September 28, aged 54.

Walker, G., M.D. Edin., of Bonington-place, Edinburgh, on September 28.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Barnsley Union.—The Workhouse is vacant; salary £50 per annum.

Skipton Union.—The Kettlewell District is vacant; area 29,490; population 1141; salary £8 per annum. Also the Grassington District; area 24,442; population 2664; salary £12 per annum.

APPOINTMENTS.

Poplar Union.—Henry V. Garman, M.R.C.S.E., L.S.A., to the North District.

Stepney Union.—George Weller, M.R.C.S.E., L.S.A., to the Limehouse District.

Death of M. Rostan.—M. Rostan, Honorary Professor to the Faculty of Medicine of Paris, one of the celebrities of French scientific Medicine, has just died of diabetes at the age of 77. He always exhibited a remarkable affection for the Medical students, and this trait was exhibited remarkably by the fact that when he felt his end approaching he removed from his own house to the neighbourhood of the schools. "He could not bear," he often repeated, "that his dear pupils should be obliged to go so far in order to follow him to his last abode."

The Faculty of Physicians and Surgeons of Glasgow.—At a meeting of this Corporation, held on the 1st inst., the following office-bearers were elected for the ensuing year—viz.:—*President:* John Gibson Fleming, M.D. *Visitor:* Andrew Anderson, M.D. *Treasurer:* John Coats, M.D. *Honorary Librarian:* George Rainy, M.D. *Vaccinator:* James Dunlop, M.D. *Councillors:* The President, *ex officio;* the Visitor, *ex officio;* William Weir, M.D.; A. D. Anderson, M.D.; James Watson, M.D.; Robert Scott Orr, M.D.; John Coats, M.D. *Board of Examiners:* James Adams, M.D.; George Buchanan, M.D.; Andrew Anderson, M.D.; Thomas Watson, M.D.; William Lyon, M.D.; Andrew Buchanan, M.D.; James Morton, M.D.; Robert Perry, M.D.; R. D. Tannahill, M.D.; J. B. Cowan, M.D. *Examiners in Arts:* Professor Ramsay and Dr. Bryce. *Clerks:* L. Hill, LL.D., and William H. Hill. *Librarian and Secretary:* Alexander Duncan, B.A.

Cholera and Fever in Scotland.—The last monthly return (September) of the Registrar-General for Scotland states that 48 deaths were attributed to cholera; 6 of the deaths in Glasgow, 7 in Edinburgh, 7 in Dundee, 3 in Aberdeen, and 25 in Leith were attributed to that cause. It may be mentioned, that exactly the same kind of weather prevailed in Scotland previous to the outbreak of cholera in October 1848, as prevailed during the latter half of September and beginning of October this year. The most fatal epidemic was diarrhœa, which caused 98 deaths, being at the rate of 5·4 per cent. of the whole mortality. Typhus caused 91 deaths, or 5 per cent. of the mortality, in the eight towns. 10·7 per cent. of the deaths in Paisley were from this cause. Of the deaths tabulated under typhus, 66 were registered as typhus, 10 as typhoid or enteric fever, 5 as relapsing, two as continued, and 8 as gastric fever.

How Boars Kill.—Every animal has a particular mode of attacking its enemies, depending, of course, on the nature and powers of its organs of offence. Longbilled birds strike at the eye; the dog and cat and ferret tribes seize their prey by the neck; injuries from pigs are not very common, but when they do occur now-a-days they are seated where the records of antiquity describe them—on the thigh. Some months ago (*Medical Times and Gazette*, 1864, Vol. I. p. 49) we noticed the case of a poor fellow whose thigh had been gored by a boar, and compared it with that of Adonis, as told by Theocritus. Now we find another, and collate therewith the case of Ulysses, narrated in the 19th Book of the Odyssey. The brute, attacked by Ulysses,

> "His tusks oblique be aimed, the knee to gore,
> Aslope they glanced, the sinewy fibres tore
> And bared the bone."

The modern hero fared worse:—

"The death of a farm labourer, caused by an attack from a boar, has just occurred about a couple of miles from Newport, Monmouthshire. On Friday afternoon he went into the fold yard, where there was a boar pig and a sow, and began teasing the former. The wife of the bailiff heard him swearing at the animal, which grunted very angrily. All of a sudden she heard the deceased cry out in great agony, 'Oh God! oh God!' She immediately ran out of the dairy, and was horrified to see the deceased making his way out of the fold yard, the front of his person all lacerated, and, to use her own expression, 'the blood gushing out in a stream as thick as her finger.' The infuriated pig ran after him, but the deceased managed to reach the farm-house passage, when he fell down from loss of blood, and almost immediately expired. The pig had entirely torn away the flesh from the upper portion of both thighs, and divided the femoral artery. An inquest was held on the body on Saturday, when the jury returned a verdict of Accidental Death."

We very much object to the word "accidental" as used in such a case. The injury clearly comes under the domain of *law*, not of accident.

Composition and Quality of the Metropolitan Waters in September, 1866.—The following are the returns of the Metropolitan Association of Medical Officers of Health:

	Total Solid Matter per Gallon.	Loss by Ignition.(a)	Oxidisable Organic Matter.(b)	Hardness.	
				Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	19·33	0·76	0·68	13·0	4·5
West Middlesex	15·89	0·84	0·80	14·5	4·5
Southwark and Vauxhall	17·83	0·91	0·72	13·0	4·0
Chelsea	19·00	0·85	0·56	13·0	4·5
Lambeth	18·54	1·00	0·79	13·5	4·0
Other Companies.					
Kent	25·89	1·01	0·28	18·0	7·5
New River	16·38	0·98	0·21	13·5	3·5
East London	18·52	1·00	0·39	14·0	5·0

(a) The loss by ignition represents a variety of volatile matters as well as organic matter, as ammoniacal salts, moisture, and the volatile constituents of nitrates and nitrites.

(b) The oxidisable organic matter is determined by a standard solution of permanganate of potash, the available oxygen of which is to the organic matter as 1 is to 8; and the results are controlled by the examination of the colour of the water when seen through a glass tube two feet in length and two inches in diameter.

The quality of the water supplied to the metropolis during the month of September has not differed very materially from that of the preceding month, the quantity of organic matter in the water derived from the Thames having been from 0·56 of a grain per imperial gallon to 0·80; while that in the East London, the Kent, and the New River supplies, which are obtained from other sources than the Thames, has ranged from 0·21 to 0·39 of a grain per gallon. In all cases the water has been perfectly bright and free from sedimentary matter.—H. Letheby, M.B.

The Hunterian Museum.—From the last annual report of the Council of the Royal College of Surgeons, it appears that Parliament having voted £42,500 for the purchase of the extraordinary collection formed by John Hunter, and towards the erection of suitable buildings for its display and preservation, the large sum of £61,000 had been supplied from the College funds up to 1847, when, further enlargement of the building having become necessary by the continued increase of the collection, the Council of the College in that year purchased the extensive premises of Mr. Alderman Copeland in Portugal-street, formerly the site and part of Ben Jonson's theatre, for the sum of £16,000, and in 1852 proceeded to the erection of the eastern museum at an expense of £25,000, Parliament granting £15,000 in aid thereof. The re-arrangement of the specimens was completed, and the additional portion of the building opened to visitors in 1855, since which time considerable and most valuable specimens have been added by purchase and donation. Mr. Flower, the indefatigable Conservator of the Museum, has for some time past been exploring the osteological stores which have been accumulating for many years in the subterranean apartments of the College, which are now gradually yielding up their treasures to enrich the Museum. Amongst the particularly valuable additions from this source which appear to have escaped the attention of previous Conservators, is the skeleton of that rare and probably extinct bird the great auk (*Alca impennis*), of which only three other skeletons are known to exist in Europe, and none so perfect as the specimen lately added to the collection. Some of the bones of this valuable Hunterian specimen were already catalogued in the collection, but without any reference to the remainder being in the possession of the College, until the examination of the boxes in the store-room during the present year brought to light all the others required to complete the skeleton, with a few unimportant exceptions. It is the eggs of this bird which at recent sales by auction of objects of natural history have realised upwards of £30 each; there are half a dozen in the Hunterian collection. Another interesting addition is a skeleton of the awantibo (*Arctocebus calabarensis*), a lemuroid animal from Old Calabar, presented by Mr. A. Murray, and at present the only skeleton of the genus known to exist. The skeleton of another very rare animal, allied to the last mentioned, but presenting several remarkable peculiarities of conformation, the aye-aye (*Cheiromys madagascarensis*), has been added during the past year by purchase. An interesting discovery was made in the latter part of last year, in the Island of Mauritius, relating to that remarkable bird the dodo (*Didus ineptus*), once an inhabitant of that island, but extinct for nearly two centuries. The head and foot were the only parts previously known, and these presented such anomalous characters that much speculation existed among naturalists as to the structure of the other portions of the skeleton. For many years numerous searches have been carried on in various parts of the island to endeavour to find further remains of this once frequent inhabitant, but hitherto in vain. The curiosity felt upon the subject was at last gratified by the discovery, while draining a marsh, of many bones of numerous individuals undoubtedly of this species. As a portion of these were sent to this country and offered for sale, the College was enabled to secure, at a moderate cost, some of the most characteristic bones. The late Mr. Gordon Cumming's collection has been put under contribution, and some interesting specimens added to the Hunterian collection.

Cattle Plague and Vaccination.—In the course of his introductory address at the opening of the Session of the Royal Veterinary College, Professor Simonds, speaking of the exploded belief in vaccination as a preventive for cattle plague, said:—"The system had its origin in the belief that cattle plague was not only an exanthematous affection, but closely allied, if not identical, with variola. This view having had its origin with some distinguished members of the Medical Profession soon found favour with the public, and vaccination was at once seized upon with an avidity that would have done honour to a better cause. The great demand for vaccine lymph led pretty soon to the manufacture of a spurious fluid by a class of persons ever ready to trade on public credulity. Points charged with a compound of collodion and croton oil, or some similar irritant, were sold by the gross, and more than one person in London is said to have profited largely by the transaction. The Northwich hundred of Cheshire was made the site of the nefarious practice of two persons, who travelled throughout it, carrying an irritating mixture in quart bottles, with which to 'vaccinate' cattle. It is said that they operated upon a thousand animals at least, making large incisions on the lower parts of the neck or shoulder, and wetting the wound with the fluid. In many cases the plague showed itself in about eight days afterwards, and its outbreak was believed to depend on these persons visiting diseased and healthy stock indiscriminately. The charge made by them was two shillings and sixpence per head, so that the sum netted was very considerable. No doubt, however, a very large number of cattle were properly vaccinated; and so many applications for lymph were made that it was found absolutely necessary for the national vaccine establishments to refuse all comers. Five shillings for a well-charged point was given in many instances, and as much as a guinea a head is said to have been paid for legitimate vaccination. The vaccination mania, no doubt, largely contributed to the spread of the plague. Three causes for this were especially brought into operation :—1st. A fancied security in the mind of the cattle owner; 2ndly. The totally unprotected state of even properly vaccinated cattle; and 3rdly. The positive inoculation of animals with cattle-plague virus, persons acting under the belief that this was vaccinating them. Strange as it may appear, some country Surgeons, among others, were found to speak of the artificial introduction of the virus of cattle plague as vaccination. Coming from a cow, they seemed to think that it must necessarily have some of the properties of vaccine lymph, and as the use of this in the human subject was a security against small-pox, so the cattle plague virus would give equal immunity to cattle without in any way endangering their lives. Without commenting on ignorance of this kind, I may observe that it was hoped that the important question of the susceptibility of cattle to the action of humanised vaccine lymph would have been solved by the experiments. For this purpose, and for other allied matters connected with vaccination, a circular was prepared by the Cattle Plague Department, and forwarded to each inspector who was a member of the Profession. The questions asked were—1st. The number of animals vaccinated. 2nd. The number successfully vaccinated. 3rd. The source whence the lymph was obtained. 4th. The number re-vaccinated; and 5th. The number in which vaccination failed altogether. A very large number of returns were received, and an attempt was made to classify the answers, so as to take those of value. This, however, may be said to have failed to rightly determine the matter; but, taking the cases most to be depended upon, it appears that out of 7692 animals 4188 were successfully vaccinated and 1775 resisted the influence of the vaccine lymph entirely. The figures here given leave unaccounted for 1729 animals. The return from Cheshire, like most other things connected with the cattle plague, was unique of its kind. It stated that 28,113 animals had been vaccinated, 22,564 before the appearance of cattle plague, and 5649 after a declaration of the symptoms. These figures are sufficient to show the extent of the delusion which possessed the minds of the farmers in that ill-fated county, apart from anything else which has been advanced in this address. It will be seen that no correct deductions can be made from the inquiry, and that the questions of susceptibility, the advantages or otherwise of retro-vaccination, remain very much in the same state in which they were prior to the cattle vaccination mania."

COMPARISON OF THE RIGHT AND LEFT CLAVICLES.—Dr. Wyman, alluding to the want of symmetry in the two clavicles, laid before the Boston Medical Society the measurements and weights which he had made in nine pairs. Of these the maximum length was 6·40 inches, and the minimum 5·35 inches; the maximum weight 30·700 grammes, and the minimum 10·240. The right clavicle was longest in one pair, and the left in five pairs, the clavicles being of equal length in three. The right clavicle was heaviest in five pairs, the left in three.—*Boston Journal, July* 19.

THE Hunterian Society commenced their annual meetings on Wednesday last in the theatre of the London Institution. An eloquent and forcible address was delivered by the President, Dr. Ward, and a paper was read by Dr. Daldy "On the History, Symptoms, and Treatment of Cholera." The migration of this Society will form a kind of epoch in its history, and it cannot be denied that a change for the better has been made. There are few Medical associations so eminently social in their character as the Hunterian Society, and we do not doubt that this change of quarters will add to the numbers as well as the comfort of its members.

THE following are the last week's Cattle Plague Returns.

—	1. Attacked.			Back cases reported in the week ended Sept. 29, 1866.	2. Result of reported Cases from the Commencement of the disease.				
	Week ended Sept. 15.	Week ended Sept. 22.	Week ended Sept. 29.		Attacked.	Killed.	Died.	Recovered.	Unaccounted for.
Great Britain .	58	66	40	3	253655	84951	124297	33413	10994

The Return shows that 40 attacks were reported to have occurred during the week ended September 29, being a decrease of 26 on the previous return.

Fresh outbreaks took place in 11 farms or places where cattle are kept; the number of such outbreaks in the previous week being 19. The number of healthy cattle slaughtered, to prevent the disease extending to them, was 61 during the week.

Since the commencement of the disease 51 in every 1000 of the estimated ordinary stock of cattle in Great Britain are returned as having been attacked.

The total number of sheep reported to have been attacked up to the date of this return is 6826.

NOTE.—One Inspector in the East Riding of York who returned three cases last week has not reported in time for this Return.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

T. B.—Write to Mr. Napper, Surgeon to the Cranley Village Hospital.

Dr. Cotton's case shall appear next week.

A Second-Year's Student.—Unless you register on or before Monday next you will lose half a session. Both close on the same day.

Dr. Poggio.—Extract from Shipping Agent's letter dated Oct. 4 :—"Your package addressed to Teneriffe is lying at our chief office, as on account of the strict quarantine regulations there have been no vessels leaving England for that place. We hope to get it off shortly."

SCOTTISH MEDICAL STUDENTS AND THE ARMY EXAMINATIONS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I beg to call your attention to a great hardship Scotch Medical Students labour under who intend entering the army service—viz., the competitive examination taking place in March, they cannot graduate till the following month, and are thus excluded from entering the service till the following August.

I have known a number of young graduates who, missing the examination in March, preferred, and in some cases were compelled for pecuniary reasons, to take up the first opening that presented itself, rather than wait and lose time till the next competitive. Is there no opportunity to call the attention of the Director-General to this state of affairs? I am certain a number of well-qualified men would avail themselves of an April examination who cannot appear in March. I am, &c.

Liverpool, October 8. A SCOTTISH UNIVERSITY STUDENT.

THE DEATH FROM INHALATION OF CHLOROFORM AND ETHER.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—My principal object in writing is to raise a suggestion, by observing that in the account of the case of death from the inhalation of chloroform and ether, so commendably given by Mr. E. Ludlow in the *Medical Times and Gazette* of the 6th inst., among the means specified as used for resuscitation no mention was made of the tongue having been drawn out. The omission of so very important a measure quite struck me. But perhaps that expedient was also practised, and, if so, any remark of mine on the point is unnecessary, and for which I beg to apologise.

Touching anæsthetics, it may not be out of place here strongly to recommend to the notice of those of the Medical Profession who have not already seen the work, the very excellent article by Mr. Lister on anæsthetics, but particularly that on chloroform, in Holmes's "System of Surgery;" for I am persuaded that aid may thence be derived that would render much less frequent than heretofore cases requiring means for resuscitation. I am, &c. M.D.

SANTONINE IN CHOLERA.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Allow me to recommend through your valuable Medical journal the trial of santonine in the treatment of Asiatic cholera. I verily believe it will prove successful I have long entertained this opinion, and expected to have had an opportunity of verifying before publishing it. But as such an occasion is not likely now to occur in Canada this year, I am induced to seek its trial in England, where the epidemic prevails.

Santonine, when swallowed, rapidly gets into the blood, and there coming in contact with the epidemic poison, as well as in the mucous membranes of the bowels and lungs, will quickly destroy it. I have come to this conclusion from the result of experiments which I have made, and intend to publish at a future period I have found it also to have a remarkable power of causing the absorption of serum which has been effused—as in pleuritis, for example—and of allaying palpitation of the heart. If it can thus absorb serum, it is fair to infer it may prevent its effusion also—the very thing that is wanted in cholera—and at the same time quiet the heart's action, which is always much disturbed in this disease. I recommend from five to ten grain doses, administered every one, two, three, or four hours, the dose being at once repeated when vomited. I shall say no more at present in recommendation of this remedy in the treatment of cholera, except to express the hope that it may soon meet with a fair trial. I am, &c.

A. Rowand, M.D. Edin, etc., Surgeon and Physician to the Marine and Emigrant Hospital, Quebec.

Quebec, September 22.

Coroners' Inquests.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Will you have the kindness to inform me, in your "Answers to Correspondents," (1.) Where an inquest ought legally to be held—whether in the house or room where the deceased person lies, or in a house or "Coroner's Court," possibly some considerable distance away, or whether it may be held at one or the other, at the option of the Coroner? (2.) Whether a Coroner can compel a House-Surgeon to leave his Hospital duties and attend such "Coroner's Court" for the purpose of giving evidence? and (3.) Whether, if it is compulsory, a House-Surgeon is not entitled to a fee (as other Practitioners are) for such attendance?

Liverpool, September 7. I am, &c. Chirurgus.

⁂ (1.) By the statute *de Officio Coronationis*, 2 Edw. I., st. 2, "the coroner, upon information, shall go to the place where any be slain or suddenly dead or wounded; and shall forthwith command four of the next towns, or five or six, to appear before him in such a place, and when they are come thither, the coroner, upon the oath of them, shall inquire in this manner—that is, to wit, if it concerns a man slain, whether they know where the person was slain, whether it were in any house, field, bed, tavern, or company, and if any and who were there." It is not, however, necessary that the inquisition should be taken at the place where the body lies, provided it is taken within the same jurisdiction; and the coroner may adjourn the jury from one place to another, provided that the real place at which the inquest is held be stated in the inquisition. The inquest may be held in the room or house where the body lies, or in any other house within the jurisdiction; and wherever it is held that would be the "coroner's court." (2 and 3.) The fifth clause of the Medical Witnesses Act enacts—"V. Provided also, and be it further enacted, that *when any inquest shall be holden on the body of any person who has died in any public Hospital or Infirmary*, or in any *building* or *place belonging thereto, or used for the reception of the patients thereof, or who has died in any county or other lunatic asylum, or in any public infirmary or other public Medical institution*, whether the same be supported by endowments or by voluntary subscriptions, then and in such case nothing herein contained shall be construed to entitle the Medical officer whose duty it may have been to attend the deceased person as a Medical officer of such institution as aforesaid to the fees or remuneration herein provided." But, in any other case, a "House-Surgeon" stands precisely on the same footing, with regard to fees and liability to be summoned by the coroner, as any other Medical Practitioner.

COMMUNICATIONS have been received from—

Dr. E. L Dixon; Dr. B. W. Foster; Edward T. Blake, Esq.; A Scottish University Student; Dr. A Rowand; Dr. John Wilson; T. B.; John Muter, Esq.; Dr. Greenhow; Dr. Cholmeley; Mr. R. E. Power; Dr. Cooke; Dr. Bateman; Mr. W. G. Curgenven; Dr. Lionel Beale; Mr. F. H. Marsh; Mr. Reginald Harrison; Mr. E. T. Blake; Dr. Blake; Dr. Evans; Mr. J. Chatto.

BOOKS RECEIVED—

Dr. Mushet on Apoplexy—The Female Casual and her Lodging—Armatage's Clinical Note Book—Norton's Osteology for Students—Broadbent on Cancer—Saunders' Report on the House-to-House Visitation—Murray on Emotional Disorders—St. Bartholomew's Hospital Reports, Vol. II.—Brown's Surgical Diseases of Women (3rd edition)—London Hospital Reports, Vol. III.—Guy's Hospital Reports, Vol. XII.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 6, 1866.

BIRTHS.

Births of Boys, 1054; Girls, 977; Total, 2031.
Average of 10 corresponding weeks, 1856-65, 1745·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	669	675	1344
Average of the ten years 1856-65	573·6	549·8	1123·4
Average corrected to increased population..	..	..	1235
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhoea	Cholera.
West ..	463,388	4	7	6	3	4	3	8	16
North ..	618,210	12	2	10	1	9	18	8	37
Central	378,058	2	2	6	1	2	5	18	31
East ..	571,158	9	6	14	1	3	5	17	50
South ..	773,175	4	12	15	7	5	13	18	48
Total ..	2,803,989	81	29	51	13	23	44	69	182

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·998 in.
Mean temperature	57·9
Highest point of thermometer	68·1
Lowest point of thermometer	53·4
Mean dew-point temperature	56·2
General direction of wind	N. & N.E.
Whole amount of rain in the week	0·02

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 6, 1866, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending Oct. 6.	Deaths. Corrected Average Weekly Number.*	Deaths. Registered during the week ending Oct. 6.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3067536	39·3	2031	1400	1344	68·1	53·4	57·9	0·02	2
Bristol (City) . .	163680	34·9	120	73	‡157	65·6	51·3	56·9	0·02	2
Birmingham (Boro')	335798	42·9	220	163	101	62·3	50·4	55·9	0·32	32
Liverpool (Borough)	484337	94·8	339	281	380	63·5	49·0	57·2	0·11	11
Manchester (City) .	358855	80·0	233	203	‡186	66·0	42·2	56·0	0·01	1
Salford (Borough) .	112904	21·8	77	57	53	66·7	45·8	55·9	0·00	0
Sheffield (Borough) .	218257	9·6	151	115	82	61·4	50·1	53·8	0·10	10
Leeds (Borough) .	228187	10·6	111	116	104	..	..	..	..	..
Hull (Borough) .	105233	29·5	96	49	40	..	..	..	..	..
Nwcastl-on-Tyne, do.	122277	22·9	67	65	89	57·0	49·0	52·7	0·08	8
Edinburgh (City) .	175128	39·6	138	84	84	59·7	46·0	52·6	0·10	10
Glasgow (City) . .	432265	85·4	331	252	230	64·7	35·2	52·0	0·00	0
Dublin (City and some suburbs) .	318437	32·7	146	†156	234	63·9	35·5	54·0	0·01	1
Total of 13 large Towns . . .	6122894	34·4	4060	3014	2984	68·1	35·2	55·0	0·07	7
	(1863)				Week ending Sept. 29.	Week ending Sept. 29.		§		
Vienna (City) . .	560000	..	..	..	..	..	..	..	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·998 in. The lowest reading in the week was 29·80 in. on Sunday. The barometrical reading having been continuously below 30 in. from July 26, on Thursday, at 9 p.m., it passed that point, and was 30·33 in. on Saturday, the 6th inst.

The general direction of the wind was N. and N.E.

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* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 55·5°.

APPOINTMENTS FOR THE WEEK.

October 13. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p.m.

15. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

16. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

Pathological Society, 8 p.m. Meeting.

17. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

18. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

Harveian Society of London, 8 p.m. Dr. Maudsley, "On Some of the Causes of Insanity."

19. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

Western Medical and Surgical Society, 8 p.m. Inaugural Meeting.

ORIGINAL LECTURES.

NOTES OF LECTURES ON INSANITY.

DELIVERED AT

St. George's Hospital,

By GEORGE FIELDING BLANDFORD, M.B. Oxon.

Lecture V.

Melancholia—Mania.

Gentlemen,—I now proceed to consider those patients of whose insanity there is no doubt, who require medical care and treatment. Putting aside all chronic and incurable cases, we may roughly divide the recent and primary into those characterised by great depression of feeling with corresponding delusions—in other words, *melancholia*—and those marked by the exaltation of gaiety or fury or ambition, or by the frenzy of delirium, comprised under the generic name of *mania*.

Probably the most frequent and the most curable of all is slight or non-acute melancholia. It is, moreover, the form which is most easily to be cured without the intervention of an asylum, and derives least benefit from such sequestration. It may occur at any age, but is chiefly found in those past middle life, in women at the change of life, in men at a corresponding age. The patient is at first simply depressed, or irritable, restless and fidgety; everything to him looks black, is going wrong; he will be blamed and will suffer, whatever happens. Trifles appear of vast importance, and oust ordinary business and amusements. Ideas of duty and religion assume a new character, and gather strength daily. He is desponding and fearful, neglects his food, and sleeps but little. So far he is said to be merely low-spirited, and his fears are called foolish fancies, but in a little while they take another shape and become definite delusions. He is doomed to eternal punishment, the police are after him, he and his family are ruined, starved, held up to public shame and disgrace. So, in despair and remorse for the crimes he thinks he has committed, or in terror at the fate that awaits him, he tries to commit suicide, and but too often succeeds. Such is the history of nine out of ten of the lamentable and preventible suicides we daily read of in the papers. When called to such a patient, you will find him, or her, either sitting in silent gloom and despondency, or restless and suspicious, fearful of everything and everybody. You will hear that he has lost flesh, does not sleep, and takes nothing or next to nothing in the way of food. The tongue, as a rule, will be coated, creamy, and foul with old epithelium, producing great fœtor of breath, the whole being often the result of starvation. The pulse is quick and weak, the bowels are constipated. This condition of things is constantly attributed to dyspepsia or "liver," which view may be supported by the patient alleging as his excuse for not eating that he has no appetite, that his stomach cannot take food, that nothing passes through him, and so on. The dyspepsia, however, and its symptoms are but the result of the mental disorder, not the cause, and they vanish when by food the nerve-force is restored. If not allowed to go on too long, such patients will usually take food, if they are made to understand that they must do so. They will take it of their own accord, or they will permit themselves to be fed with a spoon without absolute force being used. And when food is given liberally they mend rapidly. They must, however, be removed from home, for there all their surroundings tend to foster their delusions and to keep alive their disorder. If their means are small, they must go to an asylum; if they are well-to-do, a new abode will be to them a quasi-asylum, where, under the surveillance of cheerful companions and judicious attendants, the treatment is to be strictly carried out. Medicines here can do much. Enemata of castor oil and turpentine will remove the hardened scybala that block the bowels; bark, quinine, and iron will do great good, but, above all, opium will procure sleep and allay the ever-present panic. Many of the preparations of this are available—the black drop, Battley, paregoric, Dover's powder, morphia, especially the solution of the bimeconate, which causes less sickness and constipation than the acetate; the latter is useful, for, being white and small in bulk, it is easily concealed. But, above all, food must be given freely and frequently, not beef tea, but solid food, interspersed with slighter refections of egg and sherry, or egg and brandy, or rum and milk. This must go on from morning to night, and in the night, and the tongue will clean, the bowels will act, the patient will gain flesh, and improve often in a marvellous fashion. A considerable amount of stimulants will be needed. They should be varied—stout, brandy, wine. They should be given with food, and the brandy and wine should be diluted with water or mixed with some vehicle as egg. Besides all this food and medicine, judicious moral treatment is necessary. Such cases require to be closely watched. Many a case of apparently very slight melancholia has ended in suicide. Windows must be secured, razors must be abolished. It is best to look on all such patients as suicidal, whether they have given any indications or not. And their self-interest and fears for self must be combated, and care and concern for others awakened. They must be made to occupy themselves, to employ their intellect, and to counteract their morbid and exaggerated emotional susceptibility. They will pretend they cannot do this, but by degrees they will listen to what is going on, will furtively take up the newspaper, and so gradually return to their old life.

But cases do not always remain in this quiet stage; they go on till they arrive at a state of excited terror and panic, which may fitly be called "acute melancholia." As the simple and slighter forms are the easiest to treat and cure, so this acute kind is the most distressing and the most unfavourable that you can possibly encounter. It arises frequently in the course or at the close of some chronic or wasting disease, as phthisis, in patients whose constitution is broken down, and who have no power to withstand it. In fact, it often accompanies what we may term the commencement of dying. A patient in this stage does not remain quiet, desponding, and inactive. He is not to be treated in an ordinary house. In perpetual frenzy, he will strip off his clothes, will not sit on a chair or keep in bed, but will pace the room, exclaiming that he is going to be tortured or burnt, and hallucinations of sight and hearing will add to his fears. Such an one imperatively demands the care of an asylum; for it will be necessary to feed him, to dress him, to guard him against windows and everything by which he can harm himself. These cases often rapidly sink in spite of all we can do, terminating, it may be, in gangrene of the lung, or in a condition analogous to that of scurvy. In their cachectic state, prostrated by the lowering attacks of fear and despondency, it is clear that they require a large supply of food; but food they will not take except by force. How is it to be given to them? Every asylum doctor has his favourite method of forced alimentation. The different varieties may, however, be reduced to two—feeding by a tube passed into the œsophagus through the mouth or nostril, and feeding by a spoon or boat, or some such kind of feeder. Now, different cases require different modes of feeding. When food can be got down frequently by means of some form of funnel or feeder without any great difficulty or a very prolonged struggle, it is well to give it in this manner; but where the resistance is very great, and the patient is determined not to admit the food into the mouth, nor to swallow it when placed there, it becomes necessary to use some sort of tube to convey it to the œsophagus. Even here some think they can administer liquids better by a spoon; but the attempt takes up so much time, and thus exhausts the patient so much, that I am persuaded that the œsophagus tube is preferable. You will read in books that there is great danger in this, that it may be passed into the glottis or even may transfix the aorta. But if you pass it by the mouth, not the nose, and use a sufficiently large tube, which is for many reasons the best, it cannot enter the glottis; and if you use no force—and none is necessary—it cannot hurt any part. One thing is essential—the patient must be motionless. Attendants holding him will not suffice, though there be a dozen. He will plunge and kick, and the operation will be a difficult and dangerous one; but if he be swathed in sheets and fastened in a sitting posture in an arm-chair, so that he cannot move hand or foot, he cannot then exhaust himself by struggling, and the tube can be passed without the slightest difficulty. These cases, like the milder forms, require morphia, and this can be easily given by the subcutaneous injection. It does not, however, always act in these excited patients with the uniformly good effect that we find in the quiet and desponding. The prognosis of these violent cases is very unfavourable, especially when no food can be got down, except by force. The quantity which can be given in this way is never adequate, for such patients require something constantly; and many of them, having already a broken constitution or some other disorder, or being advanced in years, rapidly sink. The taking of food then becomes the key to the prognosis. There are many others in the first stage of mania or primary dementia who may refuse food for a day or two, but these generally come round in a short time, or their resistance, by coaxing or a little firmness, is readily overcome. There is a kind of melancholia which has been erected into a species called *mélancolie avec stupeur*, where, instead of this excited and panic-stricken frenzy, we find dull, silent stupor. The patient will sit for hours and days lost in thought. This, it has been said, may be confounded with that automatic cataleptic condition called primary or *acute dementia*, which I shall speak of hereafter. The two may be distinguished by the history of the commencement of the attack, by the age, and by the progress, for the cataleptic patient is scarce ever the same two days running. Such cases of melancholia are more passive and manageable than the excited, and the prognosis is more favourable.

There are fewer varieties and subdivisions of melancholia than of other forms of insanity, the difference being one of degree. It merges, however, into mania on the one hand, and into primary dementia on the other, so that it is difficult to say of some cases whether they are to be ranked amongst the maniacal, the melancholic, or the demented. Having said this much concerning melancholia, we must next consider mania.

The primary forms of mania—for I do not speak of the chronic forms of this or any other kind of insanity—are at least three in number. There is the complete delirium of true acute mania, the *délire aigue* of the French; there is the noisy, violent, but conscious mania, sometimes called acute; and there is the quiet orderly insanity with delusions, called by some *monomania*, by others *partial insanity*. *Acute mania* or acute delirium usually comes on very rapidly in persons under rather than over middle age, who are in the height of strength and vigour. The premonitory symptoms will vary much, but after great restlessness and excitement of manner, with sleeplessness and probably pain in the head, the outburst may suddenly occur with or without definite delusions. There will at first be intervals of comparative calm, till at last the storm breaks out, probably in the night-time. Then begins a period of raving unconscious delirium, with singing, shouting, and laughing, an incessant strain of incoherent talk, and perhaps perpetual motion of the limbs. The patient will not stay in bed, will not keep any clothes on, is wet and dirty; but he is not dangerous, and is only violent when opposed. Yet he must be placed where he cannot come to any harm. His room must be rendered safe, whether it be in an asylum or not, for mechanical restraint must not be used here; it can only serve to exhaust the patient and prolong the attack. Such cases get well suddenly, recovering very rapidly when the delirium ceases, and may be quite well in a month, or even less, but they must be carefully tended while in the delirious stage. They require an empty room, dark, cool, and airy, with bed on the ground, and their clothes must be fastened so that they cannot strip them off. They do not, as a rule, refuse their food, though they are whimsical and require coaxing, sometimes rejecting it, sometimes eating ravenously.

The waste in this disorder is great, and much food is required, and will act beneficially as a sedative, while stimulants, at any rate in the outset, will greatly increase the excitement—the head will be hot, the face flushed, the pulse quick; sleep will be absent perhaps for many days; the tongue will be at first coated and clammy, and afterwards brown and dry; the bowels will not act, and the water will be scanty and high-coloured; the patient, in fact, will present all the symptoms of feverish cerebral hyperæmia, of what is often called "brain fever." What is the medical treatment of such a case? Very little, so far as drugs are concerned. Opium, our sheet-anchor in melancholia, is useless here. You may go on giving it in ever-increasing doses, and the first indications of any effect will be fatal collapse and coma. Neither do I think that tartar emetic or digitalis is suited to this form of mania, though they are serviceable in others. The fact is, that these cases of acute delirium, if plenty of food can be given, generally terminate favourably and run a definite course, the actual delirium lasting a week or a fortnight, and being succeeded by a more or less speedy convalescence. As the excitement declines, opiates occasionally operate, but sleep will often come without aid of any kind. At the height of the attack your efforts must be directed to subdue the cerebral activity by cold to the head in an ice-cap or bladders of ice, and by warm baths with mustard. These baths have been given abroad for six, eight, ten, or even fifteen hours at a time. Here they are generally given for thirty or forty minutes, cold being applied to the head during the bath; and after such a bath a patient often sleeps. As the delirium abates, stimulants will be useful, especially bottled stout or ale, which often promotes sleep. The more food is given the more rapid will be the convalescence. Do not be deterred by the appearance of the tongue; it is the tongue of prostrate nerve-force, not of dyspepsia. This acute delirium generally occurs in the young and strong, and the prognosis is favourable, at any rate in the first attack. It is unfavourable—1, if the patient is old; 2, if there have been many previous attacks; 3, if the strength be feeble and there be other bodily disease; 4, if the patient refuses food; 5, if there be at times of comparative quiet great increase of temperature and quickness of pulse. This prognosis has reference to the question of life or death; that of ultimate mental recovery will depend on many other considerations.

There is another form of mania sometimes called "acute," characterised not by delirium, but by noisy violence and outrageous mischief. It does not, as a rule, come on so suddenly as the last, but gradually developes till it reaches this stage. Nothing but an asylum will restrain or cure such a patient; for he is perfectly conscious, and with all the wits at his command taxes the temper and the ingenuity of those who have the care of him. His health appears tolerably good, he sleeps occasionally, perhaps by day, and makes night hideous with singing or shrieking. He will destroy everything he can—clothes, furniture, bedding. He will be wet and dirty, not from unconsciousness, but from pure love of causing trouble. Such patients try the temper and patience of all who have to do with them: they will go on for months in this state, and then get well or quiet down into a more orderly form of mania, or from continual excitement and want of sleep they may sink and die of exhaustion. These are the cases in which extended and prolonged muscular exercise has been recommended, and is of great service. In acute delirium this, I need not say, is out of the question; but in this subacute or noisy conscious mania it will divert the normal bodily activity and procure a greater amount of sleep. It is here, also, that such drugs as tartar emetic, digitalis, and hydrocyanic acid are useful; opiates will not avail much, but the others will often allay the great excitement and make a man more rational and obedient. For these know and understand perfectly what is said to them, and require to be treated with great firmness as well as kindness. Pre-eminently they demand moral control: their *amour propre*, their self-respect, must be stimulated. A man in acute delirium, under any kind of moral treatment, may regain consciousness and recover his right mind, but these patients, under rough hands, may degenerate into dementia or chronic insanity. They will eat heartily and require plenty of food. The medicines I have mentioned must be carefully administered and closely watched, and of the three probably digitalis is the most useful, not in heroic doses of half an ounce, but in safer doses of half a drachm. There may be little to discover in the way of delusion in such, their insanity being chiefly displayed in action. On the other hand, they may be full of delusions and hallucinations, in which case the prognosis is less favourable, especially if the attack be prolonged. This kind of violent mania, without marked delusions, is in women often denominated *hysterical mania*, and it may last a very short or a very long time, varying from a few days to months, and an analogous form often occurs in young men who are nervous or weakly, or given to self-abuse. This may run its course in a few days, presenting all the appearance of a violent hysterical attack.

Puerperal insanity may assume any form, though probably it is oftenest met with as acute puerperal mania. Besides this, however, we may find it appearing as quiet monomania, as suicidal melancholia, or as primary dementia. There is nothing special in the treatment of it. That which benefits acute delirium, or noisy mania, or melancholia, will, as a rule, be applicable to each form when it arises after parturition. It is stated in books that such cases all derive good from opiates. But I have found morphia as prejudicial in puerperal as in any other kind of mania. It may come on almost immediately after delivery, or even before, at the time of the first appearance of the catamenia, during lactation, or after weaning. The older women are, the more prone are they to show symptoms of it, and if it has occurred once it is liable to return after subsequent labours. The prognosis is favourable, especially in the acute forms. Almost all of these recover if they survive the acute stage. Where the disease begins some time after delivery, and creeps on insidiously into quiet monomania, the case, as might be expected, is not nearly so hopeful.

Acute mania, as I have already said, occurs for the most part in the young and strong, rather than in the aged. When it is found in the latter, there is often an assignable cause, such as the *metastasis* of rheumatism or gout. Of this several examples have come under my observation. A lady, aged 60, had been altered and peculiar for several weeks, when suddenly she was attacked with violent mania, singing, shouting, and screaming, with absence of sleep and refusal of food. The prognosis was extremely unfavourable, but quite as suddenly her hands became very red, swollen, and painful with rheumatic gout, and her mind was simultaneously restored. An old gentleman had repeated attacks of mania, which for the most part terminated in a genuine gouty toe. Where this is suspected, we may benefit the patient by endeavouring to bring about this much-to-be-desired consummation.

Another form of mania with delirium occurs in the decline of acute diseases, as fever, pneumonia, and the like. It is not that the disease culminates in this, neither is it the ordinary delirium of typhus or other disorders affecting the head. It begins as the original disease declines and convalescence sets in. This has been called the *delirium of collapse*, and is accompanied by an anæmic and prostrate condition of body, with weak pulse and cold hands and feet. The prognosis in these cases is particularly favourable, and the treatment is plainly indicated by the weakness and prostration. Opiates are of great service here, and, in conjunction with stimulants and food, soon bring about sleep and recovery.

Mania characterised not by excitement, but simply by delusions, is generally called *monomania;* and when the patient acts orderly and tranquilly, and can talk rationally on other points, it is often termed *partial insanity.* Such insanity is usually chronic and the termination of a more acute attack, though without this some drift by degrees into the condition of delusion. When such delusions have appeared recently, and are traceable to some given cause, they may possibly be got rid of by change of scene, by the substitution of other employments and ideas, and similar appropriate treatment. But where they have been apparently without any cause evolved out of the disordered ideas of the brain, and when they remain and persist, immutable and inexplicable, they form perhaps the most incurable of all the varieties of insanity. In such cases the absence of necessity for immediate treatment frequently causes it to be postponed till the time is past and the disease is chronic and ineradicable.

ORIGINAL COMMUNICATIONS.

ON DR. JOHNSON'S THEORY OF CHOLERA.

By W. MOXON, M.D.

In the well-known little book which its author tells us is intended "to sweep away an erroneous theory with regard to the nature of cholera," Dr. Johnson states that "having discussed the chief points of my pathological theory with some of the most distinguished physiologists, pathologists, and chemists, no serious objection has ever been raised to any one of my main propositions," and proceeds forthwith to comment on the inertness of mind, the indolence, and the pride of his Professional brethren, which he regards as the only remaining obstacles to the triumph of his true interpretation of the chief symptoms of cholera.

Having read the book, I have waited for some one to come forward with serious objections to these main propositions, until there appears to me a danger of their passing by altogether unchallenged, and therefore it is that I am induced to venture upon questioning them; for I believe that these propositions are—and demonstrably are—in some cases false in point of logic, in others at variance with truth of fact, while the remainder are invalidated by the unfoundedness of the former fallacious and unfounded sorts. Making so bold a statement, I must quickly to the proof.

Dr. Johnson's first section is the basis of his whole view; its import may be summed up in his own words:—"It must, I think, be conceded that the evidence of there being an inverse rather than a direct ratio between the degree of collapse and the loss of liquid by vomiting and purging is fatal to the hypothesis so generally received and acted on, that choleraic collapse is caused by the drain of liquid from the blood." Now I cannot allow the necessity of this concession; if this concession is made on the basis of facts from which Dr. Johnson demands it, then a vital part of the inquiry is slurred over in a most curious way. On p. 2 a false step is made, and can be at once seen. After inquiring "What is the relation between the symptoms of choleraic collapse and the loss of fluid by vomiting and purging?" Dr. Johnson says in answer—"If the symptoms of collapse are occasioned by a drain of fluid from the blood, there must, as a rule, be a direct relation between the degree of collapse and the amount of liquid which escapes from the blood,"—and then, lower down the page—"Not only is there no direct relation between the loss of liquid by vomiting and purging and the degree of collapse, but," etc., he then proceeds to quote at length various excellent authorities to show that *this last* relation is often inverse.

It seems to me most remarkable that Dr. Johnson should overlook the not trifling difference that there is between the loss of fluid from the blood and the loss of fluid from the bowel. Dr. Johnson is of course aware that a man may bleed from an ulcer of the stomach to death so rapidly that no external escape of the blood shall occur. On January 25, 1866, I inspected the body of a man who had suddenly cried out, and died without apparent cause. His alimentary canal contained a good deal of blood, and the stomach was moulded on a clot of rather large size. An ulcer of the stomach had opened the cœliac axis, and led to this sudden hæmorrhage proving fatal immediately; but not a drop of blood had escaped externally. The like occurrence is always alluded to in text-books on hæmatemesis. Cases of the kind are not uncommon. Now, if a man can lose blood enough to kill him by the drain, and yet not pass a drop, can he not also lose serum enough in a similar way? Will the loss of serum, which leaves the blood that remains thick and sluggish, be more easily tolerated than the loss of as much entire blood, which leaves the remainder of as good quality as before? The passage of serum from the bowel, then, might not occur at all when the man died solely from the escape of it from the vessels; and yet Dr. Johnson shifts from passage out of the vessels, to passage out of the bowels, as though these were one and the same thing, to be used as equivalent in argument.

But apart from all this, which alone is sufficient to refer us to that book of facts which it is so necessary to study before using syllogisms, there is another feature of this supposed equivalency of passage from the blood and passage from the bowels, which it seems to me surprising that Dr. Johnson does not at least allude to. When a patient goes twenty-five times to stool, and another goes twice, it is a great leap to at once conclude that the difference, if any, in the quantity of fluid absolutely passed by them is a difference in the quantity of fluid which came from their respective blood-volumes. In no disease is thirst more urgent. The most callous bystander could not withhold the water which the sufferer craves for and drinks with such avidity. Now, it might possibly be that the one who passed less did drink as much; but surely it is necessary to put this simple fallacy out of the way before coming to the conclusion that all the twenty-five stools were serum. Dr. Johnson never notices this, and his extracts from authors—showing, as a rule, that those who pass little are those who are very bad and die soon—go some way in the direction to suggest that the lighter cases pass much because they drink much, whilst the graver cases (to follow Dr. Johnson's example of free hypothesis) are so overwhelmed by the virulency of the poison that the sluggish medulla oblongata cannot feel thirst, and the person does not drink, and, not taking so much liquid in, does not pass so much liquid out.

If it should turn out that of two men of equal size and equal fulness of blood, each having taken six pints of watery liquid, and each on inspection after death being found to hold an equal quantity of liquid in his bowels, the one passed twenty-five stools and the other three or four, then Dr. Johnson's proposition would have the valid support of these two cases; but Dr. Johnson utterly ignores the ingesta and the bowel contents, and confines his estimation to the quantity of any liquids (whatever their source) which may find their exit from the bowel.

It appears to me quite unnecessary to go any further with the matter until this fundamental part of the question is established. If Dr. Johnson proves what he states—viz., that there is not a direct relation between the degree of collapse and the amount of liquid which escapes from the blood—then it will be time to examine his hypothesis regarding arterial spasm.

But section 2 is so curiously beside the question that one is tempted to comment on it. Taking, then, the "natural and obvious inference" which Dr. Johnson draws from facts—asserted—viz., "that there is an essential difference between the condition of a patient who has been exhausted by a profuse drain from the blood and that of one in collapse of cholera," it will be seen that the words of the sentence which are most essential are, "profuse drain from the blood." Now, at p. 11, it will be seen that the conditions contrasted with cholera as being also "profuse drains from the blood" are—(1) copious hæmorrhage, (2) profuse and long-continued leucorrhœa, (3) prolonged lactation, and (4) excessive purging by disease or medicine. The first, hæmorrhage, is not a drain *from* the blood, but a drain *of* the blood; a very essential difference, because it tends to leave the blood (when it is rapid, and otherwise there is no analogy) in smaller volume, but of the same composition; whilst choleraic drain tends to leave the blood also in smaller volume, but of a different composition. The former has (say) half his blood corpuscles left with half his serum, the latter all his corpuscles with half his serum—a difference, the effect of which it is not possible to estimate nor, probably, to over-estimate. As to (2) leucorrhœa and (3) lactation, these are very chronic affairs, and the difficulty is to find a trace of analogy between them and choleraic drain, for in them there is no aversion of the intestine to the absorption of liquid as there is in cholera, and also in them there is always a degree of the little known condition of anæmia or want of red corpuscles; so that they offer the conditions of watery blood with few corpuscles, whilst choleraic drain offers the opposite conditions of blood, deficient in water, with proportionally numerous corpuscles—a difference which again it is not possible to estimate and perhaps not possible to over-estimate. Lastly, as to (4) poisoning by purgatives. If the action of the poison be only purging, and the action be as speedy as the action of the cholera poison, I do not know, and Dr. Johnson does not show, that there would be any difference between the effects of these in their relation to syncope; and if in the case of any poison it were found that it both purged and caused faintness, the specific effect such poison might have on the heart's action would have to be estimated, and perhaps could not be over-estimated.

In a future communication I will examine the basis of facts on which Dr. Johnson founds his hypothesis of spasm of the capillary pulmonary arteries.

REMARKS ON THE HEALTHY TEMPERATURE OF THE BODY AND THE EFFECTS OF DRUGS UPON IT.

By JOHN SOUTHEY WARTER, M.D.

HAVING used the thermometer considerably in investigating disease, I determined, when the opportunity should offer itself, to make some observations on the healthy temperature of the body, so that, having studied normal fluctuations, I might be better able to appreciate the departures from them in disease. As I proceeded with my observations, it struck me that it might be useful to test also the action of some common drugs on animal heat, those chosen acting chiefly on the vascular and nervous systems—namely, dilute hydrocyanic acid, tincture of belladonna, camphor, ether and ammonia, brandy, and port wine.

In order to make the results as uniform as possible, I lived very methodically during the whole time the observations were being taken, the programme of each day's proceeding being somewhat as follows:—Rose from 7.30 to 8; breakfasted at 8.30; morning occupied in reading, writing, and making observations; lunched from 12.30 to 1.30; afternoon occupied in walking; dined at 5 or 5.30; had tea at 8.15; evening occupied in reading, writing, and making observations; retired to bed from 10 to 11. The number of the pulse was always taken when sitting, for the sake of uniformity, and the temperature of the rooms varied from 64° to 72° Fah.

The first fact that seems worthy of attention is that out of 150 observations extending over a period of eleven days, during six of which drugs were taken, the temperature, with two exceptions, never varied more than two degrees—ranging from 96·4° to 98·4° Fah. The first exception occurred the only night I dined from home; after walking back, a mile and a half, I found my temperature to be only 96°. The other exception alluded to was after walking nearly two miles in twenty-three minutes. In this case the temperature rose from 98° to 98·75°, the pulse being also raised fifteen beats.

In the subjoined table the temperature, pulse, and respirations, noted as often as possible at intervals of half an hour, are collated for nine days, during the latter six of which drugs were taken in the morning. In each instance the temperature, pulse, and respirations are arranged in sequence from above downwards.

Now, proceeding to analyse these figures and a few others taken at odd times, and not included in the table, we find the daily variations in temperature to range as follows:—1st day, lowest 96·4°, highest 98·3°, range 1·9°;(a) 2nd day, lowest 96·4°, highest 97·9°, range 1·5°; 4th day, lowest 97°, highest 98·1°, range 1·1°; 5th day, lowest 97·3°, highest 98·4°, range 1·1°; 6th day, lowest 97·55°, highest 98°, range 45°.(b) The 3rd, 7th, 8th, and 9th days are omitted, as, owing to there being no temperature taken early in them, the range if calculated would in all probability appear less than it really was. From these figures it appears that the greatest variation observed from 7.30 a.m. to 10.30 p.m. in a healthy adult male during a period of five days, was only 1·9°.

(a) In this calculation the temperature 98·75° is omitted as abnormal, being caused by very violent exercise.

(b) In this calculation the temperature 96° is omitted as abnormal, resulting from a tiring walk home after a long evening.

	8 a.m.	8.30	9.30	10	10.30	11	11.30	12 a.m.	12.30	1	1.30	2	2.30	3	3.30	4	4.30	5	5.30	6	6.30	7	7.30	8	8.30	9	9.30	10	12 p.m.
Day of Health.	96·4 54 16	97 60 20	97·3 63 18	97·6 70 20	97·9 60 18	97·8 66 22	98 60 20	98·1 66 22	98·1 69 18	98·1 66 20	97·8 72 20	98 87 24	98·75 102 24	98·2 96 21	98·2 78 20	97·6 84 21	97·8 87 24	97·8 84 20	..	..	97·4 87 22	98·3 84 20	98 90 20	97·3 81 24	97·8 84 20	..	97·7 86 20	97·5 96 24	..
Day of Health.	96·7 57 16	..	97·1 69 20	97·4 72 20	97·8 68 20	97·8 68 20	97·85 63 16	..	..	97·4 76 20	..	97·45 72 20	..	..	..	..	..	..	97 87 22	..	96·8 93 24	..	97·2 80 16	97 81 24	..	97·2 78 22	..	96·4 81 20	..
Day of Health.	..	..	..	..	97·8 ..	98·1 ..	98·15 ..	98 ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Prussic acid taken.	97·4 64 18	..	..	97·8 72 22	98·1 72 18	98 67 18	97·6 63 18	97·8 69 18	97·8 64 18	..	..	97·8 78 18	..	..	..	..	..	97·6 81 22	..	..	..	..	97 84 22	97·6 88 20	..	97·9 90 20	98 90 20	98 88 24	..
Tinct. of Belladonna taken.	97·4 66 18	..	..	..	..	97·6 75 20	97·8 60 18	97·6 60 18	97·5 58 19	97·8 60 18	..	97·4 72 20	..	..	..	..	..	97·6 82 20	..	..	..	..	97·4 75 22	..	97·3 72 20	98 98 22	..	98·4 84 20	..
Port wine taken.	.. .. ..	97·8 60 20	..	..	97·55 75 16	98 69 19	98 69 20	98 78 23	97·9 74 22	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	96 75 26
Brandy and water taken.	..	..	..	..	98 60 24	98 63 20	98 62 20	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Camphor taken.	..	..	..	97·7 64 19	97·8 66 18	97·9 66 18	97·8 60 18	98 62 18	..	..	..	..	..	..	..	..	..	98 93 20	..	..	..	..	..	98·3 105 24	..	98·4 96 22	98·4 100 ..	98 99 22	..
Ether and Ammonia taken.	..	..	..	..	97·8 84 22	97·8 75 24	98·2 82 20	98·2 72 22	98 60 24	..	.	97·8 72 24	98·1 81 24	97·8 78 20	97·8 75 22	..	98 72 23	..	97·8 63 24	..	..	..	..	..	..	..	..	..	..

The thick lines in this Table indicate when the drugs were taken.

On studying carefully all the temperatures I have taken, I find the diurnal variation in myself appears to be somewhat as follows:—From 7.30 a.m. till about 11 or 12 in the morning, the greatest rise takes place, and from this time till about 2 p.m. the temperature sinks a little, then, after rising again for about an hour, it again sinks till about 6.30; here another rise takes place for about an hour, and then another fall till 8.15. Finally, after a considerable rise for nearly an hour, the temperature again sinks, and probably continues to do so till the morning. Now, on looking at the account of the hours when meals were taken, which I have previously given, it will strike the reader that with the exception of the first elevation, which seems to commence before breakfast on getting up, the temperature has a tendency to rise in about an hour, more or less, after food has been taken; and this seems to be really the truth, though in the case of tea the elevation of temperature begins almost at once. The latter fact, if it be one, is interesting, as going far to explain the wonderful and rapid reviving power exercised by this beverage.

The pulse seems more variable than the temperature in proportion, and does not rise or fall necessarily with it. At night it is almost always considerably more frequent than in the morning, and hence, speaking broadly, from morning till night the temperature falls and the pulse rises. This is curious from having its parallel in disease—a correlated rising pulse and falling temperature, pointing to failing strength in both instances.

Violent exercise seems to have great temporary power in raising temperature as well as pulse; thus on one occasion, after walking rapidly for two miles, I found the temperature raised ·75° and the pulse 15 beats; and at another time when violent exertion had been undergone, I found the temperature had been raised ·3° and the pulse 12 beats in the minute.

Taking food, as far as I have observed, does not at once alter the temperature of the body, though, as the period at which it is taken generally corresponds with a descending wave, it may appear to have really lowered it. As soon, however, as digestion has advanced to a certain stage, the temperature begins to rise, and for a greater or less period remains comparatively elevated.

Whatever action alcohol may exert on others, it certainly did not seem to lower *pro tempore* the heat of the body in my case; but I shall speak more at length on this point in the next division of my subject, to which I now pass.

EFFECT OF DRUGS ON ANIMAL HEAT.

Action of Dilute Hydrocyanic Acid.—Five measured minims of the dilute acid of the London Pharmacopœia were taken at 10.2, the pulse being at that time 72 and the temperature 97·8°. The first change perceptible was at 10.48, when, after a temporary rise of 3 beats, the pulse began to sink regularly, being 67 at 11, 66 at 11.6, and 62 at 11.15; this was its lowest point, and it ranged after this at about 64 till 1 p.m., when some lunch having been taken, it rose again to 78. Then as to the temperature—in eight minutes from the time the drug was taken it had risen from 97·8° to 98°, and it continued about this point or a little higher till 11.21; then it began to sink, being 97.9° at 11.32, and 97.8° at 11.42, and from this point till 2.5 p.m. it remained stationary, lunch having had no effect on it. As regards the sedative action exerted on the heart by this drug, I may state that, though its pulsations are lowered, the organ becomes much more under the influence of mental emotions than in the healthy state, and the same remark applies equally to the action of belladonna when taken internally. Both also tend to produce that fear of death from cessation of the heart's action, which is so often met with in persons suffering from functional disturbance of the heart.

Action of Tincture of Belladonna.—Twenty drops (10 measured minims) of the tincture of belladonna of the London Pharmacopœia being taken at 11.10, the pulse at that time being 75 and the temperature 97·7°, the pulse began to drop in thirteen minutes, ranging as follows:—69 at 11·23, 60 at 11.30, 60 at 11.40, and 56 at 11·54; this was its lowest point, and from this time till 1 p.m. it ranged between 58 and 63. Lunch, as in the previous instance, raised the pulse to 72. The temperature, which was at 97·6° when the drug was taken, rose to 97·8° at 11·23, remaining at this height till 11·54, when it fell to 97·5°; after this it ranged between 97·3° and 97·5° till 12.40, when it rose again, being 97·7° at 12.49 and 97·8° at 1. Lunch appeared to lower the temperature in this case, as it was only 97·4° at 1·47. The effect of this drug was more disagreeable than that of the hydrocyanic acid, as, in addition to its primary sedative action on the heart, it gave rise to a feeling of slight confusion in the head during the morning, to nausea in the afternoon, and to headache in the evening; at no time during the day were the pupils in the least affected.

Now, in considering the action of these two sedatives as regards animal heat, we must remember the healthy law apparently existing that the temperature rises in the morning till about 11 or 12, and then falls till 2 p.m. Hence I do not think we can say that the hydrocyanic acid had any decided action on the temperature, as when it had exerted its greatest influence on the pulse, reducing its frequency from 72 to 62, the temperature had not sunk appreciably, and the fall of ·2 eighty minutes after the drug had been taken might be fairly accounted for by the natural fall at that period. The same line of argument applies equally to the belladonna taken; but in this instance the fall in temperature was so considerable (half a degree) that I think we must allow that the drug had some share in causing it. At any rate, the fact remains clear that the pulse in both cases was reduced in frequency much before the temperature began to decline, even if the latter was in any way influenced by the drugs taken.

Action of Port Wine.—The object of taking this and the next drug, "brandy," was to see whether the temperature was lowered after the introduction of alcohol into the stomach, as stated by some observers. Four ounces of port wine taken at 10.55, the pulse being at that time 75 and the temperature 97·55°, reduced the pulse six beats in eleven minutes, and from this time, 11.6 to 12.30, the pulse varied in frequency from 69 to 78. The temperature, which was 97·6° at starting, rose to 98° in three minutes, and remained at this point till 12.30, when it sank one decimal, probably from my having moved into a colder room.

Action of Brandy and Water.—Ten drachms of brandy mixed with an equal quantity of water, and heated to 98°, were taken at 10.40, the pulse being then 60 and the temperature 98°; in five minutes the pulse had risen 4 beats, and from this time till 11.40 it ranged between 60 and 64. The temperature, 98° at starting, rose to 98·1° at 10.45 and 10.50, and then remained at 98° till 11.40, when it again rose to 98·1°. Looking then at the effect of these stimuli, we find that in both cases the temperature was slightly elevated after they had been taken; and though this elevation was in neither case sufficient to prove that the drug had any effect in causing it (keeping in mind the natural rise at this time), still it makes the proof more forcible, that, at any rate in these two experiments, alcohol exerted no influence in lowering the temperature of the body.

Action of Ether and Ammonia.—Two drachms of an equal mixture of spir. æther. co. and spir. ammon. arom. being taken in water at 10.30, the pulse being then 84 and the temperature 97·8°, the following results were obtained. The pulse sank continuously till 11.10, at which time it was 72; it then varied between 60 and 75 till 12.30, except on one occasion, when it rose as high as 82. The temperature rose in five minutes to 98°, then, varying between this number and 97·8° for thirty minutes, it rose at 11.10 to 98·2°, continuing at this point till 12.5 p.m.; after this it began to subside, and was only 98 at 12.30. The physiological effect of this drug half an hour after having been taken was to reduce the pulse considerably in strength and volume, and to cause a feeling of heaviness in the head.

Action of Camphor.—Eight grains of this substance in powder was taken at 10.15, the pulse being then 61 and the temperature 97·7°. The action of this drug on the pulse was not very definite, but on the whole it seemed to reduce its frequency. The temperature rose continuously from the time the drug was taken, at 10.15, till twelve minutes after 12, nor had it sunk at all when observed before dinner time, as late as 4.50 p.m.

Summing up the effect of these last two drugs, the action of ether and ammonia on animal heat (in health) appears indecisive; but camphor seems to have some power in raising the temperature slightly—indeed, this drug has the strongest evidence in its favour of any that I tried, as no decided fall of the temperature occurred (at least during the times that I observed it) till just before tea-time, at 8.25. Possibly the day, being very hot and close, might have had something to do with this, as I find the temperature of my room was as hot as 68° even at 10.30 p.m.

Experiments made on a single individual are of course only valuable to a certain extent, as it does not follow that what is the normal range in one person is necessarily the normal range in another. Again, single experiments on drugs as detailed in this paper are open to objection, as it may be fairly argued that the same result might not be obtained from the repetition of the same experiment. The several conclusions that follow must therefore be only taken for what they are worth, namely, as probable truths, and not as absolute facts :—

That the normal daily variation in temperature is usually less than two degrees, and that the pulse seems to be more variable than it in proportion, and does not rise or fall necessarily with it.

That in health there is a gradual elevation in temperature from the time of rising till about 11 or 12 o'clock in the morning, and that the temperature then seems to have a tendency to fall more or less continuously, though each successive meal, after a certain period, seems to raise it again for a given time.

That violent exercise is a powerful agent in raising for a time the heat of the body, and that hot tea seems to have a decided influence in raising temperature.

That vascular sedatives reduce the frequency of the pulse long before they influence the temperature, but that it is probable that after a time the temperature also is slightly depressed.

That alcohol, at any rate, does not cause a depression of temperature, but tends rather to elevate it slightly, and that camphor has probably a decided influence in keeping up the temperature of the body.

41, Queen Anne-street.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

◆

SPECIAL REPORT ON THE TREATMENT OF FRACTURES IN THE LONDON HOSPITALS.

FRACTURES OF THE PATELLA.

When cholera began to show itself in a serious form in London upwards of two months ago, it seemed to us that the best course would be to suspend for the time our usual Hospital Reports and devote the space thus gained entirely to the study and discussion of the threatened epidemic. Now, however, that we are happily able to believe that the worst of the outbreak is over, and as the past few weeks have sufficed for the publication of the chief opinions concerning this disease, we may return to general topics, and continue our Report on the Treatment of Fractures in the London Hospitals, taking fractures of the patella for the present paper.

Of the various fractures to which this bone is subject—the transverse, the longitudinal, the stellate, and the compound—little need be said of any but the first or transverse, for the treatment of the remainder is well agreed upon, and that which we have found in use differs neither in principle nor in any important particular from that which is set down in all the good handbooks. Confining the report, then, to the transverse fracture, it will be convenient to begin by referring to some points which will readily lead up to the question of treatment.

In view of the fact, with which every Surgeon is familiar, that transverse fracture of the patella is almost never repaired by bony union, it has been suggested that this defective result is due to the poor supply of blood which the bone, isolated as it is by ligamentous and aponeurotic structures, receives. This explanation, however, is made untenable by evidence so short and so conclusive, that it may be inserted here. The patella shows itself capable of perfect repair in cases of longitudinal fracture, where bony union commonly occurs. There are in the London museums patellæ which, after being broken transversely, have thrown out callus in abundant quantity for producing bony union if the parts had been placed under favourable conditions. There are, although they are undoubtedly rare, specimens of patellæ which, after being broken transversely, have been perfectly repaired by bone. C. Bell and William Hunter had a specimen each of this kind. And lastly, there is a case mentioned by Sir A. Cooper (Surg. Essays, part ii., p. 96), in which a gentleman fractured his patella transversely and the lower fragment likewise perpendicularly. The transverse fracture united as usual by ligament, the perpendicular one by bone. No doubt the true explanation of the infrequency of bony union is to be found in the difficulty which there is in keeping the fragments in sufficiently close apposition. But to this we must refer more particularly when we come to speak of treatment.

The amount of separation of the two fragments from each other at the time of the fracture will depend, as Boyer pointed out, on the degree to which the aponeurotic structures at the sides of the bone are torn. If at the time of the accident the strain on the muscles is sufficient only to snap the patella itself without lacerating the tendinous structures at its sides, these, by bracing the fragments together, will prevent any wide separation ; but should they be torn, the interval will be much more considerable. Hence some cases of this fracture are from the first more difficult to manage than others are.

But the question which is by many degrees the most interesting that can be raised here is that which refers to the condition of the muscles to which the upper fragment is attached, and which asks whether these are liable, by their contraction, constantly to disturb the fracture unless they are prevented from doing so by some special means, or whether they do not rather remain passive, while the limb is at rest, without exerting any such influence.

Although this is part of the much wider question, what is the condition of muscles generally after fracture—an inquiry much too extensive to be undertaken in the present paper—we cannot wholly avoid it, as out of its consideration there has recently grown a very important modification in the treatment of the fracture now under notice.

It is generally agreed that a muscle exists in two distinct conditions — the elongated and the contracted ; the former being its condition of rest, the latter of activity. Although a muscle when at rest is not completely relaxed, but is, on the contrary, slightly contracted, or in the state of what Mr. Bowman has termed "tonicity," yet this contraction is so slight that for all practical purposes it may be wholly disregarded, and we may look upon a muscle, when it is at rest, as being completely relaxed and passive, and as exerting no influence at all on the position of a fracture in the neighbourhood of which it lies. Now, of course, it is almost a necessary condition for the well-doing of a fracture that the muscles surrounding it should be in this state of rest, so that they may produce no movement or separation of the fragments from each other. It was long a belief among Surgeons that it was requisite to secure this state of the muscles by placing the limb in such a position that they should be "relaxed." Thus, in fracture of the patella, the thigh was raised to nearly a right angle with the trunk, to relax the quadriceps.

This is now known to have been both an unnecessary and a useless precaution : unnecessary, for it is found that if the limb is placed horizontally, and in an unrestrained position, the muscles are perfectly relaxed and show no tendency to disturb the upper fragment ; and useless, for it is certain that if the muscles showed any tendency to contract, they could not be prevented from doing so by any position in which it would be possible to place the limb. Moreover, Mr. Hutchinson has pointed out (London Hospital Reports, vol. ii., p. 338) that as the crureus and the two vasti muscles arise not from the pelvis but from the femur, the raising of the thigh cannot alter the relative position of their origin and insertion, since these move equally and to the same extent with each other in any position of the limb. It is strange that the fact that in fracture of the patella the quadriceps becomes, after the first few hours, relaxed, should have been overlooked, since its parallel in other fractures has long been insisted on. Almost every one has met with a case similar to the following, which we lately saw in one of the Hospitals. In a boy who was admitted for fracture of the middle third of the femur, muscular action had been so violent that the limb was drawn up to a right angle at the seat of fracture, and any attempt to bring it down into the straight position was very strongly resisted. As this was so, nothing further was done at the time than to leave the limb in the position it had chosen for itself, on a pillow. The next day it was found that the muscles were completely relaxed, and the limb was then drawn down into perfect position and length almost as readily as would have been the case with the limb of a dead person. If the quadriceps is examined two or three days after fracture of the patella, it will be found in the same condition of complete relaxation ; and it is useless to raise the thigh on the pelvis to relax the muscles, for it is impossible to place a limb in such a position as to prevent muscular action. Any one who lies down on the floor, and flexes the thigh on the pelvis to its extreme extent, or the leg on the thigh, or the forearm on the arm, will find that the respective sets of muscles, the quadriceps, the hamstrings, and the flexors of the arm, are still capable of strong action, and would certainly be able still further to shorten themselves if their lower extremities were detached. But for a confirmation of these objections to the plan of raising the thigh in fractures of the patella, we may appeal to the results of practical experience.

For upwards of three years Mr. Paget has treated all the cases of this fracture that have been admitted under his care at St. Bartholomew's Hospital by simply keeping the limb outstretched horizontally upon the bed, and in several Hospitals this practice is now adopted. We have carefully watched many cases so treated, and have examined them both at the time of their discharge from the ward and in some instances several months afterwards, and we have found that the results obtained are, to say the least, as good as those secured by what may now be called the old method. In several patients, indeed, the interval between the fragments was barely perceptible, and on no occasion have we detected any separation that could lead to material interference with the action of the quadriceps muscle. This change in the plan of treatment is of considerable importance. It allows the patient to lie in an unrestrained and easy position, which was by no means the case when the limb was raised, and it makes any special bed unnecessary.

In a large number of the cases to which we refer, nothing has been done besides keeping the limb scrupulously in a state of horizontal rest, but sometimes an effort is made to draw the fragments towards each other by means of some kind of apparatus. A large number of contrivances have been invented for this purpose, but they need not be described here, for we do the majority of them no injustice when we say that they are, on the whole, mischievous rather than useful. They are almost all of them open to the same objections. They are inefficient. We have seen instances in which, after they had been applied with all care, considerable separation still remained. A principal defect is that they do not bring the fragments together with the broken surfaces parallel to each other, but tend to produce tilting of the edges either backwards or forwards, so that the fragments are in contact only at the anterior or posterior margin, while a wedge-shaped interval exists between them in the rest of their extent. The interval is usually widest between the front edges, and the difficulty which is often met with in bringing these closely together depends not on the contraction of the quadriceps pulling on the upper fragment, but on the fact that the posterior margins are already in irregular contact. Generally these contrivances are apt, by the circular pressure they cause, to lead to injury of the soft parts and to swelling of the knee, and they are a source of considerable discomfort to the patient.

But we must refer to two plans for adjusting the fragments which claim special attention—the hooks invented by Malgaigne, and the apparatus used by Mr. J. Wood, of King's College. Space will allow only a notice of the use of Malgaigne's hooks in London. A description of the instrument itself may be found in Holmes's "System of Surgery," vol. ii., p. 624. In several Hospitals Malgaigne's hooks have been tried, but they have found most favour at the Middlesex and at St. George's. We have seen them in use in several cases. The discomfort and irritation which they produce has been generally slight, but some patients suffer considerable pain from their application. In the large majority of cases they have led to no serious inflammation either at the punctures through the skin or in the knee-joint. But we have heard of one case in which death resulted from suppuration in the knee-joint, and of another in which, after suppuration in the joint spreading widely among the muscles of the thigh and calf, the patient recovered with a stiff joint. It may be doubted whether this apparatus, except, perhaps, in a few rare instances, accomplishes the object with which it was invented, of keeping the fragments so nicely in apposition as to secure bony union between them; for, as the hooks are fixed into the anterior part of the fragments, there is a strong tendency for the broken surfaces to meet accurately only by the anterior margin, while an interval remains between the posterior. It seems very unlikely that this apparatus will ever be generally used by English Surgeons. Wood's method consists essentially in drawing the fragments towards each other by pieces of strapping, which, passing around the upper and lower margins of the patella, cross each other at the sides of the joint, and are fastened to hooks on the back of a wide ham-splint. By this means the patella is grasped only at its front and sides, and all circular constriction of the limb is avoided.

In conclusion, we may refer to the great importance to the patient of wearing a stiff apparatus for the knee for some weeks after the period of absolute rest has elapsed. Mr. Erichsen advises that a leather splint should be worn for at least three months. If this precaution is not taken, "the union between the fragments, which at first appear in very close contact, will gradually lengthen, until in the course of a few months an interval of several inches will be found between them."

DERBYSHIRE GENERAL INFIRMARY.

ON THE TREATMENT OF FRACTURES.

By W. G. CURGENVEN, House-Surgeon.

Whilst engaged on our report on the treatment of fractures in the London Hospitals, we feel especially grateful to any provincial House-Surgeon, under whose care cases of fracture are of common occurrence, for a statement of the methods employed at the Hospital to which he is attached. In our first article we stated that this would be of great service to us and of great general interest, and we beg to thank Mr. Curgenven for his report on the treatment of fractures at the Derbyshire General Infirmary.

By bringing together the treatment adopted in the leading London and provincial Hospitals, and, as we hope to do ultimately, the results, a useful series both for comparison and reference would be formed.

Of course, a great deal of difficulty would be experienced in arriving at any definite conclusions with regard to the absolute superiority of one particular form of treatment over another, owing to our losing sight of patients after they leave the Hospital walls; but we can arrive at a tolerably accurate approximation.

The method adopted by Mr. Curgenven in cases of fracture of the shaft of the thigh-bone appears to have some advantages, especially that of using the weight to procure and maintain extension. The use, however, of a perineal band seems still optional in the practice of Surgeons. This subject we remarked upon somewhat at length in our report on fractures of the thigh-bone.

The treatment of fractures has always been one of the interesting questions of Surgery; but as new methods of employing mechanics are introduced, it becomes important to ascertain their superiority over the old. Accordingly, I propose to give a short account of the general mode of treatment at this Infirmary, and more particularly in this communication with reference to fractures of the lower extremity.

Fractures of the Thigh-bone.

In cases of fracture of the shaft, the treatment recommended in most Surgical works, and adopted at most Hospitals, is that by means of the common long splint known as Liston's; but though this splint may be well padded and the bandage evenly applied, many patients suffer some amount of pain from it, and even excoriation in the neighbourhood of the ankle. The bandage requires to be frequently reapplied, in order to keep up extension and avoid shortening of the limb. Chiefly to meet this difficulty, I employed the following method, which appears to have many advantages:—A perineal band, well covered with cotton wool, and applied in the ordinary way, is firmly fixed to the head of the bed. A long piece of adhesive plaster about two inches in breadth, in the case of an adult, is applied, first on the inner, and then on the outer side of the leg, from the knee downwards, in such a way as to form a loop below the sole of the foot. In order to secure this, circular strips of plaster are placed around the leg, and over all a bandage. A weight, varying from 2 lbs. to 8 lbs., according to the age of the patient, is then fixed to the loop of strapping by means of cord passing over a pulley fixed to a stool about the same height and at the foot of the bed. By these means extension can be kept up in a direct line, and more weight can be added if necessary. In order to keep the thigh secure, sand-bags are placed on the outer and on the inner side, and, what is often most important to allay spasm, transversely across the front of the thigh. Another sand-bag is placed by the outer side of the foot to prevent eversion.

Comparing this mode of treatment with the one generally adopted—viz., with the common long splint—I consider that it has the following advantages:—

1. The patient never suffers from pain or any excoriation of the integument over the malleoli or at the heel.

2. A greater and more perfect extension can be kept up.

3. The limb can be more easily watched from day to day without removing any of the appliances and without disturbing the fracture.

4. That this mode of treatment is more comfortable to the patient, admitting of a ready use of the bed-pan with little disturbance of the fracture.

I will briefly refer to three cases recently admitted into this Infirmary, where this plan of treatment was adopted with very great advantage and with very good results.

George A., aged 50, having been knocked down by a wagon, and the wheels passing over him, was admitted on November 1, 1865, with a fracture of the right thigh-bone, a fracture of the fibula (Pott's) on the same side, a comminuted fracture of the left collar-bone, and slight emphysema. The method described above was tried, and seemed especially applicable in this case, where, owing to the patient suffering from a Pott's fracture in addition to the fractured thigh, a long splint could scarcely have been used. He was discharged cured on January 5, 1866, at which time there was firm union and scarcely any shortening of the limb.

Thomas A., aged 12, was admitted on November 4, 1865, with a fractured thigh. The accident happened a fortnight previously, and he was sent to the Infirmary by a Medical man in the country because there was apparently at that time no sign of union taking place, and much shortening existed. The lad was a strumous subject, and required much attention. The treatment by means of a weight was at once used. At the end of a month union was found to be very imperfect. This method was, however, persevered with; the lad was placed on a very nourishing diet; stimulants and tonics were given freely with milk and lime-water; the limb was kept at perfect rest for six weeks, at the end of which time complete bony union had taken place; there was no shortening. He was discharged on February 12, 1866. No doubt the fact of this mode of application being kept up so long without causing pain or uneasiness to the patient, and without the necessity of occasionally applying a fresh bandage, as would have been the case with the long splint, aided by the constitutional treatment (always a matter of great importance), tended in a great degree to produce so good a result.

Francis W., aged 60, admitted on January 27, 1866, with a simple fracture of the right thigh-bone. On admission there was great displacement, eversion of foot, shortening to the extent of four or five inches, and much spasm. He stated that the same thigh had been fractured before, and that the limb was much shorter than the left. The thigh was fixed in the manner described above. He was discharged cured on April 19, 1866. The union was complete, and there was shortening only to the extent of half an inch.

Fractures of the Neck of the Thigh-bone.

The treatment described above for fractures of the shaft is also adopted here for these cases, and after three weeks or a month a starch or gum and chalk bandage is applied.

Fractures at the Lower End of the Thigh-bone or in the vicinity of the Knee-joint.

These cases are treated by the limb being placed on a double inclined plane.

Compound Fractures of the Thigh-bone.

When the injury to the soft parts is not great, and when an attempt is made to save the limb, although this is very rare, the general plan of treatment is by means of a double inclined plane.

Fractures of the Leg.

The methods of treatment are indeed numerous for simple fractures of both bones, tibia and fibula, when there is little or no displacement. For such cases the mode usually adopted here is simply to place the limb on a soft pillow, and on each side a sand-bag fastened securely by straps with buckles.

When there is any displacement, which is generally the case in very oblique fractures, two side splints with foot-pieces are placed on either side of the leg. After three weeks or a month, a gum and chalk bandage is generally applied, and the patient allowed to get up.

I may here state that I have used for some time the gum and chalk bandage (*i. e.*, the gum acacia and creta præp.), in preference to plaster of Paris or starch. I hope, however, to adopt the plan recommended by Mr. De Morgan, of the Middlesex Hospital, and described by him in the *Medical Times and Gazette* of May 20, 1865. I believe many Surgeons recommend the application of a starch or gum and chalk bandage at the first or within a week after the accident. I cannot say that I have tried it in a sufficient number of cases to enable me to give a decided opinion as to its success, but in the few cases in which this plan was adopted I considered that the results were not satisfactory. The objections to it are, I think, as follow:—In the first place, there is always more or less swelling accompanying the fracture, owing to extravasated blood or ecchymosis. If a starch bandage is at once applied, the swelling will be found to subside greatly in a week, and the bandage will not then closely envelope the leg and support the fracture; secondly, if the starch bandage is applied early, and swelling subsequently takes place, the pain which arises from the great pressure can be scarcely endured by the patient; also, by applying the bandage too soon, the inducement for an Hospital patient to get up is so great that the leg is apt to swell, the union may take place imperfectly, or the patient may fall and break the leg again.

Fractures of the Tibia.

A fracture of the tibia alone is rare, the fibula usually giving way as well. For such cases the same treatment is adopted as for simple fracture of both bones.

Fractures of the Fibula.

The method described above for fractures of the tibia and fibula is applicable, or, as is most frequently adopted here, the plan of placing the leg on its outer side on a pillow or side splint with the knee flexed.

Compound Fractures of the Leg.

The Macintyre splint is found most useful in these cases. Side-splints are sometimes used in addition. If the wound is situated at the back of the leg, a side-splint with a foot-piece is used and treated in the manner described for fractures of the fibula, so that the wound is exposed and thus easily dressed. Salter's swing is found to be a great addition in cases of compound fracture of the leg, maintaining a proper position of the bones and giving comfort to the patient by an easy flexion of the knee, as well as by the elevation of the swollen and painful limb. I have never had occasion to divide the tendo-Achillis in order to facilitate reduction when much spasm existed, although such a plan of treatment would be adopted if the case required it.

HOSPITAL FOR CONSUMPTION, BROMPTON.

PHTHISIS—FATAL HÆMOPTYSIS FROM ANEURISM OF A SMALL BRANCH OF THE PULMONARY ARTERY.

(Under the care of Dr. COTTON.)

THE following case is from notes taken by Dr. Dunlop, Resident Clinical Assistant:—

William J., aged 27, was admitted on April 27, 1866. He had been ill for eighteen months, and first spat up blood (to the extent of about half a pint) in August, 1865. On admission his chief symptoms were cough, mucopurulent expectoration, frequent pain in the left side of the chest, and dyspnœa on exertion. On the right side, anteriorly, the respiration was harsh, with prolonged respiration and some subcrepitant rhonchus. Posteriorly, there was dulness on percussion at the base, with weak respiratory sounds and subcrepitant rhonchus. On the left side the percussion note was wooden in the infra-clavicular region, with weak respiration, accompanied by subcrepitant râles. Posteriorly, the lower half of the lung was dull, with bronchial respiration all over, and a few humid clicks at the angle of the scapula. He was ordered cod-liver oil and syrup of the iodide of iron, with chloric ether mixture for cough.

June 28.—Since admission the patient's health has been gradually improving, but there is now marked cavernous respiration and rhonchus in the left infra-clavicular region; and, over the middle third of the same side, posteriorly, there is amphoric breathing and whispered pectoriloquy.

July 3.—This morning he complained of unusually severe pain in the left scapular, infra-scapular, and infra-axillary regions. At 8 p.m. he had a sudden attack of hæmoptysis, to the extent of about two pints.

4th.—At 8 o'clock this morning he had another attack, when he lost about a pint and a half of blood. Pulse 120, soft, steady. At 7 p.m. hæmoptysis again took place to the amount of about half a pint.

5th.—At 3 a.m. hæmoptysis to the extent of two pints. Pulse 104, small, jerking.

6th.—Two attacks occurred during last night, about five ounces each time, and another took place this morning, when he lost about two ounces of blood.

7th.—About 8 a.m. hæmoptysis to the extent of fifteen ounces. Pulse 120.

8th.—At 3 a.m. hæmoptysis to the amount of about two pints. Pulse 120, small. He is now weak and irritable; his face is pale, and his lips are blanched.

9th.—At 2 a.m. he brought up about five ounces of blood. Pulse 128, small, jerking.

10th.—Hæmoptysis occurred at 5 o'clock this morning, when he lost about five ounces; again at 8.20 a.m., to the extent of about a pint; and at noon he coughed up about three ounces. Pulse 140, small, thready, and jerking.

11th.—Died at 8.20 a.m. Since midday yesterday there has been no profuse hæmoptysis, but his expectoration has contained a large amount of blood.

Post-mortem Nineteen Hours after Death.—The right lung was large, and its lower half was œdematous. Tubercular matter was thickly deposited throughout the upper lobe and upper part of the middle lobe. In the apex was a cavity the size of a walnut, with membranous walls; and there was another about the size of a filbert close beneath the upper surface of the middle lobe. There were a few slight pleural adhesions. The left lung was contracted, covered by thickened pleura, and bound down by strong adhesions. The upper lobe contained a cavity about the size of a fist, with thin rough membranous walls. Another cavity, rather larger than a hen's egg, was found about an eighth of an inch beneath the pleura, about the middle of the posterior aspect of the lung. Almost immediately beneath the pleura on the inner surface of the lung, within an inch of the base, there was a third cavity, which was of irregular shape, with smooth walls, and about two inches in length and one in breadth. A bronchus of about two lines in diameter entered it at its upper end, and was seen to pass out at the lower, while two others of smaller size were given off rather below the middle, so that the cavity had all the appearance of a dilatation of the tube. It contained an aneurism as large as a walnut, which was found to arise from an artery about the size of a crowquill running along its wall. The wall of the aneurism was about a quarter of a line in thickness, and that part of it which was opposite to the point of attachment to the artery exhibited a rugged opening, from which the hæmorrhage had evidently taken place. A pretty tough irregularly shaped clot was adherent to its lower end, the inner surface of its walls was lined by a fibrinous lamina of varying thickness, and its cavity contained a recent clot. The tissue at the base of the lung around the aneurism was hard, dense, airless, and on microscopic examination it was found to be in a state of cirrhosis. The heart was large, but the valves were healthy. The right ventricle and pulmonary artery contained a large clot. The liver was enlarged and fatty, and its left lobe was adherent to the spleen. The other organs were not examined.

Dr. Cotton remarked that this case presented the curious, but far from uncommon, occurrence of improvement in the general health whilst the pulmonary signs of the disease were on the increase, showing that after softening has once commenced Nature's attempt at cure consists in the production of a cavity, the discharge of its contents, and its subsequent contraction. He considered, however, that the point of most interest was the existence of the small aneurism of a branch of the pulmonary artery, apparently due to the loss of support of the surrounding tissue, owing to the presence of the vomica; and as a precisely similar case occurred in another of his Hospital patients a few months back (published in the *Medical Times and Gazette*) he thought it not improbable that the rupture of similar aneurismal dilatations, although at present little recognised, is more common than is supposed, and may account for many of the cases of extensive, sudden, and fatal hæmoptysis occurring in the latter stages of phthisis.

Glasgow Faculty of Medicine.—At a meeting held on the 5th inst., the following office-bearers were elected for the ensuing year, viz.:—*President:* Dr. Hugh Thomson. *Vice-President:* Mr. John M'Carron. *Treasurer:* Mr. James M'Innes. *Secretary:* Dr. Thomas Lapraik. *Librarians:* Mr. George M'Ewen and James Buchanan. *Sealkeeper:* Dr. James Scanlan. *Vaccinators:* Dr. John Coats and Mr. James Mullan. *Directors:* Mr. Alexander Morton, Mr. Andrew M'Farlane, Mr. A. M. Robertson, Dr. Robert Cowan, Mr. David Calderwood, and Dr. Moses Thomas. *Factor:* Mr. James Donald. *Officer:* John Mitchell.

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Medical Times and Gazette.

SATURDAY, OCTOBER 20.

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THE VISITATION OF EXAMINATIONS.

It will be remembered that in April, 1865, the General Medical Council resolved "that each of the Branch Councils, or such of their members as may be deputed by such Councils, shall from time to time visit the examinations, preliminary as well as professional, conducted by the qualifying bodies in their respective divisions of the United Kingdom, and report the results of their observations to the General Council." Reasons for such a resolution on the part of the General Medical Council are not far to seek. The annual returns of examinations from the Army and the Navy Medical Departments give painfully clear evidence of the fact that at present, somehow or other, qualifications to practise are obtained by men who cannot be safely entrusted with the care of the health of our soldiers and sailors, though the Medical Departments of the two services are at their wits' ends for officers. We need not point out how important it is that such a scandal as this should be made impossible of recurrence. Further, it may be supposed that the General Medical Council think it desirable to obtain, as nearly as possible, equality of value among the various diplomas or licences granted by the different qualifying bodies, so that a licence in Medicine or Surgery granted by one body shall have the same weight and value as that granted by any other. If we are to require equality of education, we should also have equality of examination for similarly named qualifications to practise; and as the organisation of the Profession is perfected, may it not be thought possible, and desirable, that a man holding a licence, diploma, or degree in Medicine or Surgery from any one of the qualifying bodies, shall be entitled to be admitted to an *ad eundem* licence, diploma, or degree of any other examining board?

It is patent, however, that before the Council can proceed to legislate on such subjects they must have a thorough knowledge of the examinations as at present carried on, and that it is not sufficient that they should know the subjects examined in, the length of time given to them, and the number and kind of questions put, but that they should also have reliable reports of the mode in which the examinations are conducted, and of the kind of answers that the examiners are satisfied with. This last point is one of paramount importance. The question papers of an examining board will show clearly enough the extent and character of the examination, and the questions may be practical, varied, and very well calculated to test the knowledge of the candidates, but at the same time it is impossible to form a correct opinion as to the value and character of the results of the examination without a clear knowledge also of the average degree and kind of excellence of the answers that the examiners deem satisfactory. As the visitors to the Oxford examinations remark, "the efficiency of any system of examination must be tested rather by the answers of the candidates than by the questions proposed."

We think, therefore, that the General Medical Council did well to establish these visitations of examinations, as a means of obtaining important knowledge to guide them in their efforts for the improvement and equalisation in value of qualifications to practise. It is true that two of the members of Council strongly objected to the visitation as now carried out, declaring that such "a reciprocal visitation by the representatives of the several licensing bodies of one another's examinations is faulty in principle, and, therefore, can never command confidence;" and one of them, with his customary warmth and force of language, denounced the whole proceeding as a sham and a farce. But we do not think a perusal of the reports presented will at all justify this opinion. We suspect that, if we look only for even the lowest possible motives of action, there is probably sufficient jealousy of each other between the various boards to insure our getting useful reports from the visitors; and we do not hesitate to believe that in fact those gentlemen have been actuated by very much higher motives, and that their reports are thoroughly honest and trustworthy.

The reports presented to the Council this year are of very unequal fulness and value. Some of them, and especially those from Scotland and Ireland, are almost confined to a more or less fully detailed description of the ways in which the examinations are conducted, of their duration, of the questions put, and of the more or less elaborate systems employed to note the value of the answers; while there is an almost entire absence of any expression of opinion on the part of the visitors as to the amount of knowledge judged satisfactory in the candidates, or as to the real value of the examinations. The Irish reports are especially meagre and neutral; they do indeed contain, we believe, two expressions of opinion by the visitors. The report on the examination for the licence of the Royal College of Surgeons informs us that "it would be difficult to find more accomplished examiners than some of the members of this Court," which is very satisfactory; and the visitor at the examination for the Magister Chirurgiæ in the University of Dublin derived "much satisfaction from the complete publicity of the examination to all who desired to witness it. There were over sixty persons present, who maintained the greatest decorum and propriety of conduct." We are very glad to hear that everybody behaved so well, but the special mention of it rather excites a suspicion that on the other side of St. George's Channel the public examination of candidates for degrees is expected to prove as exciting as a horse-race or an election, and somebody must, we fear, have been sadly disappointed on this particular occasion. The reports presented by the members of the English Branch Council are of more value and utility, though they "differ much as to the degree in which they enter into details." Most of them "explain the scope and extent of the examinations respectively visited, the machinery for conducting them, the time allotted to them, and the precautions taken to render them impartial and trustworthy;" and they further contain clear and positive opinions on the value and efficiency of the examinations, and in some instances suggestions as to the way in which the knowledge of candidates might be further tested in certain subjects, and in which the examinations might be improved.

This variety in the scope and character of the reports is not, however, to be attributed to any difference in the degree of willingness and good faith with which the several visitors addressed themselves to their work, but to the fact that the General Medical Council gave no directions to guide them, and no instructions as to the points to be especially reported on, but were content to simply direct them to visit the examinations "and report the results of their observations to the General Council." This year it was further directed that in future the reports "shall include a statement of the facts observed, and of the opinions of the visitors as to the efficiency of the examinations, as also such remarks and suggestions on defects in them as circumstances may indicate." So that next year the reports may be expected to be more uniform in character, fulness, and value.

The Professional Examinations of all the English qualifying bodies were visited, except the University of Durham, no examination at which had taken place between the two sessions of the Council. The visitors attended the *vivâ voce* examination, and examined written answers by accepted and rejected candidates, and report their concurrence in the judgments of the examiners, and "in every case they express themselves satisfied that no persons were improperly passed in the subjects or parts of subjects *in which they were examined.*" Clinical examinations are required by all the qualifying bodies except the Royal College of Surgeons and the Society of Apothecaries.

Of the examinations of candidates "hitherto unqualified for practice" for the licence of the Royal College of Physicians, the visitors report that "they are conducted by special examiners on each subject, and in our opinion they afford a very fair and satisfactory test of the candidates' knowledge and fitness to practise."

Candidates for the licence who have been registered under some qualification before 1861 are exempted from all written examination and from clinical examination, and only examined *vivâ voce* for an hour and a half in Medicine, Surgery, and Midwifery, and the visitors opine that "this practical examination may be considered sufficient for its purpose," as the class "is limited in number, and must hereafter have been at least five years registered." We do not exactly perceive why the limitation in number should tell as a reason for altering the character of the examination, nor why the fact of the candidates being already qualified should exempt them from the clinical examinations—the most practical part, that is, of the whole system. We do not learn anything about the examination of candidates for the membership of the College, because the visitors "did not consider it consistent with their duty to attend the examination of these gentlemen, as they were already legally qualified to practise." They are similarly considerate and polite with regard to "the very few candidates likely to claim the membership of the College as a first qualification for practising Medicine," observing only that "the greater age and more extended education required of them, and the more stringent examination in Medicine to which they are subjected, as compared with that for the licence, render it, no doubt, amply sufficient."

At the Royal College of Surgeons the visitors appear to have been most satisfied with the "first or anatomical and physiological examination." They perused written examinations marked by the examiners as good, moderate, and bad, and agreed with the judgment passed by the examiners; they consider that the oral examination was "extremely well conducted, and calculated to well and fairly test practical anatomical knowledge;" and they think that, as a whole, the examination was "a fair and sufficient test of that degree of anatomical knowledge which may be reasonably exacted of candidates for a qualification to be registered as Practitioners in Surgery." On the "second or pass or pathological and surgical examination" they remark that "it appears very well conducted as far as it extends," but they suggest that "it seems desirable, and we feel assured it is quite practicable, to subject the candidate to practical exercises in bandaging and such other appliances, and operations on the dead subject." One of the visitors, indeed, doubts the practicability of this; we may point out to him, however, that in the examinations for the degree of Medicine in the University of Edinburgh "the Professor of Surgery devotes half an hour to testing the candidates practically in bandaging, application of splints, etc." There is a degree of reticence in the visitors' remarks on the examinations at the College of Surgeons, and especially on the pass examination, that reminds us of the rule to be observed in weighing testimonials, "that it is necessary to think quite as much, if not more, of what is left out than of what is put in."

The report on the examinations at Apothecaries' Hall is the most critical and suggestive of any. The visitors report on the first and second examinations for the licence of the Company. On the questions given in the first they remark that, "considering the period when this examination is passed, these questions appear to us well suited for their purpose. If well answered, they would show, we think, a fair knowledge of the subjects;" and further on they say, "we have been permitted to read some answers, and concur with the judgment of the examiners thereon;" but they suggest that "probably as the system is matured the number of questions will be increased, and more time given for the replies." The candidates are also examined orally, and, as at the College of Surgeons, more weight is apparently given to this part of the examination than to the written answers. As the summing-up of their observations on the second examination, the visitors observe, "We think it right to add, that we are much impressed with the great care and attention given to every part of the examination, and with the evident desire to thoroughly test the candidates. We think, indeed, that the examination is a really good one. If we have ventured to indicate that a longer examination in Medicine and Therapeutics and in Midwifery, and a practical examination of patients are desirable, we are certain that we are only anticipating the desire of the Society itself, for we cannot forget that ever since 1815 the Society of Apothecaries of London has steadily and judiciously brought into play a scheme of gradually increasing severity of examination, which has had the best effect on Medical education." Further on they note the fact that members of the College of Surgeons are excused the written examination, and they suggest a doubt as to the propriety of this practice, as candidates are not examined at the College in Medicine, Chemistry, or Toxicology. The Society well deserves the compliment paid it; and we may remark that the observations of the visitors are fully justified by the fact that the Society has determined that in future candidates possessing the College diploma shall pass a written examination in Medicine, Therapeutics, Toxicological Chemistry, Midwifery, and Forensic Medicine; and we have heard it rumoured also that in other points the suggestions of the visitors are to be carried out.

The report on the examinations at the University of London is very short; probably the high character that the degrees have acquired seemed to do away with the necessity for criticising closely the examinations. The examinations at Oxford and Cambridge are spoken of in laudatory terms. But we have said quite enough to show that these visitations cannot fail to be of considerable value and utility, and we shall look with much interest for the improved system of reports which may be expected next year.

ROUGH NOTES ON SYPHILIS.—No. II.

THE PHAGEDÆNIC TYPE OF SYPHILIS.

On inquiring into the causes of this form of the disease, we are met with the same difficulties which we encounter when we try to account for the differences observed in other diseases depending upon the action of animal poisons. Sometimes we can account for the occurrence of a case of typhus, scarlatina, or variola—exceptional for its severity or malignancy—by the constitution of the individual, or by the influence of some peculiar local conditions; but often we cannot. A number of persons may be exposed to the same source of contagion, and in nearly all may the disease assume a mild character, but here and there occurs an instance of very exceptional severity. This is notably the case in scarlatina. A benign type of this disease may appear in a school and spread by contagion, but the disease does not always preserve the same character; the strongest and healthiest boy or girl of the school may exhibit the worst form of it.

The same thing occurs in syphilis. Here and there a case of the phagedænic type of syphilis presents itself, for which we may be unable to account. But it is generally otherwise. The cause lies, nine times out of ten, in the constitution of the individual sufferer.

Some observers believe that there is a *something* superadded to the venereal virus which imparts to it an abnormal action and power, and they cite instances in which several men have contracted the same unhealthy form of disease from the same source. In such cases we cannot help suspecting that they have been inoculated with some morbid product over and above the syphilitic virus. Still, it has never yet been *proved* by observation or experiment that phagedæna is due to any peculiar quality of the poison.

The writer, drawing his observations from his own experience, would enumerate the following among the causes he has noticed:—

1. Phagedæna, rupia, and unhealthy ulcerations are more common in persons of the strumous diathesis. The writer makes the distinction which is generally recognised between the strumous and tuberculous diatheses. The former appears to him to be most liable to be injuriously affected by syphilis. The individual conforms to this description:—A dyspeptic, liable to "bilious attacks," unable to digest fats easily, suffers from heartburn; breath exhales a sickly, faint odour; flabby tongue; spongy gums, surrounded by a vermilion line, presenting the appearance of scurvy or stomatitis; a weak and inactive circulation, as noticed in the extremities.

2. Constitutional idiosyncrasy, as in the case of a patient who suffered from two attacks of constitutional syphilis, with an interval of ten or twelve years between them, and on each occasion the primary and secondary lesions were of a very bad character—sloughing or phagedæna of the chancre, succeeded by pustular syphilides and ulceration of the skin and scalp.

So far for the inherent constitutional defects. But this unhealthy type of syphilis may be induced by—

1. Injudicious treatment. When every chancre was treated by blue pill continued to salivation, there can be no question that the number of these disastrous cases was infinitely larger than in the present day. Mercury is a destructive agent. When it is administered internally for an indurated chancre, it is liable to derange the assimilative functions, to cause asthenia, and induce unhealthy ulceration. In such cases, the subsequent progress of the disease is bad; the ordinary evolution of the symptoms is injuriously interfered with, the constitutional manifestations become characterised by a low and unhealthy form of lymph, which takes on softening and suppuration, and induces pustulation or ulceration. While mercury exerts a powerful influence in causing absorption of effused syphilitic products, it is liable to induce unhealthy ulceration, and whenever it does this, its action is injurious. Mercury is then "the devilish remedy for syphilis," which Professor Boëck calls it.

2. The complication of syphilis with other diseases is a frequent cause of a bad form of the disorder. A man becomes broken down in health by hardship, debauchery, exposure to climate, by intermittent, dysentery, hepatic disease, scurvy, and so on. A syphilitic subject is overtaken by another and grave disease; the symptoms of his syphilis become overlaid by those of another disease; these act and react on one another; and what would have been perchance a mild outbreak of syphilis (even if it had occurred at all, for the virus may remain dormant for years in a healthy constitution), becomes a very formidable malady.

The observation of many of our unfortunate soldiers, landed from tropical climates, has abundantly corroborated the truth of this statement to the writer's mind. Their condition and symptoms sufficiently express the agency of a syphilitic element, but its discovery serves little purpose in a patient completely broken down in health by a combination of morbid causes. To combat the asthenia and promote nutrition are the main, nay, the only, things to be effected.

We may here make a remark or two on the influence of climate. The experience of our army and naval Surgeons favours the idea that these active and unhealthy processes are not uncommon among Europeans residing in hot climates. Defective hygiene is another well-established cause. Bad ventilation, the crowding together of cases of suppurating wounds, the presence of pyæmia or its congener erysipelas, a scanty supply of water for the purposes of cleanliness, and the use of salt rations, may all be ranked among the causes of an unhealthy action in syphilitic lesions. It is a good rule, by the way, not to place cases of suppurating buboes in contiguous beds in a sick ward.

The Treatment.—No difference of opinion ought to exist as to the employment of mercury in the case of a chancre attacked with a destructive form of inflammation. Nothing, in the writer's opinion, could be more reprehensible than to administer mercury in such a case. If sloughing or rapid ulcerative action appear in a chancre, we must try to arrest this by the use of some of the remedies we have already named. These cases, as a whole, generally require what a celebrated Surgeon termed "stall feeding." They cannot live too well, so long as the food is assimilated and does not induce gastric derangement. To accomplish this is ofttimes difficult, and the Surgeon must study his patient's constitutional peculiarities as well as his disease. Milk, fish, eggs, mutton, and wine, as these can be borne; and cocoa-nibs instead of tea and coffee. Besides the wines with a "body," which are indicated for their stimulant and nutrient properties, we may often tempt the appetite, allay the thirst, and afford an agreeable relish by the use of the lighter French wines. The writer much prefers wine to beer and spirits, as less apt to disagree.

If practicable, let the patient go to the sea-side; let him occupy a large airy bedroom, on which the sunshine falls, so that the windows can be opened. As regards medication, the great thing is to feel our way, and to see that no harm is done under the one-sided idea that we have syphilis to treat. Cod-liver oil, and the syrup of the triple phosphate of iron, strychnia, and quinine, will generally prove advantageous; then we can try the effect of iodide of potassium in large doses (gr. x.—xxx.). Sometimes the change is marvellous. But it must never be forgotten that syphilis pursues a curvilinear and not a straight course. It will occur again and again, perhaps, that superficial ulceration or sloughing reappears just as all the lesions are assuming a healthy aspect, and almost all appears undone which it has taken so much time and care to accomplish.(a)

It seems to the writer that the explanation of these accidents is to be attributed to the nature of the lymph effused and the constitutional asthenia. The reparative material is lowly organised; its life is a limited one; degeneration and death follow speedily on the heels of growth and development. The constitution makes repeated efforts to bring about that natural cure, which it fails to accomplish for want of power. If there be disease of bone and the liver is enlarged, nitric acid in large doses will sometimes answer well. It is better, we think, to abstain from opium if we can; if not, the soap and opium pill is about the best preparation. Local measures are not to be forgotten; the nitric acid lotion, a solution of Condy's fluid, and afterwards a lotion of nitrate of silver sufficient to blacken and harden the parts, will often bring about healthy local changes.

But let us suppose that the patient's strength and general condition have been rendered pretty good, but his syphilitic manifestations remain the same, or nearly the same; are we justified in trying mercury? If the patient has used it before, we have the result of the experiment for our guide. If the mercury caused sloughing or ulceration, then, its trial is certainly attended with much risk; if the mineral has not been used, the Surgeon is decidedly justified in giving his patient the benefit of the chance; and calomel vapour, with or without the bichloride internally, is perhaps the best method. A time arrives in most cases in which the syphilitic virus appears to have done its worst: the effects remain. In such cases mercury will sometimes produce a striking benefit, and the patient rapidly progresses towards recovery under its use. This naturally makes a great impression upon the mind of the Surgeon as well as the patient, and it is not to be wondered, therefore, that the former is tempted on a subsequent occasion to try the same method, it may be with disadvantage to his patient, distress and annoyance to himself. After all that we have said against mercury as a remedy for this type of syphilis, it would sound very paradoxical, to say the least, if we proceeded to add that we sometimes use it nevertheless. Well, physic is full of apparent contradictions, and here is another! In some cases, where the ulcerative or phagedænic process is uncontrolled by the use of any of the plans we have stated, the direct application of mercury—*i.e.*, by *localised*, not *general*, fumigations—is most beneficial. But, then, in these exceptional cases the unhealthy action is confined to one part, and is not general to all the lesions—a destructive action is ensuing in the throat, in a piece of integument, or on the penis, and the general health is not in a worse state than can be accounted for from the pain, anxiety, and want of sleep. If the local application of calomel fumes is to be productive of benefit at all, it speedily commences—in a day or so. No great harm can accrue from the trial therefore. The writer wishes he could lay down more precise rules, but he cannot, for if he has had his share of triumph it has not been unmixed with grievous defeat. Dr. Hammond, in his capital and original book on venereal diseases, speaks pretty positively of his plan of treatment, and the reader must take it on his authority, which is deservedly great. He says:—

> "Rupia is often regarded as a difficult affection to cure. I have rarely, however, had any trouble with it. The vitiated state of the system under which the disease is developed must not be forgotten, nor the means of restoring it to a good condition neglected. . . . I have never seen rupia resist the solution of the bichloride of mercury in iodide of potassium, though I have witnessed cases that were very obstinate to other mercurial preparations."

Here is his formula:—℞ Potass. iodidi ʒj.; hydrarg. bichloridi gr. vj.; aquæ ℥xij. The dose is a teaspoonful three times a day.

To conclude:—When the phagedænic form of syphilis appears in a man over forty years of age, it is even still more difficult of cure.

THE WEEK.

ARMY MEDICAL SERVICE.

OUR attention has been called by several correspondents to a recent appointment in the above department. We may, in evidence of this, refer our readers to another part of our present number. There can be no doubt about it; the course pursued by the authorities is suicidal in the extreme. Our public services have been of late years at the lowest ebb of popularity and all but abandoned by first-class men, and yet there turns up a scandal of this sort. The conduct of the authorities is simply inexplicable. All the circumstances were well known to newspaper readers, and the appointment would be sure to arrest the attention and excite the indignation of members of the department.

"What is the Director-General about?" ask our correspondents. For our parts, we cannot see any good whatever in having a member of our Profession as the official head of the Medical Department, if his conception of the dignity and etiquette of his Profession is to be so utterly at variance with that of every one else.

(a) In cases of pustular syphilide, the writer has tried Fowler's solution in pretty large doses, and the iodide of potassium once daily, with apparent benefit.

In civil life a Professional man can please himself; he can refuse to meet a Practitioner or not, as he thinks fit; but in the Army there can be no choice in the matter. There are fifty official duties which compel men to hold intimate Professional intercourse one with another. Any young Medical man now entering the service may have hereafter to act as Assistant-Surgeon in a regiment of which the individual in question is Surgeon.

However, it is no good pointing out obvious truths. The fact is, the administration of our Army Medical Department is radically defective; it is evidently in a much worse state than our Poor-law administration. It has got out of joint with the Profession at large, and men have come to shrug their shoulders and say nothing. But the authorities may depend upon it that a day of reckoning—a day of thorough reform—will come The education and social standing of those who enter our Profession are every day improving, and the authorities may find it as difficult to obtain third-class men in the future as it appears to be to attract first-class ones in the present.

METROPOLITAN WORKHOUSES.

It appears that the Metropolitan Poor-law Medical Officers' Association has applied to the Poor-law Board for an interview on the subject of the contemplated appointment of Resident Medical Officers for some of the Workhouses in the metropolis. The application has been met by the reply that, under existing circumstances, the Poor-law Board consider that it would be premature to receive the proposed deputation. The Board have, however, intimated that should there hereafter arise any necessity for the attendance of the deputation, they will be happy to receive it.

RADICAL PREVENTION OF TYPHUS.

Dr. Allbutt, of Leeds, has lately proposed a great scheme for the radical prevention of typhus, by establishing wholesome dwellings for the really poor. The houses are not, like those built by Alderman Waterlow, intended for artisans and others who can pay good rents, but for hawkers, costermongers, and unskilled labourers of all kinds. These latter are the persons who breed typhus, and for them the new dwellings are most appropriate, the cost of rental being 1s., 1s. 6d., and 2s. per week. There is now an "Industrial Dwellings Company" started in Leeds on this plan with a capital of £50,000, and a block of fifty tenements is nearly completed in the heart of a labouring district of the town. The design is admirable, and we shall watch its progress with the deepest interest.

RECOGNITION OF DR. SNOW.

Our readers will be glad to learn that the members of the Health Department of the Social Science Congress have passed an unanimous resolution, asking the Government to place the two sisters of the late Dr. John Snow on the Civil Pension List. The request is not put forward as a begging request, but as an acknowledgment of the wonderful and hitherto unrecognised labours of one of the most industrious, far-seeing, self-sacrificing men of his age. We can hardly imagine that so reasonable a demand can be refused. Dr. Snow was the sole originator of the now accepted view as to the mode of propagation of cholera; he laid the basis for the prevention of cholera; he made the great question of anæsthesia a science; he added largely to our knowledge of the local origin of disease; and whatever he touched he not only adorned but advanced, and in some instances perfected. We would suggest that every Medical society in the kingdom should second the effort now being made by sending in to Lord Derby its petition for two ladies who would have required no Government aid if their brother had not expended all he could earn in the cause of that broad spirit of humanity which leads the earnest disciple to forget even himself and the nearest to him, when the whole human family is to be the recipient of his bounty.

"A NEW TRADES UNION."

Bumbledom is in a state of excitement. The Medical officers of the metropolitan Workhouses have had the temerity and impertinence to form themselves into an association, one of the objects of which is absolutely to imitate the example of Oliver Twist and "ask for more." The mixture of astonishment and horror to which this unprecedented assertion of their rights by the Medical officers has given rise, is comically enough expressed by a writer signing himself "A Citizen," in the *Press and St. James's Chronicle.* "The Poor-law Medical officers of the metropolis," he tells us, "have formed themselves into a trades union, and placed themselves in direct antagonism to their employers." Again—"It appears that these gentlemen do not meet together to discuss Medical questions, and to increase their Professional knowledge, but to consider political questions, to criticise the conduct of the guardians and the Poor-law Board, and to advance their salaries and their own special interests. They are, then, a Poor-law Board and a trades union combined, and something more, for they are to obtain that which neither the central authority nor the executive authority at present possesses—*i.e.*, an authoritative decision upon all disputed questions relating to duties and extra Medical fees." We can only say in apology for the Medical officers that they certainly have a perfect right to associate together for the purposes on which the writer animadverts; and that, had the Poor-law Medical officers been treated by the Poor-law authorities on a different principle from the trading one of obtaining the largest possible amount of valuable services for the smallest possible amount of pay, they would not have borrowed the tactics of trade, by combining to obtain better terms.

RISK ALLAH EFFENDI, M.R.C.S., A.K.C., ETC.

We are sorry to learn from the *Morning Post* that this well-known gentleman is in trouble, being accused of no less a crime than murder. Risk Allah is, we believe, by birth a Levantine, from Beirout. A clever fellow, a good linguist, and of easy manners, he attracted the attention of some English religious philanthropists, who persuaded the Turkish Government to send him to England to study Medicine, in order that on his return he might assist in civilising his fellow-countrymen. He came accordingly to England in 1847, and studied first at King's College, then at the Westminster Hospital, and contrived somehow not only to pass the Royal College of Surgeons, but to become an Associate of King's College likewise. We never heard that he distinguished himself in Medical practice, although he was considered Medical Attaché to the Turkish Embassy; and although he served in the Crimean War, he does not seem to have gained any great repute as a Surgeon. His greatest success was in marrying a rich widow, by whom he had one child, which died. His wife also died, leaving him a considerable annuity, and leaving him also guardian to a youth, a relative of a former husband, to whom she bequeathed a considerable sum, which, it is said, was to revert to Risk Allah, if the youth died before attaining his majority. This youth, it is said, committed suicide at Brussels last year, and his guardian was arrested and subjected to judicial inquiries in consequence, but as there was no evidence against him he was let go. Since that time, however, it is said that the Belgian police have found some fresh clue, in consequence of which Risk Allah has been arrested in London and sent over to Brussels to await a second trial. It is said that M. Lachauel, the advocate of Madame Laffarge, is to defend him,

THE MEDICAL SOCIETY OF LONDON.

The first meeting of a fresh session of the Medical Society was held on Monday last and attended by an unusually large number of members. Dr. Hare, the President, entered very fully, in his address, into the various changes that have recently been made in the working of the society, and into the prospects of the ensuing session. During the recess the Council have had under consideration various proposals for rendering the meetings of the Society and the library of greater use to members, and several important alterations have resulted in consequence.

The President glanced at the various current topics of the day, and suggested that from time to time it might be well that the Society should take an opportunity of expressing its collective opinion upon matters specially attracting public attention—notably, for example, cholera.

Mr. Marshall referred to a communication which had been received by the Council from the relatives of the late Dr. Snow, asking that the Medical Society would give support to an application about to be made to Government for a pension on behalf of the sisters of the late Dr. Snow, who are now in straitened circumstances, and it was unanimously resolved that the President and Secretaries should at once communicate with Dr. Snow's relatives, and forward in every possible way their wishes.

Dr. Andrew Clark then read a paper, "On unabsorbed Pneumonic Deposits," which was to be admired as much for the elegance of its diction and style as for its value as a contribution to practical Medicine. It called attention to the importance of attending to the after consequences of pneumonia and to the success of the alkaline and tonic plan of treatment. We hope to see it in print. The present session of this Society bids fair to be a most successful one. There will be no dearth of papers—indeed, the list, we hear, is already more than full.

THE PATHOLOGICAL SOCIETY.—THE NEW TREATMENT OF CANCER.

The first meeting of the Winter Session was held on Tuesday last, under the able presidency of Dr. Peacock. We would draw particular attention to the remarks of the President on this occasion. The business of the Society is so great that every effort has to be made to economise time, and, however inconvenient in some ways the rule as to the exhibition of living specimens may be, it is impossible for the Society to get the whole of its work done without some such regulation.

The attendance was very large, and several former Presidents were present. The big volume of *Transactions* which the President showed to the meeting is the best sign of the amount of work the Society has done in the last Session. This volume is the largest of the whole series, and we have reason to believe that its matter is of the best.

The Pathological Society of London seems to have more vitality in it than most of its brethren. It is year by year increasing in number of members, and the amount of work done in each Session becomes larger and larger. Much of the Society's vigour and usefulness is owing to the succession of able men chosen as Presidents, and to the energy of the Honorary Secretaries. The style of work is indeed very much influenced by the kind of man a Society elects for its head.

No better introduction to the working men of the Medical world can be given than that which the membership of this Society offers. In the rooms in Berners-street will be found those who are patiently and quietly doing the best work that is done for Medical science. To a narrow utilitarian spirit it might occur that much of what passes at these meetings is unpractical but there can be no doubt that steady progress in therapeutics will be much assisted by the Pathological Society of London. It will, in the first place, help to diminish a too confident reliance on drugs, and nothing hinders the progress of rational therapeutics more than mere drug-giving. It is easy to get drugs into the stomach, but the stomach is no doubt frequently puzzled to know why they are sent there, and sometimes at once sends them back. Pathology shows us what has to be done, and thus we get better ideas of what our present mineral and vegetable remedies are likely to be able to do when put into the stomach. There was, moreover, on Tuesday an important communication of immediate practical interest. Mr. C. H. Moore brought before the Society a cancerous gland which had been treated on Dr. Broadbent's plan—*i.e.*, by the injection of acetic acid into its substance. Mr. Moore spoke very highly of this method of treatment; and his testimony in its favour excited very great interest. Mr. Power related a case in which a cancerous growth of the eyelid disappeared altogether after injection. Dr. Broadbent's work, however (although it has so direct an application to practice that his plan has been quickly taken up by several Hospital Surgeons), has its root in pathology. His treatment of cancerous tumours was arrived at, not by trying this, that, and the other, but from reasoning on the nature of malignant growths, and from the known action of reagents on their elements. What on a small scale acetic acid does to cancerous cells on a microscope slide, its injection, Dr. Broadbent believes, will do on a large scale in cancerous tumours.

"Treatment of cancer" is a phrase so often heard, and so little usually comes of most confident predictions about it, that we consider it fortunate for the new remedy—if we may so individualise it—that it is brought forward by a Physician whose standing in the Profession will insure it a trial, and whose character keeps him far above the suspicion of interested motives. The treatment of cancer slides so much into the hands of quack doctors that the very words "treatment of cancer" may be said to smell of quack practice.

We shall shortly report more in detail from various Hospitals on this new method of treatment. In the meantime, we may refer our readers to Dr. Broadbent's pamphlet, just published. Apart from the direct value his procedure may have, Dr. Broadbent's researches seem to us an admirable specimen of work done according to a good scientific method. His work stands in marked contrast to the careless, heedless labour of pure empiricism. Whether this new treatment will bear the test of a much larger experience we must not venture to say, but the practice seems reasonable, and ought to be properly tried. If it keeps its ground, Physicians will feel some complacency that one of their body has given this new therapeutical means to the Surgeons. Nay, will it not then be a question whether treatment of cancer is not Medical rather than Surgical ? We have heard an eminent Surgeon jocosely affirm that the only instrument that could safely be trusted to Doctors was a wooden one—viz., a stethoscope; but surely Physicians may venture to inject acetic acid into cancerous tumours, especially when a Physician discovers the method of treatment. The *kind* of work Dr. Broadbent is doing is at least a hopeful sign of orderly progress in the Study of Therapeutics.

There were other communications of great interest. Mr. Bruce brought forward many bones showing the effect of gunshot wounds received in the late German war. Dr. Wilson Fox made remarks of much value on the pathology of cholera.

THE FEMALE CASUAL AND HER LODGING.

It is said that Jupiter once, in the pursuit of an amour, took upon himself the disguise of an old woman. We cannot help suspecting that Dr. J. H. Stallard may have submitted to the same metamorphosis in his zeal for philanthropy; for, lo ! he gives us a capitally written account of how female thieves and vagrants pass their nights in casual wards, and pretends that the author is a "pauper widow, who, having received some slight assistance in a period of great distress, volunteered, as an act of gratitude, to visit these wards for the express purpose of describing them." Certainly, a respectable woman who would, from gratitude or love of humanity, visit these dens of blasphemy and filth, and describe them so well as this pauper widow has done, must be a remarkable specimen of her sex, although she is not quite up to Mr. James Greenwood's level. Anyhow, Dr. Stallard has succeeded in making a useful book. So far as "casuals" are concerned, all those interested in Poor-law matters knew all about them before; but for persons to whom this is a new study, his sketch of the female casual may be of service, and they may learn to set a proper value upon the "Houseless Poor Act."

The facts are shortly these. The whole country is infested with a criminal class, known as vagrants, tramps, or casuals. They are persons who hate honest industry, and who choose a roving life, living on alms or plunder, and preferring rags and filth, and even cold and hunger, to comfort and cleanliness, provided that these are associated with fixed residence and regular occupation. These persons are the terror and abomination of all the police and of all relieving officers and overseers. And these are the wretches for whom the Houseless Poor Act was passed, which, as Dr. Stallard says, has given them "legal position and privileges of food and lodging at the public expense." They are not parishioners, for they belong to no parish; they are not "poor and starved," for any Medical connoisseur who has ever passed a mob of them clamouring for admission at a workhouse door must have seen that their red lips and cheeks betoken no starvation. They are land pirates, *hostes humani generis*; the very provision made for them deters any poor travelling workman from accepting a refuge at the risk of contamination and insult; and *they are the living vehicles of typhus and small-pox.* Can it be wondered at that the guardians, whose duty it is to provide for the deserving poor, do their worst for the casual? The guardians are wrong; Christian men have no right to maintain such dens as the casual wards at Whitechapel and St. George's-in-the-East; but wrong as they may be, they have a species of rough justice on their side.

The fact is, that, as Mr. Chadwicke pointed out thirty years ago, all the vagrant class are criminals and not paupers, and ought to be dealt with by the police, and not by the Poor-law authorities. If the present President of the Poor-law Board desire to reform his department thoroughly, let him begin here. Let the vagrants be eliminated from the rate-receiving class; let there be a State Hospital for all persons who have no local claims;—so, when the London ratepayers are relieved of a burden (we may say, a standing nuisance and insult—for such the vagrants are), they will have no excuse for not doing their duty to their own poor.(a)

FROM ABROAD.—BERLIN REGISTRATION RETURNS—THE TRUE HISTORY OF THE GUILLOTINE.

Dr. E. Muller has just published the Berlin mortality returns for 1865. The year proved to be nearly an average one, with the exception of an increased number of cases of diarrhœa in children. The deaths amounted to 21,957, which gave 3·38 per cent. of the inhabitants, the mortality having been only 3·03 per cent. in 1864. The proportion of deaths to births was 100 deaths to 110 births, while it was 100 to 138 births in 1864, and 100 to 131 for the period 1852-63. Of the 21,957 who died in 1865, 11,753 (53·5 per cent.) were males, and 10,204 (46·5 per cent.) females, the proportion of males being slightly above the average. There were 1224 children born dead, 688 males and 536 females. 8081 infants (4414 males and 3667 females) died within their first year, and a further number of 3415 (1743 males and 1672 females) before their 5th year, making a total of 11,496 under 5 years. Between 5 years and 20 there were 1467 (757 males, 710 females) deaths; between 20 and 40, 3014 (1628 males, 1386 females); between 40 and 60, 2400 (1425 males, 975 females); between 60 and 80, 1996 (965 males, 1031 females); and above 80, 319 (97 males, and 222 females). The suicides amounted to 137, and the number has not been on the increase during the last quarter of a century, notwithstanding the numerous changes which have occurred during that period at Berlin. Comparing the past year with the years 1852-64, month by month, it is found that although there is some difference as to the months in which the greatest mortality is observed, yet, as a general rule, the summer months are such. This arises from the prevalence of diarrhœa among children, which always occurs in one of the months June, July, or August, unless some epidemic outbreak of other diseases takes place. Besides the diarrhœa and cholera of children, the other diseases which were exceptionally prevalent in 1865 were scarlatina, typhus, and gastro-nervous fever, phthisis, and tabes; while variola, measles, pertussis, croup, and inflammation of the air-passages were considerably less prevalent.

The history of the invention of the guillotine has, it seems, been wrongly told, and M. Dubois, Perpetual Secretary of the Academy of Medicine, in a discourse delivered before that learned body on the last days of another celebrated perpetual secretary, Antoine Louis, of the Academy of Surgery, furnishes the correct version. The Physician Guillotin, the supposed inventor of this instrument of punishment, was, as one of the members of the Constituent Assembly, fully impressed with the doctrines of equality which prevailed at that time, and among other motions he made in that body in furtherance of these was one on the mode of performing capital punishments. It was contrary to the spirit of the day that, as hitherto had been the case, decapitation should be reserved for the nobler sort and for the higher crimes, as high treason, while those of lesser degree were subjected to hanging, with the consequent stain this brought on their families. Accordingly, in 1789, Guillotin carried, amidst the acclamations of the Assembly, that all crimes of the same kind should be punished in the same manner, whatever the rank of the culprit. Further, he expressed the desire that decapitation should be executed by some less uncertain and less painful mode than by means of the ordinary axe. And this is all he had to do with the invention of the celebrated instrument to which his name has been given. It was more than two years after this—viz., in 1792—that any attempt to carry the idea into practical operation was made, when a Committee of the Legislature appointed to consider the subject addressed a written consultation to the Academy of Surgery concerning it, and the reply to this fell to the province of Louis, the Secretary, who almost may be said to have constituted the Academy at that time, the object being to ascertain how decapitation could be executed with most certainty, celerity, and uniformity. Louis at once accepted the task, and not only supplied to the Assembly an elaborate account of the mode of construction of the knife, and the position in which the criminal should be placed, but had a model instrument constructed at the Bicêtre which was satisfactorily worked upon dead bodies in presence of a committee of the Assembly. Louis' proposition was submitted to the Assembly March 20, 1792, and the instrument was first employed on a man condemned for robbery on April 25. Louis died a few days before the first of the long series of political victims came under its terrible edge. Although none will doubt the excellence of the motives which induced Louis to undertake his ungracious task and the completeness with which he accomplished what he had in view, yet M. Dubois rightly declares that the fulfilment of such a mission was no part of the duty of a Surgeon, and that he ought to have rejected it. One of the apparent advantages of the instrument—the celerity of its operation—was no doubt a cause of a greater amount of blood being shed during the Revolution than would have been the case had executions been performed more slowly. Thus 21 of the Girondons were executed in 31 minutes, and at a later period 62 heads fell in 45 minutes. It is strange indeed that Guillotin's name should have become indelibly attached to an instrument with the invention of which he had nothing whatever to do, and which, as M. Dubois remarks, should rather have been termed a Louison or Louisette. The only explanation is, that his proposition in the Assembly in 1789 became the subject of ridicule by the pens of some of the Royalist writers, the word "guillotine" being found in some of the doggrel verses of the day.

(a) Dr. Stallard's book is entitled "The Female Casual and Her Lodging, with a Complete Scheme for the Regulation of Workhouse Infirmaries." Saunders and Otley. 1866.

CHOLERA LITERATURE.

The Report of the International Sanitary Conference upon the hygienic measures which should be adopted for preservation against Asiatic cholera is divided into six sections, the conclusions arrived at under each being as follows:—

1. As to the hygienic measures which should be adopted in the localities or countries deemed to be the permanent foci of cholera.

There are no direct means of extinguishing the endemic foci of cholera, but we may hope to accomplish it by a combination of measures, amongst which hygienic measures may be expected to play the most important part. Amongst these measures the Commission enumerate a proper sanitary organisation, the preliminaries of which have been already set on foot by the establishment of permanent sanitary commissions at the seat of government in each of the Indian Presidencies. Next come the necessary measures for improving the health of towns, again already set about in Calcutta, Bombay, and Madras, and at some of the principal military stations. Next they refer to those measures which relate to the health of our troops, such as have also been taken in hand by our Government; and lastly, those calculated to obviate the danger arising out of the pilgrimages. These are of two kinds—viz., such as are calculated to prevent the development of cholera in the places of pilgrimage during the time that pilgrims resort thither, and next those which are calculated to prevent the propagation of the disease by the pilgrims on their way home. The Commission express a hope that the British Government will continue to pursue, and even extend, the path of reform upon which it has entered, and, above all, recommend that it should not renounce measures of coercion. They remind us that, the transmissibility of cholera being given, and the slow operation of hygienic measures being known, measures of restriction and isolation will be indispensable for a long time yet, in order first to prevent importation (always threatened), and then to give time for hygienic measures to produce their results.

2. As to the hygienic measures for preventing, as far as possible, the importation of cholera by sea.

With this object they recommend the adoption of proper measures of naval hygiene; having regard, first, to the departure of a vessel; secondly, those to be adopted during the passage; and thirdly, on the arrival in port. The following is their advice on this head, with a view to obtaining uniformity of action:—

(1) To open *concours*, and to give prizes to the authors of discoveries or improvements, having for their immediate result some progress towards the improvement of the wholesomeness of ships, the amelioration of the hygienic condition of their crews, or the welfare of the passengers. (2) The publication of a Manual of Naval Hygiene for the use of the mercantile marine of all countries, the carrying out of the more important directions of the manual to be made obligatory upon all captains and masters of vessels. (3) The encouragement by insurances and rewards to such owners, captains, or masters of vessels as are distinguished for the good condition in which they keep their vessels and crews.

3. As to the hygienic measures for lessening the chance of disease being received into harbours.

The Commissioners conclude that the mode of rendering harbours healthy, besides prohibiting the discharge of the common sewers of the town into them, their periodical dredging, and a good sanitary police at the port, consists in the use of those hygienic measures which are the most important as affording preservation against transmissible diseases in general, and cholera in particular.

The rendering wholesome of those quarters contiguous to the harbours, and a very stringent sanitary police there, are also most important preservative measures.

4. As to the hygienic measures for lessening the predisposition of localities to suffer from the disease.

The adoption of measures for improving the wholesomeness of towns is an efficacious means of opposing the reception of cholera and of mitigating its ravages. Such measures consist generally in the use of means calculated to maintain the purity of the air, a proper and abundant supply of wholesome water, and the prevention of the infection of the soil by organic matters.

The disinfection on the spot and instantaneous removal of all excrementitious matters is a hygienic measure of the greatest importance, especially in cholera seasons.

Dr. Dickson informs us that, in addition to the above recommendations, it has been proposed by the Conference that water-closets, drains, etc., shall be disinfected by chemicals from the very moment that diarrhœa begins to manifest itself in a place threatened with an impending outbreak of cholera.

The Commission add:—"We are quite prepared to hear an objection raised on the ground of the enormous expense of the execution of all these measures on a large scale; but our reply is, that *the expenditure of the very largest sum for the accomplishment of measures for the improvement of health is only to place out money at very large interest—national health is national wealth.*"

5. As to the hygienic measures for arresting, as far as possible, the propagation of the disease in the interior of a country.

The following is the summary of these measures adopted by the Commission:—A judicious organisation of public relief; general preventive visitation, or at least Medical visitation at the houses invaded; immediate attendance on those attacked; the publication of popular instructions; the encouragement which arises out of a confidence in the promptitude and extent of the relief afforded; and the publication of the true state of the epidemic; in addition to these, the establishment of special Hospitals and of temporary houses of refuge for the reception of the families of poor patients. Each of these points is dwelt upon in the Report. The Commission insist upon the importance of the domiciliary visitation being carried out *daily* and conscientiously, regarding it as truly a *preventive* measure. They insist strongly upon the danger which attaches to the emanations from excrementitial matters, and consider that in cholera seasons it would not even be unreasonable to prohibit the use of common privies, and to render the disinfection of all excrementitial matters absolutely obligatory. They express themselves with equal force upon the subject of perfect frankness being observed by authorities in making known to the full the danger of the population, on the ground of the confidence it would establish and the tendency of the public mind to exaggerate unknown perils; and they think this may very safely be done when conjoined with the reassurance derivable from the adoption of rational means of prevention and relief. With regard to Hospital accommodation, they express an opinion, in which all sanitary Medical officers will, we think, coincide, that every large town should be provided with a *permanent special Hospital*, situated outside its limits, for the reception of the earliest cases of any epidemic disease, such as cholera;

and as there are sure to be cases which it would not be prudent to transport to a distance, or which require very prompt attention, that there should, in cholera seasons, be also improvised houses of reception in open places within the town itself. They do not regard it desirable that cholera patients should be received into general Hospitals, but when this becomes a necessity they consider that the wards into which such are admitted should be quite separate from the rest of the building. They say also that the carriages for the conveyance of cholera patients should be used for this purpose exclusively. They also lay down rules for the management of all that concerns the cholera evacuations, the soiled linen, bedding, etc., and the nurses; and dwell in a most benevolent spirit upon the care which should be taken of the families of those attacked.

Taking into consideration the transmissibility of the disease, they further recommend the temporary interruption of communication with infected localities, which, provided it can be made absolute, is the surest preservative against the transmission of cholera. The timely displacement and methodical dissemination of movable aggregations of people (such as caravans, bodies of troops, etc.) are, they say, most efficacious means of preventing the outbreak of cholera amongst them, as well as of checking its extension and lessening its violence. Emigration well timed, and dissemination well regulated, may give the same good results with fixed aggregations of people (as in localities, public establishments, etc.).

6. As to hygienic measures calculated to prevent the formation or to promote the extinction of foci of infection, by destroying in the air, or in contaminated objects, the germs of the malady.

This is what we mean by the term *disinfection*, respecting which Dr. Muhlig, the reporter of this part of the proceedings of the Conference, has prepared a special report, which appears in the form of an appendix. It is so important, that we shall give the latter an extended notice.

After some preliminary remarks upon the subject of disinfection in general, the object held in view, and the results obtained hitherto by disinfection in cholera, Dr. Muhlig proceeds to discuss—The various means of disinfection applicable to cholera. First of all he mentions *free exposure to the air*, the length of time that any object must be exposed depending upon its physical qualities, and the readiness with which air can penetrate it, or the tenacity with which morbid germs adhere to it. He regards eight days or so sufficient for the purpose of purification under the worst circumstances, but whenever it is possible other means of disinfection should be conjoined—indeed, in many cases, the exposure of contaminated objects may be dangerous. *Exposure to heat* is regarded as one of the best modes of destroying morbific germs in general, but in the case of cholera the heat must be raised to the extent of destroying organic matter; this amounts, then, to *combustion*, if we intend the heating to be of undoubted efficacy. *Immersion in water* constantly renewed can only be used at the certain risk of contaminating the water itself. *Chemical procedures.*—Under this head Dr. Muhlig discusses the relative value of chlorine and chloride of lime or soda, quicklime, the mineral acids, coal tar and carbolic acid, Condy, and the salts of iron and zinc. He thinks that the efficacy of chlorine has been exaggerated, that experience has shown that its value is very limited, and that there is not a single conclusive fact to prove that it has any power to prevent the propagation of any one contagious disease. Chloride of lime, so far as the disengagement of chlorine is concerned, is necessarily still weaker than the chlorine used alone, and Dr. Muhlig thinks that whatever disinfectant power it possesses is attributable to the lime which forms its basis. He regards *quicklime* as a highly useful disinfectant, since, besides its chemical action upon organic matters, it fixes and solidifies them at the same time that it also thus prevents the disengagement of emanations; it absorbs water and watery vapours from the atmosphere, with all that is suspended in them, without liquefaction itself, and also evolves much heat in the process. Its great inconvenience is that it promotes the disengagement of ammonia, and generally merely retards, in place of completely preventing, the process of putrefaction. The only value the writer attaches to *charcoal* powder and *dry mould* is that which arises from their power of absorbing gases. *Peat* he regards, from its power of absorbing ammoniacal matters, as the best disinfectant of urine. The *mineral acids* Dr. Muhlig looks upon as disinfectants only in the sense of their being antiseptics. Nitric acid vapours and nitrous fumes he regards as having only partially justified the confidence which has been reposed in them as anti-contagious agents, and he thinks that the same remark applies to sulphurous acid. *Carbolic acid*, with which he classes coal tar, appears not to have received so much consideration from Dr. Muhlig as might have been expected from the estimation in which it is held in this country, or as it deserved, in our opinion, after the elaborate report upon it put forth by Mr. Crookes. The objection he raises to *permanganate of potash* is its price; still he regards it as a useful agent in purifying water from organic matters. Among all the chemical disinfectants, M. Muhlig gives the palm, on the whole, to *sulphate of iron*, so far as destroying the infection of cholera is concerned, its cheapness being also very much in its favour. *Chloride of zinc* he regards as undoubtedly superior, the only obstacle to its general employment being its price. We are sorry to confess ourselves somewhat disappointed with this part of Dr. Muhlig's report. We think that a sanitary international conference should have put forth something upon this most important subject that would carry more weight than the string of opinions enunciated by Dr. Muhlig. It contrasts very unfavourably with the admirable report on disinfectants issued by Dr. Angus Smith and Mr. Crookes under the auspices of our own Cattle Plague Commission.

Dr. Muhlig passes on to consider the practical application of the several means of disinfection before referred to in the management of cholera. 1. *As to the disinfection of cholera dejections.* Regarding these as containing the germ of the disease, he insists upon the necessity of submitting them to the operation of chemical agents from the very moment of their discharge. The agent which he prefers is the chloride of zinc, or in default of this the sulphate of iron, or they may be covered immediately on their discharge with quicklime in sufficient quantity to solidify them, or else carbolic acid or coal tar may be used. He gives a warning (very necessary for us in London, who are governed (?) by a number of disconnected local boards) against the absurdity of using a variety of chemical agents at the same time, some of which can only serve to neutralise the operation of the rest. 2. As to the *disinfection of privies and drains*, he considers that much will depend upon the system of sewerage in use. He thinks that the system of movable troughs (*fosses mobiles*) alone permits of a thorough plan of disinfection being carried into effect. Into these he would introduce, while empty, chloride of zinc, sulphate of iron, or coal tar. Under other circumstances he would treat the privies with a dose of the same disinfectants from time to time, using powdered charcoal also as a supplementary measure, to prevent the disengagement of putrid evacuations. Where a system of channelling is in use (as in London) he would prefer—on account of the vast system of sewers and their free intercommunication—to throw into the privies charcoal and quicklime, but he admits that in this case coal tar may "perhaps be an useful agent." At any rate, we are using carbolic acid very generally in our city, and it has, we believe, the full confidence of the majority of the Metropolitan Medical Officers of Health. One admirable suggestion of Dr. Muhlig is, that the disinfection of privies and drains should be adopted, not only when cholera has broken out, but as soon as its outbreak is even threatened. 3. *For the disinfection* *of drinking water* he prefers filtration through charcoal and the use of permanganate of potash. 4. As to the *disinfection of houses.* Dr. Muhlig recommends, first, free aeration, not only by opening all the windows, but by establishing currents of hot air by means of braziers; next, that the floors, etc., should be sprinkled and washed with a solution of chloride of lime or carbolic acid; after this, that sulphur should be burned, so that the fumes should reach all the corners and crannies. He recommends that this process should be extended over several days, and that finally the walls should be limewashed and the floors, etc., freely washed with water. Eight days he regards as the shortest period over which the process of disinfection should be made to extend. 5. As to the disinfection of *goods, clothing, and merchandise.* Linen articles, etc., before handing over to the laundress, should be disinfected as quickly as possible with chloride of lime or soda, and after washing should be freely exposed to the air until absolutely dry, and in order to insure purification, the articles should be boiled. The experience of the Imperial Marine Hospital at Constantinople is in favour of this method. Dr. Budd uses chloride of zinc in a similar manner. But it is clear that some articles in common use by cholera patients cannot, from their nature or thickness, be thus treated when contaminated—such articles must be burned. Of this nature are beds, mattresses. At least, if not burned, they should be exposed to a high degree of heat, as recommended by the late Dr. Henry, of Manchester, and subsequently freely exposed to the air. 6. *As to the disinfection of ships.* This Dr. Muhlig confesses to be a most difficult affair. It must, however, be based upon similar principles to those on which the disinfection of ships is based when they are contaminated with yellow fever. The measures to be adopted should be more or less rigorous, according to the intensity of the focus as manifested on board, the lapse of time since the departure from an infected port, and the degree of healthiness of the port. M. Muhlig in his report gives minute instructions upon this subject, which it is unnecessary that we should transcribe, but which we recommend to the study of all who are, or are likely to be, concerned with the prevention of disease at seaports.

There is another appendix to the Report of the Commission which it is well that we should notice, inasmuch as it indicates the main points which the proposed "Manual of Naval Hygiene" should embrace. Following a natural order, it is suggested that it should first treat of the hygiene of ships anchored in an infected port; the preservative means would then be such as related to the anchorage, the care that should be taken in regard to the receptacles of excrementitious matters, the avoidance of the use of river water where vessels are at anchor, especially for drinking purposes, and the careful watch that should be held over the health of the crew. Next it should treat of sanitary police as respects departure, the wholesome condition, and the capacity of the vessel; the sanitary condition of those embarking, the quality of the provisions taken in, of the clothing, and other things in general use by those coming on board; the quality of the merchandise shipped, the separation of the things in personal use by passengers and crew from the articles of merchandise, and the carrying of a Medical man. After this it should give directions as to sanitary police as relates to the passage, pointing out the measures which should be adopted for preventing the invasion of cholera, and then those which should be adopted in the event of cholera breaking out on board. Under the former head the Commission include a rigorous superintendence of the sanitary condition of the passengers and crew, a constant good ventilation of the whole ship, and especially of the cabins; frequent exposure to the air of the things in common use by the passengers and crew, and the careful washing and disinfection of the necessaries. Under the latter head, the Commission would insist upon the separation of the sick from the healthy, the adoption of measures for immediate disinfection of discharges, etc.; the prohibition of use by any persons suffering from diarrhœa of the necessaries used commonly by the passengers, and the keeping of a journal of all cases of disease occurring during the passage. Lastly they would point out the leading circumstances which should guide a commander in his determination of continuing the voyage or of returning into port.

REVIEWS.

On Railway and other Injuries of the Nervous System. By John Erichsen, F.R.C.S., Professor of Surgery and Clinical Surgery in University College. London: Walton and Maberly. 1866. Pp. 144.

Any work with the Erichsen stamp upon it must always command the attention of practical Surgeons, and we welcome this as perhaps the most practically useful treatise written for many a day. It is a collection of lectures which Professor Erichsen had the foresight to give last spring. As with civilisation new forms of death are brought into healthy districts—bullets for the beasts and syphilis for the savages—so railways have, many persons think, brought a new class of injuries and results of injuries into the already well-filled list.

There is, at all events, this peculiarity about them—that they undergo a resurrection in the courts of law, and that they are very profitable to the lawyers, who ask questions and scoff at the answers. M. le Dr. Rabelais knelt in Notre-Dame before the statue of that good King who had brought a certain malady out of Italy which had so benefited his Profession. So should lawyers and some Medical men go to the Euston Station and kneel before Stephenson. But Professor Erichsen's evident desire is to do away with the idea that railway accidents are to be looked upon—of course after the event has passed a little while—as different from any others, and to lead the minds of his brethren back within the pale of pure and simple Surgery. We would, however, remind him that it was a Medical gentleman who lived in an island in the Ægean, and not Mr. Liston, who said that "no wound of the head should be despised," which he very rightly takes as the text for this book. Professor Erichsen also stands up most nobly for his own calling in discussing "discrepancy of opinion." He shows that it is common to all professions. The lawyers, when in full dress, never do agree. Every country village has at least a dozen theologians widely differing from each other. So how can you expect that Medical men should agree about the probable condition of John Smith four years hence, or estimate the damages he is to get from the railway and those from time? The thing is so preposterously absurd that it is astonishing eminent Medical men should go into court to answer questions which they know well enough they cannot answer correctly unless they have the gift of prophecy given them in its most versatile form. Now, Professor Erichsen, having evidently seen this, and having had very extensive experience, tries to put it right, and (p. 8) he describes how mere "verbal differences," where one man called the patient "*paralytic*" and the other that the limb "*dragged*," gave the "astute masters of verbal fence" such a chance as they did not lose. This alone is a lecture. We were once in a court where a railway injury-to-a-leg case was being tried and hotly contested. The lad had lost one leg, and the Medical witness—the fourth, we think—was asked, "Will his losing that leg make him incapable for following his trade?" "Yes, if," said the Surgeon, "his trade requires two legs."

Professor Erichsen's object was to bring before his pupils' observation the local, constitutional, immediate, and remote effects of certain injuries to which the spinal cord may be exposed without lesion of its protecting membranes. These injuries, from the obscurity of their primary symptoms, the very slow development of their primary phenomena, and from the evils they occasion, are of the greatest interest to the Surgeon. He proceeds to consider the "effects of slight and apparently trivial injuries to the spine," the effects of injuries to distant parts without blows on the back or spine, and, thirdly, those produced by wrenches or twists; and he seems to think that Surgeons have included all these pathological conditions under one term, "Concussion of the Spine," as well as chronic alterations of the structure of the cord itself, resulting from impaired nutrition. At p. 27 there is quoted from Eve's Surgical Cases (p. 90, and *New York Journal of Med.*, 1853, by U. D. Purple, M.D., of Greene, New York) a case where the patient had long suffered from paralysis, and insisted on the removal of his legs at the thigh. During the operation he felt no pain. This was an excessive case; so at p. 21 it is pleasant to find that we may have—1. Complete recovery after a longer or shorter period; 2. Incomplete recovery; 3. Permanent disease of the cord and its membranes; 4. Death. So that the sufferer from concussion may console himself like Coleridge's philosopher—

> "In himself, his Maker and the angel Death."

The chapter upon the effects of severe blows on the spine is extremely interesting. "A severe blow on the upper cervical region may produce instantaneous death; on the dorsal region, more or less paraplegia." There appear to be four forms of lesion that will lead to a fatal result in cases of spinal concussion,—intra-spinal hæmorrhage, tearing of membranes, and extravasation of the medulla, disintegration or inflammatory softening of the cord; and again, bleeding may occur outside or inside the covering of the cord, or in both situations. The fourth lecture is of great value, and treats of cases of "an extremely insidious and protracted character," where there has been no injury to the head or the spine, but in which the whole system has received a severe shake or shock, in consequence of which disease is developed in the spinal cord or brain.

The case of Mr. C. M. E., aged 56 (p. 69) is too long for transcription, which we regret, as it is so graphically described. We can see him walking, to use an expression of Professor Macdonald's, "like a horse in a boat" (p. 72); then again, at p. 74, is the case of Mr. D., aged 33, a man who had been of healthy constitution and active habits, and was banged about in a third-class carriage near Doncaster on March 1, 1865. In May, 1865, the author saw him in consultation with Mr. Hewer. Then this fine healthy young man could not speak, could not bend his back, had hyperæsthesia from the neck to the loins so intense that the touch of a finger felt as a "red-hot iron." The Railway Company gave him damages to the extent of £4750; but still (May, 1860), though under doses of bromide of potassium, he is better, he stammers, is anxious, careworn, and aged-looking. Professor Erichsen (p. 78) alludes to the forcible twisting of the head, and at p. 81, case 13, to what one can hardly read without a feeling of sickness—a lady, 28 years of age, on June 9, 1865, lay for two hours and a half under a mass of broken carriages, with a dead fellow-passenger across her. She was lying in such a position that she could not move, her head forcibly twisted to the right side, and the neck bent forwards.

Talk of the Inquisition or the tortures that were, at all events, used by disinterested persons, and compare them with what Englishmen do for money! After this Miss —— could not support her head; it hung loose on the top of her backbone, her left arm was without sense or motion, though the former returned by degrees. She had been an "intrepid rider, a skilful driver, a pianist and harpist"—she *received 1350l. to buy plaister* with which to patch her broken life!

The fifth lecture describes the periods at which symptoms begin to develope, and Mr. Erichsen remarks how rarely you find injury to the spinal cord or brain along with a fracture, giving a very pretty analogy, that when the glass of a watch is broken, the works are rarely found to be injured. This lecture specialises railway injuries more than one would have expected, but is very interesting. All the senses may be affected, he says. The state of the spine will be found to be the real cause of all these injuries. There are other chapters on Meningo-myelitis, of which he says, "I have never known a patient to recover (the italics are his) *completely and entirely, so as to be in the same state of health that he enjoyed before the accident.*" There is then a chapter upon Treatment, excellent as all the book is. One thing is evident, that except such men as Professor Erichsen, who are called in for consultation, and the other Doctors, the generality of men and women know very little about railway accidents. Any one who reads in Professor Erichsen's pages the following terrible words—"A prolongation of life, so that with care, by the avoidance of bodily fatigue and mental exertion of all kinds, the patient may drag on a semi-valetudinarian existence for fifteen or twenty years"—will, before a journey, wish the railway companies the blessings of good clear management and an ample and not overworked staff.

Dr. Livingstone.—Letters have been received in Glasgow from Dr. Livingstone, dated May 1, 1866. The Doctor was then in good health, and prosecuting his mission successfully.

PROVINCIAL CORRESPONDENCE.

SCOTLAND.

Edinburgh, October 17.

We have not the pleasure of continuing the congratulations expressed in our last letter, that Edinburgh had escaped the cholera visitation. The lapse of a few weeks has brought our city within the category of many other towns in Scotland, where the disease has merely occurred without assuming a violent or epidemic character. Among these may be mentioned Montrose, Dundee, Perth, Aberdeen, Brechin, Kirkcaldy, Glasgow, Wishaw, and Coatbridge. In Fraserburgh only has there been a serious outbreak, and here the total deaths have already amounted to fifty.

At the commencement of July a doubtful case of Asiatic cholera occurred at Leith, the seaport of Edinburgh, on board a vessel which had recently arrived from Stettin, and we are glad to say that this occurrence seems to have originated a commendable zeal on the part of the authorities to do all in their power to improve the sanitary condition, and to make all necessary preparations for the arrival of the unwelcome visitant. Boards of Health and district visitors were appointed, whose exertions in improving the condition of the densely-populated and always filthily-dirty closes of the city have been, on the whole, very successful. A portion of the city poor-house, being an extremely suitable building for the purpose, was also obtained, to be converted, as soon as required, into a Cholera Hospital. Owing to these exertions and to other causes, the health of the city during the last two months has been unusually good. In September several cases of British cholera terminated fatally, but no true case of Asiatic cholera was reported until the end of the month, when a man who had recently arrived from Leith died of the disease. Within a few hours this case ceased to be a solitary one, as the son, wife, and mother of the man were in succession fatally attacked. During the next fortnight a number of straggling cases were reported. These all occurred in those quarters of the city which are notorious for the utter absence of hygienic precautions, for the shameful overcrowding of the so-called dwelling-houses, and for the degraded character of the inhabitants, and, except where three or four cases happened in the same flat or close, were not specially connected with each other. The total number reported up to October 8 was eighteen, of whom fifteen were fatal. On the 9th the Cholera Hospital was opened, and since then a few deaths have occurred; but it is satisfactory to report that a week after the threatening character of the outbreak had necessitated the opening of the Hospital the inmates were only four men, two women, and two children. The histories of these cases have shown the existence of the usual predisposing causes of this disease as it occurs in this country. All the victims were wretchedly poor. The first case we mentioned was that of a man who had recently been receiving parochial assistance, and who, for some time before the attack, had been out of employment. Another fatal case was that of a poor seamstress, who was being surely starved on her wages of three shillings per week, and whose dinner on the Sunday preceding her death consisted of a boiled cabbage only. The local causes of cholera all exist in a very marked form in those districts of the town where these cases occurred, and, as might be expected, our "plague spots" were selected for its first appearance. Edinburgh unfortunately possesses many such in her old town. There are numerous closes with a long passage only a few feet wide, bounded on either side by houses of four or five flats, each room of which—if so they can be called—is tenanted by squalid families, and often, in addition, by as many lodgers as their floors can accommodate. The majority of these houses have no water supply, and are unprovided with water-closets, and so offal of all sorts is laid on the honeycombed pavements of the close, where the scavenger's brush can do little to remove the decomposing filth. The slow progress of the disease and the mild type of the more recent cases give us reason to hope that this will not prove a formidable epidemic of cholera.

The University and Extra-Academical Sessions are announced to be resumed on November 1. In the University it has been arranged that Dr. Warburton Begbie will conduct the class of Practice of Physic during the absence of Professor Laycock. We are extremely glad to announce that the Professor continues to improve rapidly, and that ere long we shall expect to find him occupied with his resumed duties.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, October 16.

Dr. Peacock, President.

The President, on taking the chair, congratulated the Society on its prosperity. He alluded to the volume of *Transactions*, which was, he said, the largest the Society had ever issued. After further general remarks the President referred to a new rule (which members will find on the back of their cards) as to living specimens. Living specimens are to be exhibited in the outer room a quarter of an hour before the time of meeting, in order to give members the opportunity of examining them *before* going into the meeting-room. The exhibitor will be called upon for his report during the meeting in his order on the list of specimens for the evening. The President next alluded to the practice which had arisen of putting down names for a meeting in advance of the one at which it was really intended to exhibit a specimen. This is done to insure that the specimen will be brought forward early in the evening of the next meeting. However, as this practice produces some confusion, it has been determined that if a member is not present when his report is called for he must give notice again to the Secretaries for the next meeting, and his name will be placed in the list according to the order in which it reaches the Secretary the second time.

The President exhibited a specimen of

ULCERATION OF THE APPENDIX VERMIFORMIS.

The specimen was removed from a girl aged 17, a patient of Mr. Kay's, of Old-street, who was seen by Dr. Peacock shortly before her death. It appeared that about three years before she had an attack of subacute inflammation of the peritoneum, under the effects of which she laboured for some weeks. Her last illness commenced with severe abdominal pain and feverishness in May, and she sank with symptoms of general peritonitis at the end of August. The small intestines were found very much distended, and at the right iliac space they were firmly matted together and adherent to the parietes by old attachments. On tearing through these adhesions a large abscess containing thick pus was laid open, and on more careful examination there were found two ulcerated openings, by which the canal of the appendix communicated with the cavity of the abscess. The appendix was free from any obstruction, but in the cæcum there was a small piece of woody material, apparently a portion of the shell of an almond, which was very irregular in shape, and might have been previously impacted in the appendix. There was also a female tricocephalus in the cæcum. The symptoms under which the girl sank were due to the occurrence of inflammation of the general peritoneal surface.

The President also exhibited a specimen of

DESTRUCTION OF THE CHORDÆ TENDINEÆ OF THE MITRAL VALVE.

The specimen was removed from a female aged 27, a patient of Dr. Peacock's at the Victoria-park Hospital, in September. It appeared that seven years before she had had a severe attack of rheumatic fever, and had ever afterwards suffered from difficulty of breathing and palpitation. Her last attack commenced seven weeks before her admission into the Hospital, and about the same time after her confinement, and was characterised by great dyspnœa, rapid feeble pulse, and palpitation, and during the time she was in the Hospital (only six days) there was a loud and somewhat creaky systolic murmur heard at the apex. The heart was of large size, weighing fifteen ounces and a half, and displayed evidences of old pericarditis. The aortic valves were somewhat thickened and opaque, but the chief seat of disease was in the mitral valve, the free fold of which was entirely loose in consequence of the destruction of the chordæ tendineæ. The aperture was also considerably larger in proportion to the other apertures than it should be. On the lining membrane of the left auricle, in the situation in which the regurgitant current would fall, there was a considerable deposit of partially decolorised lymph, and there were small concretions of lymph about the loose ends of the chordæ tendineæ.

Mr. Bruce exhibited specimens of

INJURED BONES FROM THE WAR IN GERMANY.

These specimens were many in number, and excited great interest. Mr. Bruce was careful to point out whether the injuries were the result of the Prussian, Austrian, or Saxon bullets. The course taken by some of these bullets was very extraordinary. Mr. Bruce also showed a skull from a soldier who had committed suicide by a very singular plan—a plan which Prussian soldiers not unfrequently adopt. The soldier loads his gun at the breech in the usual way, then rams down a pad upon the charge, and next fills the barrel two-thirds full of water and forces a cork down to the level of the fluid. The muzzle being placed at one eye, he touches the trigger with his toe. In the specimen exhibited the ball had passed through the right orbit and had come out at the centre of the right parietal bone. The effect of the water was to rend the bones of the skull from one another, and Mr. Bruce's specimen was patched together by rivets in very many places. Mr. Bruce drew attention to the fact that the fracture of the outer table was more extensive than that of the inner.

Mr. De Morgan then showed specimens illustrating the sequel of a case of

REMOVAL OF A CANCEROUS TUMOUR FROM THE ORBIT.

Mr. De Morgan brought this patient before the Society at a meeting last session, and a report of the case will be found in our last volume, p. 237. Since that report the patient had had pain down the legs, and subsequently complete paraplegia came on. He had, however, no brain symptoms, except loss of sight of one vertical half of the right eye. At the autopsy a large growth was found within the cranium, extending from the optic foramen, or rather from the usual position of this foramen. Neither the optic foramen nor the transverse fissure was to be found; they were obliterated by new growths of bone. The malignant growth had encroached on the chiasma of the optic nerves. A cancerous mass was found enveloping the lower end of the spinal cord, where the cauda equina was given off. There were several nodules on the nerve trunks. Mr. De Morgan thought that, apart from its Surgical interest, the case showed a way in which cancer might be propagated. He believed it was most likely that a piece of the growth in the head had gravitated in the subarachnoid fluid to the lower end of the spinal canal. Mr. De Morgan added that Mr. Hulke and Mr. Lawson had each a year ago removed similar tumours from the orbit, and in their cases, the operation having been done early, there had been no return. In his patient's case he believed there would have been no return if the operation had been performed earlier.

Mr. J. Z. Laurence showed a specimen of

GROWTH IN THE INTERIOR OF THE EYEBALL.

A woman, 58 years of age, was admitted on October 4, 1866, into St Bartholomew's Hospital, Chatham, under the care of Mr. Laurence. Three years ago the left eye was attacked by some violent form of inflammation, for which she underwent four operations. The final result was total loss of vision and atrophy of the globe. Latterly she began to experience pain and impairment of vision of the right, previously sound eye. On October 4 Mr. Laurence removed the lost globe. The eyeball was atrophied, puckered, and hard; cornea reduced to a surface of about a line in diameter. On dividing the globe from before backwards a growth was found in its interior, adherent to the back of the remains of the cornea in front, and to the tunics of the globe behind, but otherwise unattached to the inner surface of the globe. The growth was enclosed in a tough dense pseudo-cyst. In the growth two parts could be distinguished—a hard, iron-grey, somewhat translucent exterior; and an ochre-coloured, friable, soft interior. This last, examined with quarter and low eye-piece, was found to consist of a brownish, granulated, fatty matter, with cholesterine plates. Maceration of the substance in cold ether (or acetic acid) produced no difference in its microscopic characters. The grey hard substance was composed of granular cells of no determinate forms.

Mr. Laurence also showed a specimen of

MALIGNANT GROWTH ROUND THE OPTIC NERVE.

Mr. Laurence described in detail the condition of parts within the eye. The chief interest of the case was, that surrounding the optic papilla was a firm buff, partially black growth, about the size of half of a large pea. This growth exhibited, under the microscope, cancer nuclei and cancer cells, many of them polynucleated, of the most typically malignant character.

Dr. Wilson Fox, Mr. Hulke, and Mr. J. Z. Laurence were requested to examine the specimen and to report on it.

Mr. C. H. Moore showed a cancerous gland illustrating Dr. Broadbent's

TREATMENT OF CANCER BY THE INJECTION OF ACETIC ACID.

Mr. Moore remarked that he had for a year and a half treated cancerous tumours by the injection of different fluids, but it had been, he said, reserved for Dr. Broadbent to suggest the material which seemed likely to be most useful. Mr. Moore having heard Dr. Broadbent's paper at the British Medical Association, at once adopted the plan recommended. He had since treated three recurrent cancerous tumours by the injection of acetic acid, and the result was that they disappeared—not a trace of them being left. The specimen Mr. Moore exhibited consisted of two cancerous glands, one of which only had been injected. The uninjected gland contained abundance of fusiform and nucleated cells. The injected gland was reduced to a brownish stringy pulp in which pools of oil floated. Under the microscope scarcely any fusiform cells were to be found—about one to four or five fields. There were found, however, corners and angles of cells and pus corpuscles, granular masses, and abundance of fat.

In reply to Mr. Lee, Mr. C. H. Moore said that the injection was only practised once. There was but one outward puncture, but the fluid was sent to different parts of the tumour by altering the direction of the point of the syringe.

Mr. Power mentioned two cases in which this plan had been tried, but he only knew the result in one of them. This patient consulted Mr. Power for a malignant growth of the eyelid. Dr. Broadbent's plan of treatment was adopted, and with surprising benefit. The tumour rapidly vanished, and Mr. Power believed the injection had really cured the disease.

Dr. Broadbent said he hoped to accomplish the removal of cancerous tumours by injections of acetic acid without causing sloughing. By using acid of the proper degree of dilution, he hoped the cancerous matter might be so altered that it could be taken up into the system with impunity. In reply to Mr. Laurence, he said he had given acetic acid internally with tonics, but he did not attach much importance to its internal administration. In reply to Mr. Henry Thompson, he said he used the ordinary syringe for subcutaneous injection. The acid acted a little on the instrument, but with care in washing it there was no practical inconvenience.

Dr. Murchison, for Dr. Bantock, showed a specimen from a case of

ADDISON'S DISEASE.

It was taken from a lady, thirty-five years of age, who had been under Mr. Baker Brown's care for uterine polypus. The patient had always been dark, but the discoloration had increased, and Mr. Brown diagnosed disease of the supra-renal capsules. The capsules were affected in the usual way. The lungs had not been examined.

Dr. Murchison showed a specimen of

OVARIAN CYST WHICH HAD EMPTIED THROUGH THE INTESTINE.

When this patient was admitted an ovarian tumour was diagnosed. Subsequently diarrhœa came on, and pus was passed by the bowels. Coincident with this, percussion over the tumour gave a clear sound instead of a dull one. It was found that the cyst had opened into the rectum. In this case both kidneys were fatty—the patient had had albuminous urine and oil-casts—and the spleen was waxy and very large. Dr. Murchison added that, at a previous meeting, he had exhibited a waxy liver and fatty kidneys from one patient. It was interesting to find two different forms of degeneration so well marked in one patient. Dr. Murchison had found the two forms of degeneration together in the liver—the waxy following the branches of the hepatic, and the fatty those of the portal vein.

Mr. Ernest Hart showed a

FIBRO-PLASTIC MELANOID TUMOUR OF THE EYEBALL.

The globe had been injured six years before by a blow from a lady's parasol. Loss of vision followed after much pain. A year ago he had rheumatic gout, and became delirious. During the delirium the eye became painful, and the cornea suppurated. Subsequently he consulted Mr. Hart, as the sight of the eye was failing. Mr. Hart cut down the damaged eyeball, and adapted an artificial eye. Subsequently the stump swelled and grew rapidly, and was therefore removed. The tumour was of rather soft consistence, but did not break up, cutting firmly with a smooth surface. It occupied the whole of the segment of eyeball, of which it had destroyed the tissues. It had invaded the optic nerve, destroying all the nerve tissue, of which it occupied the place. The sheath was much thickened. It might be seen cut across, and the black matter occupies the sheath of the nerve where cut across, so that a nucleus for further growth was perforce left. The further progress of the case will therefore be of considerable interest. The microscopic examination of the substance of the tumour shows it to contain all the elements of a fibro-plastic growth. There are to be seen in the section submitted a number of free cells, spherical, and containing a single bright colourless nucleus, partly refractive, without any granular matter. The size of the cell is about $\frac{1}{3000}$th of an inch, that of the nucleus is about $\frac{1}{8000}$th of an inch. This cell may be seen in some places surrounded by amorphous granular matter, elsewhere itself forming the nucleus of larger fusiform or caudate cells, from which issue filiform processes. These larger cells contain also granular matter. The cell just described appeared, therefore, in several phases, sometimes solitary, while elsewhere around it are formed either aggregations of molecules, or larger cells. Within some of these it may be seen to have divided and doubled itself. The pigment is variously disposed, aggregated in some cells so as to form black masses somewhat more sparsely scattered. The colour of the tumour is uniformly black.

An interesting report on cholera, by Dr. Wilson Fox, will be given in our next impression.

OBITUARY.

GEORGE HILARO BARLOW, M.A., M.D.

Our readers will have heard already with regret of the death, at the age of 60, of Dr. Barlow, early on the morning of the 13th inst., at his house in Sydenham. Born in 1806, descended from a family of some standing, he entered at Trinity College, Cambridge, where he took his Arts Degree in 1829, and his M.D. in 1841. He was for some time at the Naval College, Portsmouth, and then at sea. On the retirement of Dr. Bright, he became full Physician at Guy's Hospital, and that post he held, with honour to himself and that institution, up to the day of his death. The pleuropneumonia which carried him off—the left lung becoming affected as the right recovered itself—seems to have been set up by a forced exposure to cold in an open third-class carriage on the evening of the 5th.

Scarcely understood, even misunderstood, by some, Dr. Barlow bore, with a portion of the Profession, a character in which great knowledge seemed to be conjoined with great indecision in diagnosis; but to those who knew him better, whether Practitioners or students, this seeming indecision was the natural result of that extensive knowledge and even more extensive power of thought. He seemed to take in at once, as in a panoramic view, all the signs and symptoms of the disease he was considering; to add up on the one side or the other those which appeared to favour or to belie the opinion he honestly attempted to form; and thus, as a teacher among students, he was hardly sufficiently dogmatic. And if dogmatism be always truth, then, as a teacher he failed. But if, in the science of Medicine, still, as in the days of Hippocrates, *ἡ πεῖρα σφαλερὴ, ἡ δὲ κρίσις χαλεπή*, then, as a teacher, he did not altogether fail. To others, more able perhaps to perform it, he left the not unnecessary task of drawing the sharp-cut lines which seem to separate diseases—at any rate, in the mind of the student, working, as most of our students must do, for examinations in the present, and for a future in which the refinements of science must bow before the dire necessities of work and life. His rather was the more scientific influence which led the mind of his hearer up to, and maybe round, each difficulty, but never took those difficulties by force, leaving the student rather to think for and teach himself than to receive at once on faith whatever seemed to him new or hard; and this influence is seen no less in his writings, published mainly in the *Guy's Hospital Reports*, and peculiarly so in his last pamphlet on cholera.

Of his moral and social character we need not speak at length. Blameless in life and death, charitable and ever kind to all, he has left us an example of what the true Physician should be. In him shone at once the inbred nobleness of the gentleman, the honest manliness of the sailor, heightened by the polish and refinement, both in manners and literature, which the education of a University can hardly fail to give. Courteous in the extreme, even in the last wandering hours, when the hardworked brain was busy still with his patients and his Profession, he exhibited that continual courtesy, not as an overlying varnish, but as the natural outgrowth of a noble mind.

By Dr. Barlow's death the Profession has lost one of its brightest lights; Guy's has been deprived of an ornament and a thinker whom it can ill afford to spare; and those who are left behind him to carry on in some sort the work he has begun for them, find gone from their midst the kindest and most considerate of friends.

MEDICAL NEWS.

Royal College of Physicians of London.—At a general meeting of the Fellows held on Wednesday, October 17, the following gentlemen, having undergone the necessary examination, and satisfied the College of their proficiency in the Science and Practice of Medicine, Surgery, and Midwifery, were duly admitted to practise Physic as Licentiates of the College:—

Eli James Barrick, M.D., Vict. Coll., Canada; Joseph Arthur Williams, M.D., Vict. Coll., Canada; Henry Denne, Guy's Hospital; James Mare Taylor, Hanley, Staffordshire; Arthur Goullet, New Wimbledon; Alfred Coleman, Dulwich; Thomas George O'Sullivan, Limerick.

Apothecaries' Hall.—On Thursday, October 11, the following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise:—

Douglas Wills, Old Kent-road; John Robert Perkins, Child's-hill Parsonage, Hendon, N.W.; Arthur John Farr, Newport, Mon.; Robert Vacy Ash, Stratton, Cornwall.

The following gentleman also on the same day passed his First Examination:—

James Rawlings, Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Bright, James Albert, M.R.C.S.E., L.S.A., has been appointed Public Vaccinator and Poor-law Medical Officer to the Third District of the Wells Union, and Surgeon to the County of Somerset Constabulary Force.

Manser, F., M.R.C.S.E., has been appointed House-Surgeon to the Tunbridge Wells Infirmary.

Wolston, W. T. P., M.B., has been appointed Resident Medical Officer of the Royal Hospital for Sick Children at Edinburgh.

BIRTHS.

Barclay.—Oct. 2, at Bruton-street, Berkeley-square, the wife of Dr. Barclay, of a son.

Beard.—On October 14, at 64, Grand Parade, Brighton, the wife of Dr. C. J. Beard, of a daughter.

Breakey.—On October 12, at Sheerness, the wife of Dr. John Breakey, R.N., of a daughter.

Brown.—On Oct. 11, at Hampstead, the wife of Dr. Gossett Brown, of a daughter.

Gouldsbury.—On September 21, at the Pavilion, Barbadoes, the wife of Dr. V. S. Gouldsbury, of a daughter.

Goullet.—On September 26, at The Firs, New Wimbledon, the wife of Dr. Goullet, of a son.

Kempster.—On Oct. 9, at Oak House, Battersea, the wife of W. H. Kempster, M.R.C.S.E., of a son.

King.—On Oct. 3, at 4, Bishop's-terrace, Bridlington-quay, the wife of K. King, M.D., of a daughter.

Mould.—On October 14, at 1, Onslow-crescent, Brompton, the wife of J. T. Mould, F.R.C.S., of a daughter.

Small.—On Oct. 11, at 26, Colville-square, Bayswater, the wife of Dr. D. N. Small, late of her Majesty's Indian Army, of a son.

MARRIAGES.

Coles—Hanks.—On October 13, at St. Luke's, Cheltenham, W. S. Coles, M.D., Surgeon-Major, Bombay Army, to Emma, only daughter of the late John Hanks, Esq., of Cold Aston, Gloucestershire.

Dalzell—Viall.—On Oct. 10, at St. John's Church, Notting-hill, W., F. B. Dalzell, M.D., Surgeon Bengal Army, to Maria Palmer, third daughter of the late Thomas Viall, of Calcutta.

Dickson—Inglis.—On Oct. 10, at Edinburgh, Dr. Frank D. Dickson, of Buxton, Derbyshire, to Isabel Catherine, third daughter of A. Inglis, M.D., of Edinburgh.

Middleton—Blair—On Oct. 9, at 14, John-street, Edinburgh, J. Middleton, M.D., of Greenwich Hospital, to Janet, eldest daughter of the late John Blair, Esq., of Edinburgh.

Scriven—Leggatt.—On October 16, at St. Saviour's, Upper Chelsea, J. B. Scriven, Principal of the Lahore Medical College, to Gertrude Margaret, second daughter of A. Leggatt, M.R.C.S., of 13, William-street, Lowndes-square.

DEATHS.

Ayton, J., M.D., at Devizes, on Sept. 30.

Barlow, G. H., M.D., at Longton Lodge, Sydenham, on October 13, aged 60.

Halt, T., M.D., Inspector-General of Hospitals, at 3, Northumberland-court, Strand, on October 10.

Madden, W., sen., M.D. Glasg., at Cliff-terrace, Sandycove, Ireland, on Oct. 10.

Radcliffe, H. J., M.R.C.S.E., at Eastbourne, Sussex, on Oct. 1, aged 57.

Walne, H., F.R.C.S.E., at 72, Guildford-street, Russell-square, on October 3.

Wyllie, D. R., L.F.P. and S. Glasg., of Montrose-street, Glasgow, on Oct. 2.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Bridgwater Union.—Dr. King has resigned the Workhouse; salary £54 per annum.

Isle of Wight Union.—Dr. Meeres has resigned the Yarmouth District; salary £85 per annum.

Lambeth Parish.—Mr. Robert Christie has resigned the Seventh District; salary £75 per annum.

Steyning Union.—Mr. Edward Young has resigned the Second District; area 12,641; population 2799; salary £56 per annum.

Uppingham Union.—Mr. Joseph H. Spencer has resigned the Hallaton District; area 7836; population 1174; salary £22 10s. per annum.

Wigan Union.—Mr. Jephtha Hussey has resigned the Hindley District; area 6517; population 17,654; salary £50 per annum.

APPOINTMENTS.

Battle Union.—Roger Duke, M.R.C.S.E., L.S.A., to the Seventh District.

Brackley Union.—George C. Douglas, M.R.C.S.E., L.S.A., L.M., to the Third District.

Depwade Union.—John D. Eames, L.R.C.P., M.R.C.S.E., to the Fourth District.

Guildford Union.—Thomas J. Schollick, M.R.C.S.E., L.S.A., to the Second Guildford District.

Lewisham Union.—John C. Duke, M.R.C.S.E., L.S.A., to the Lewisham Village District and the Workhouse.

Liverpool Parish.—Isaiah de Zouche, M.D. Ire., M.R.C.S.E., Resident Workhouse Medical Officer.

Manchester Township.—Henry Simpson, M.R.C.S.E., L.S.A., M.D. Lond., Visiting Medical Officer to the New Workhouse.

Maldon Union.—Charles Read, M.R.C.S.E., L.S.A., to the Bradwell District.

Merthyr Tydfil Union.—Rees Miles, M.R.C.S.E., L.R.C.P. Edin., to the Town District.

St. Ives (Hunts) Union.—James Deane, M.D. Glas., M.R.C.S.E., L.S.A., to the Warboys District.

Williton Union.—George R. Norris, M.R.C.S.E., L.S.A., to the Brompton Ralph and Clatworthy District.

Death of M. Jobert.—This distinguished Surgeon, whose death has been recently announced, was born in 1799, at Lamballe (Côtes-du-Nord), the name of which place he used to add to his own. He studied in Paris, and passed his final examination in 1828, and became successively Surgeon to the Hospital St. Louis and to the Hôtel-Dieu. After the revolution of 1830 he was named Surgeon to the Hospital of St. Cloud and Consulting-Surgeon to the King, and appointed to the chair of Clinical Surgery. In 1852 he was named Surgeon in Ordinary to the Emperor. He was Professor in the Faculty of Medicine, Member of the Academy of Medicine and of the Academy of Sciences, and Member of the Council of Health.

Cholera in a Metropolitan Prison.—A fatal case of cholera occurred on Sunday last in the House of Detention, Clerkenwell.

Cholera in Dublin.—The Rev. Professor Haughton, M.D., has written a letter to *Saunders's News Letter*, pointing out that cholera is unquestionably on the increase in Dublin, and he does not hesitate to charge the authorities with gross neglect in not having instituted house-to-house visitation. He writes:—"Six weeks have now elapsed since the necessity of house-to-house visitation was impressed by me and by others on the authorities, and so far as I can learn it has not been carried out, and the only alteration in the dispensary routine consists in having the dispensaries open day and night, a precaution which is very important, but which is not sufficient. During the six weeks I have described I believe that 500 lives have perished by cholera, at least 200 of which might have been saved by an earlier interference with the premonitory symptoms of the disease. I ask, sir, who is to blame for this unnecessary loss of life?" He pays a glowing tribute to the courage and activity of the Anglican and Roman clergy, the Medical students and nurses of Sir P. Dun's, the Meath, the Hardwicke, and the Mater Misericordiæ Hospitals, and the Sisters of Mercy of the latter institution.

Cholera in the North-East Seaports.—Cholera still threatens to assume an epidemic form in the north-eastern seaports. From Saturday night until Monday morning there had been five fatal cases in North Shields, and all of them of short duration. Two fatal cases had occurred at South Shields, and two at Sunderland; and there were several very serious cases under treatment in the latter town. Choleraic diarrhœa is prevalent in North Shields, and a bad form of spotted typhus fever has appeared at South Shields. A later report states that between Monday and Tuesday nights there were four more fatal cases of cholera in North Shields. There have also been four more fatal cases at Sunderland. The cholera has also appeared at Stockton, and in the village of Wolverstone, near to that town, there have been twenty-one fatal cases since the disease appeared there a few weeks ago. There has been a fatal case at Newcastle-on-Tyne and another at South Shields.

Cholera among Dogs.—The *Pungolo* of Naples states that the dogs in that neighbourhood have been suffering from a malady which resembles cholera in its symptoms, but have been cured by their swallowing a certain earth, which they seek for instinctively. That phenomenon is now the object of a study by the Medical men of the city, to ascertain the properties by which such a result is obtained. A letter from Foggia also mentions that marvellous effects have been produced by the use of a decoction of rosemary in attacks of cholera.

Poisoning by a Cholera Nostrum.—Alma Miller, a child five years of age, daughter of a boot-finisher in the City-road, was poisoned last week by her father, who, on her showing premonitory symptoms of cholera, gave her at short intervals six tablespoonfuls of "Cox's celebrated red mixture." On analysis the cholera medicine appeared to be made of peppermint, prussic acid, and morphia. The quantity taken by the child contained a grain of opium.

Dry Packing in Cholera.—During the last ten or twelve days, says the *Propagateur* of Lille, the large woollen establishment of MM. Dillies Brothers, at Roubaix, has received sixty-five cholera patients, all of whom have recovered by the following means:—"The patient is taken into a room in which are generators. There he is stripped and wrapped up in an immense quantity of raw wool, until he is, so to speak, in a bath of perspiration. At a height of two yards and a half a trap is opened, to let the vapour escape and to renew the air. The patient, however desperate his state, speedily begins to feel better, and the vomiting and evacuations gradually cease. At the factory of Holden and Co., at Croix, a similar result has been obtained."

Escape of a Prisoner by feigning an Attack of Cholera.—At Lisle a man named Dewuyst, a tinsmith, was sent a few days since to gaol to undergo his sentence. On Thursday evening, having got weary of his confinement, he commenced all of a sudden to roll on the floor, and twist, and exhibit other symptoms attributed generally to cholera. It was thought he was seized, and the governor deemed it necessary to send his prisoner to the Hospital of Saint-Sauveur. There, after recommencing his contortions, he allowed every relief to be administered to him. The patient at last grew calmer, and was left to repose. Dewuyst, then profiting by the latitude accorded to him on account of his condition, and taking advantage of the darkness, succeeded in making his escape, and is still at large.

The Sewage of Towns.—It is announced that a "Congress and Conference" on the important subject of the "sewage of towns," with a view of arriving at a satisfactory solution of the question, will be held in the Royal Pump-room, Leamington, on the 25th and 26th inst., under the presidency of Lord Leigh, and the vice-presidents are the Earl of Warwick, the Earl of Aylesford, Lord Willoughby de Broke, Lord Charles Bertie Percy, Rev. Lord Charles Paulet, Mr. G. W. J. Repton, M.P., Sir Charles Mordaunt, M.P., Mr. H. C. Wise, M.P., and Mr. Arthur Wellesley Peel, M.P. Mr. Hitchman, M.R.C.S., the Arboretum, Leamington, is secretary, to whom communications should be sent.

Case of Fatal Poisoning by Sulphate of Copper.—On Saturday afternoon an inquest was held at Balmore Farm, about four miles from Newport, on the body of a woman named Ann Morgan, aged 75 years, whose death had resulted from poison. It appears that the deceased was addicted to drinking. On Thursday morning she went into the adjacent village of Caerleon, and returned home about two o'clock very much intoxicated She partook of a potato for dinner, and was then observed to go to a desk where was kept some sulphate of copper, and afterwards to drink from a basin Shortly afterwards she was ill and vomited very much, whereupon she went to bed. It was then noticed that the vessel from which the old woman had drunk contained some of the sulphate of copper. Strange to say, although this fact was deposed to, no Medical assistance was sought, nor does the deceased appear to have been much cared for by anybody. The farm servants left the premises as usual when their day's work was finished. About six o'clock a charwoman, named Crowley, who had been engaged about the house during the day, went to see the deceased, and the old woman then said she was better. A man, about seventy years old, was left alone in the house with Mrs. Morgan, and next morning, about seven o'clock, when the servants went to the farm, she was found dead in bed. The jury, after a long consultation, returned a verdict to the effect that the deceased died through taking sulphate of copper, administered by her own hands when she was so much under the influence of drink as not to be accountable for her actions. The jury severely censured the conduct of the farmer in neglecting to obtain Medical assistance.

Hahnemannic Practice.—At Bradwell, Bucks, Elizabeth Walters, aged 5, has died from hydrophobia. It came out at the inquest that one of the remedies tried was a cooked piece of the liver of the dog that bit her, taken from the animal some ten days after it had been drowned.

Abernethian Society, St. Bartholomew's.—This Society held its first meeting for the ensuing session on Thursday evening, October 11. The inaugural address was given by Mr. Thomas Smith. In a very able manner he showed the value of such a Society as the Abernethian as a means of bringing forward the results of observations made by the students in the wards, post-mortem theatre, or dissecting-rooms; the advantage of attending the free discussion of doubtful or disputed points of Medical practice, and the value of cultivating a ready manner of speech-making, etc. He then traced its origin, now more than seventy years ago; instanced the eminent men—some living, some dead—who had been its ardent supporters, and who had first brought to the Abernethian meetings germs of subjects which were afterwards developed into authoritative teaching on the questions about which they had worked and written. As an illustration of what a young student Abernethian had done, Mr. Smith gave an account of the discovery of the "trichina spiralis" by Mr. Paget thirty years ago, the first account of that parasite having been given to the Abernethian Society. He then gave a full and excellent description of the flesh worm; its mode of introduction into the human body; its passage through the alimentary canal; and its final lodgment in the muscles. He also gave an account of the symptoms of trichinous disease in man, and alluded to its treatment. Numerous specimens of trichinæ were placed under the microscope. The attendance of members was large, and after a few remarks from some old Abernethians, encouraging the new students to enrol themselves in the ranks of the Society, the meeting separated. The following is the list of the officers of the Society for the ensuing session 1866-67:—*Presidents:* Dr. Warter and Mr. Vernon. *Vice-Presidents:* Messrs. Bloxam, Moore, Batt, and Heelas. *Treasurer:* Mr. Paget. *Committee of Audit:* Messrs. Kemp, Ellis, and Smith. *Honorary Secretary:* Mr. R. H. Coombs.

St. Bartholomew's Hospital.—There was a large attendance of Medical students on the 10th inst. at Sir Roger Cholmeley's grounds, Highgate, to witness the athletic sports of the gentlemen educated at St. Bartholomew's, when several valuable prizes were distributed to the winners by Mr. James Paget. The first was a flat race of 100 yards, for which there were 21 competitors; Messrs. R. Samuel, A. A. Henley, and T. Lee were respectively placed 1st, 2nd, and 3rd, running the distance in 11 seconds. For throwing the hammer of 20 lbs. there were six competitors, of whom Mr. Knapp was 1st, Angove 2nd, and Henley 3rd; the distance to which the hammer was thrown was 58 feet two inches. No. 3 on the card was a hurdle race of 120 yards (10 flights); seventeen competitors; won in 20 seconds, Mr. T. Lee being 1st, Mr. R R. Evans 2nd, and Mr. C. D. Batt 3rd. No. 4 was throwing the cricket ball, which was done in excellent style by Mr. E. S. Angove, to a distance of 90½ yards, Mr. Budd being second. No. 5. Flat race of one mile; 1st Mr. Sankey, 2nd Mr. Angove, 3rd Mr. Irving; time, 5 minutes 35 seconds. No. 6. Long jump; 1st Mr. Henley, 2nd Mr. Angove; distance, 16 feet 8 inches. No. 7. Flat race of 440 yards; 1st Mr. Samuel, 2nd Mr. T. E. Scobell, 3rd Mr. Payne; time, 62 seconds. No. 8. High jump; 1st Mr. Angove, 2nd Mr. Henley; height, 4 feet 8 inches. No. 9. Flat race of half a mile; 1st Mr. H. Scobell, 2nd Mr. J. O. Sankey; time, 2 minutes 26½ seconds. No. 10. Putting the stone (20 lbs.); 1st Mr. Knapp, 2nd Mr. Henley. No. 11. Hurdle race of 300 yards (twelve flights); 1st Mr.

Henley, 2nd Mr. Evans, 3rd Mr. Lee; time, 51 seconds. Messrs. Callender and Langton officiated as judges.

QUEEN'S UNIVERSITY IN IRELAND.—At a meeting of the Senate of the above University held on Thursday, the 11th inst., in St. Patrick's Hall, Dublin Castle, the following degrees in Medicine and Surgery were conferred, in the presence of His Excellency the Lord-Lieutenant and a large assemblage, by the Right Hon. Maziere Brady, Vice-Chancellor of the University:—*Doctors in Medicine.*—Third Class: George Gray, Belfast. Unclassed: John Albert Anderson, Belfast; Henry Schofield Baldwin, Galway and Belfast; Thomas Carmichael, Belfast; Thompson R. Clarke, Galway; Thomas St. John Clerke, Cork; William Collins, Cork; James Conolly, B.A., Galway; John Kelly Conway, Galway; John Snow Allen Cuningham, Galway; George M'Bride Davis, Belfast; James Reid Dickson, Belfast; George J. Gibson, Cork; Anthony Gorham, Galway; Joseph Reay Greene, honoris causâ; Alexander Heron, B.A., Belfast; John F. Hodges, M.D., honoris causâ; David Johnston, Belfast; Robert Peel M'Elevy, Belfast; Frederick M'Clement, Belfast; John Macaulay, Belfast; Newenham Maher, Galway; Hickman Morgan, Cork; Andrew Mullan, M.A., Belfast and Cork; Edwin Field Nelson, Belfast; John O'Connor, Cork; William Arthur O'Connor, Cork; Daniel O'Connor, Cork; Samuel Parke, Belfast; Robert Vincent Power, B.A., Cork; James Hutton Ritchie, Belfast; John Ralph Ross, B.A., Galway and Belfast; James Edward Saunderson, B.A., Galway; William Sharpe, Belfast and Galway; William Stephens, Galway; William Thornley Stoker, Galway; Edmond Townsend, B.A., Cork; William Henry Warren, Galway; George Vesey Wood, Galway, Cork, and Belfast; William Wylie, Belfast; Alexander Young, Belfast. *Masters in Surgery.*—Thompson R. Clarke, Galway; William Collins, Cork; George J. Gibson, Cork; George M'Bride Davis, Belfast; Barry Delaney, M.D., Cork; Alexander Filson, B.A., M.D., Belfast; George Gray, Belfast; John Kennedy, M.D., Belfast; Henry Lupton, M.D., Galway; John Wilson M'Cloy, M.D., Belfast; Edward Louis M'Sheehy, M.D., Cork; Pierce Mansfield, B.A., M.D., Cork; John W. Mulligan, M.D., Belfast; John O'Connor, Cork; William Arthur O'Connor, Cork; James J. Louis Rattan, M.D., Cork; James Hutton Ritchie, Belfast; James Edward Saunderson, M.D., Galway; Edmond Townsend, B.A., Cork; George Vesey Wood, M.D., Galway, Cork, and Belfast. On the following day the Convocation of the University, in accordance with Her Majesty's letter, was held in the same place, the principal business being the election of a Senator, and the consideration of the supplemental charter, giving to the University the power to confer degrees, as in the University of London, irrespectively of the place of education of the candidates, and not, as heretofore, exclusively upon those educated in the Queen's Colleges of Cork, Belfast, and Galway. The supplemental charter had been adopted a few days previously by the Senate by a majority of two, but a strong feeling was known to exist against it among the body of graduates at large. Accordingly, Mr. David Ross, LL.B., who came forward as the opposition candidate, was elected senator by a majority of 81 over Dr. Mapother, who was known to be favourable to the adoption of the charter, the numbers being, for Mr. Ross 127, for Dr. Mapother 46. Subsequently, on the motion of Sir Robert Kane, F.R.S., seconded by Mr. Porter, barrister-at-law, it was resolved, without a division, "that, in the opinion of the Convocation, the acceptance of the supplemental charter is inexpedient." An amendment, to the effect "that we approve of that portion of the charter which recognises the affiliation of properly recognised Colleges, but object to the principle of admitting to degrees persons not educated in some such institutions," had been previously put to the meeting, but only one voice having been polled it was declared to be lost. This result amounts, however, only to an expression of opinion, the decision of the question of the adoption or rejection of the charter resting with the Senate; but two things may be gathered from the speech of the Lord-Lieutenant delivered at the meeting to confer degrees—first, that her Majesty's Government will attach importance to the result of the discussion in the Convocation, and, secondly, that the whole subject will shortly be brought under the consideration of Parliament.

HERNIA STATISTICS.—Dr. Sullivan states that, during the examination of 10,000 men for military service, he found hernias to exist in 455, or 45·5 per 1000. The following were the varieties observed:—right femoral, 1; double femoral, 1; umbilical, 6; ventral, 9; right inguinal, 234; left, 173; double, 31. Thus it is seen how rare femoral hernia is, not merely in comparison with inguinal but also other less frequent forms of the affection. The right was the affected side in nearly two-thirds of the cases of inguinal hernia.—*Boston Journal, August* 23.

ROYAL COLLEGE OF SURGEONS.—From a short account of the library of this institution it appears that it was not until 1828 that the collection, then containing nearly 11,000, was available to the members. It is now rich in the Transactions of learned societies both at home and abroad, and contains at the present time 31,157 volumes. It has been the object of the Council to insure the completeness and excellence of the collection, and great facilities of reference have been provided by the preparation of additional catalogues and indexes of subjects. Since the formation of the library there have only been three librarians—viz., Dr. Willis, now in practice at Barnes; Mr. Stone, the present clerk to the College; and Mr. Chatto, who now deservedly fills the appointment.

THE following are the last week's Cattle Plague Returns.

—	1. Attacked.			Back cases reported in the week ended Oct. 6, 1866.	2. Result of reported Cases from the Commencement of the disease.				
	Week ended Sept. 22.	Week ended Sept. 29.	Week ended Oct. 6.		Attacked.	Killed.	Died.	Recovered.	Unaccounted for.
Great Britain .	66	40	32	..	253687	84978	124302	33413	10994

The Return shows that 32 attacks were reported to have occurred during the week ended October 6, being a decrease of 8 on the previous return.

Fresh outbreaks took place in 11 farms or places where cattle are kept; the number of such outbreaks in the previous week being 11 also. The number of healthy cattle slaughtered, to prevent the disease extending to them, was 42 during the week.

Since the commencement of the disease 51 in every 1000 of the estimated ordinary stock of cattle in Great Britain are returned as having been attacked.

The total number of sheep reported to have been attacked up to the date of this return is 6826. No cases are reported during the week.

NOTE.—One Inspector in the county of Chester who returned one case last week has not reported in time for this Return.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

A Guardian.—The next examination in Arts at Apothecaries' Hall will take place January 25. There will be one at the College on December 18.

A Metropolitan Teacher.—We have authority for stating that all teachers of anatomy, whether metropolitan or provincial, will readily obtain permission to view the new preparations on which, together with other dissections of the fresh subject, candidates for the Diploma of the College of Surgeons will henceforth be examined. Indeed, it is the President's wish that full facilities be afforded to all lecturers and demonstrators desirous of seeing the preparations. Mr Partridge deserves full credit for inaugurating his presidency by such a graceful act to our teachers. It is only requested that the valuable time of the gentlemen engaged in preparing the dissections be not interfered with. A contemporary gives all the credit to a Mr. Moseley. It is, however, well known that Dr. Pettigrew is the originator of the admirable mode of displaying and dissecting the preparations used at former examinations. Notices of this fact appeared in the journal alluded to, as well as in the *Medical Times and Gazette.*

THE DEATH FROM INHALATION OF CHLOROFORM AND ETHER.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Will you kindly allow me to inform "M. D" that I did draw the tongue well out by means of an artery forceps? I did not specially mention this fact because I considered that, in adopting artificial respiration, the tongue should always be drawn out. I quite agree with "M. D." in his remarks with regard to Mr. Lister's article on anæsthetics (Holmes's "Surgery," vol. iii). This excellent article, moreover, is not of inordinate length, so that it can easily be read even by those whose time is already very much occupied. I am, &c. E. LUDLOW.

Royal Infirmary, Bristol, Oct. 15.

A RECENT APPOINTMENT IN THE ARMY MEDICAL SERVICE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—On reading the letters which appeared in a late number of your journal about a recent appointment to the Army Medical Department, I made some inquiries of a military friend as to their accuracy. He referred me to copies of the *Times* of the 13th and 25th November last. By them you will perceive that a late Army Assistant-Surgeon was a witness at

Dr. Hunter's trial, and that he professionally attended some of his patients. In what capacity he did so does not concern us further than that the fact establishes the existence of some kind of professional connexion between them. It would be indeed a remarkable coincidence if the name, rank, and regiment be the same, but the individual not so.—I am, &c.

London, October 16. AN HOSPITAL PHYSICIAN.

TREATMENT OF CHOLERA BY NITROUS ACID.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE

SIR,—Having lately met with a copy of a letter by the late Thomas Hope, Esq., Senior Surgeon of the Civil Establishment, Woolwich, "On the Nature, Treatment, and Cure of Cholera" by nitrous acid, etc., and believing that his formula and system deserve to be better known, I have had about ten dozen copies printed, and shall be happy to post one or two to any gentleman on a stamped address being sent me.

I am, &c. GEO. BROOM, Printer, &c.

Llanelly, South Wales, October 16.

ONE OF THE FAMILY OF THE LATE SIR JOHN FRANKLIN.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Whilst looking from these windows on the partially uncovered statue of the circumnavigator, Sir John Franklin, in Waterloo-place, I was forcibly reminded of the position his sister's son is now holding. Henry Stephen Peacock is now a weekly clerk in the South-Western Railway Company. He is a Member of the College and the Hall, highly educated as an anatomist. He went as subcurator to the Museum at Guy's under the late Dr. Hodgkin, and was the first, I believe, in this country to discover the trichina in the human subject. Circumstances led to a misunderstanding between Dr. Hodgkin and the Governors of Guy's Hospital, which ended in the former's resigning his post. Peacock, feeling his superior had been wronged, likewise resigned, and then joined some one in general practice, when he became involved, and hence his present position.

Now, Sir, when I know the benevolence which exists in the breasts of members of our noble Profession to relieve a fallen brother, let us see, with the assistance of your excellent journal, what can be done to place this gentleman in one of the pensioners' dwellings of the Medical Benevolent College, towards which I shall be too happy to contribute.

Athenæum Club, Oct. 15. I am, &c. F.R.C.S.

PURIFICATION OF A SICK ROOM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I do not think that Mr. Simpson in his last letter on this subject has improved upon his previous valuable suggestion. The diffusion in the atmosphere of carbolic acid would seem to me to be a sure way of counteracting the effects of permanganate of potash (Condy's fluid), since very few substances possess equal power of neutralising that compound. Carbolic acid, by its behaviour with oxidising agents, must be ranked with organic effluvia themselves. Several observations published by Dr. Nelson, of Birmingham, Dr. Nevins, of Liverpool, and others, go to prove that permanganate of potash is of much advantage in certain cases of lung disease; but I am not aware of any good results having been obtained by the continued respiration of the vapour of carbolic acid. Some good authorities have even considered the breathing of it to be fraught with danger. That carbolic acid is a deadly poison, when taken in considerable quantity into the stomach, was recently illustrated by the death of a man who had accidentally swallowed some of it. Mr. Simpson need be under no apprehension of embarrassment arising from the presence in the sick room of the dry powder of binoxide of manganese from the decomposition of such quantities of permanganate as would be required to keep the air pure. To produce that result, an absurdly large amount of permanganate would be necessary. I am, &c.

London, October 10. JOHN MUTER.

COMMUNICATIONS have been received from—

Dr. COUSINS; Mr. J. D. JEFFERY; Mr. JOHN LENEY; Dr. GARRETT; Dr. LAPRAIK; Dr. LUDLOW; F.R.C.S.; Mr. HORNIBROOK; A LATE STAFF-ASSISTANT-SURGEON; Mr. BROOM; Dr. ANDERSON; Mr. THOMAS R. FRASER; Mr. HARRY LEACH; Dr. SHEPHERD; Dr. DIVERS; Dr. COTTON; Dr. DUCKWORTH; Dr. BLANDFORD; Dr N. EVANS; Mr. E. BELLAMY; Dr. MOXON; Dr. PEACOCK; Dr. BALLARD; Mr. F. H. MARSH; Dr. HUGHLINGS JACKSON; Mr. J. CHATTO.

BOOK RECEIVED—

Frankland's Lecture Notes for Chemical Students.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 13, 1866.

BIRTHS.

Births of Boys, 1052; Girls, 1021; Total, 2073.
Average of 10 corresponding weeks, 1856-65, 1777·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	661	692	1353
Average of the ten years 1856-65	570·8	540·1	1110·9
Average corrected to increased population..	..	..	1222
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	4	4	3	3	1	2	8	30
North ..	618,210	6	5	5	2	10	18	3	38
Central	378,058	2	3	11	—	4	4	5	39
East ..	571,158	6	2	6	—	5	9	17	65
South ..	773,175	6	7	11	—	7	11	14	35
Total ..	2,803,989	24	21	36	5	27	44	47	207

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·998 in.
Mean temperature	52·4
Highest point of thermometer	66·0
Lowest point of thermometer	35·6
Mean dew-point temperature	48·6
General direction of wind	N.E.
Whole amount of rain in the week	0·00

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 13, 1866, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending Oct. 13.	Deaths.		Temperature of Air (Fahr.			Rain Fall.	
				Corrected Average Weekly Number.*	Registered during the week ending Oct. 13.	Highest during the Week.	Lowest during the Week.	Weekly Mean of the Mean Daily Values.	In Inches.	In Tons per Acre.
London (Metropolis)	3067536	39 3	2073	1460	1353	66 0	35 6	52·4	0·00	0
Bristol (City) . .	163680	34·9	116	73	‡44	61·8	46·5	51·8	0·01	1
Birmingham (Boro')	335798	42·9	264	163	131	59·9	44·0	51·2	0·00	0
Liverpool (Borough)	484337	94·8	342	281	358	58·3	46·0	52·3	0·04	4
Manchester (City) .	358855	80·0	265	203	‡175	61 7	35·0	46·6	0·44	44
Salford (Borough) .	112904	21·8	92	57	61	63·5	37·3	48·8	0·40	40
Sheffield (Borough) .	218257	9·6	144	115	80	58·6	42·0	49·2	0·50	51
Leeds (Borough) .	228187	10·6	151	116	130	62·5	42·3	50·6	0·36	36
Hull (Borough) .	105233	29·5	67	49	50	..	..	..	..	..
Nweastl-on-Tyne, do.	122277	22 0	78	65	82	57·0	45·0	50·7	0·01	1
Edinburgh (City) .	175128	39·6	106	84	82	58·7	41·0	49·2	0·10	10
Glasgow (City). .	432265	85·4	319	252	221	56·8	41·3	48·5	0·19	19
Dublin (City and some suburbs) ..	318437	32·7	199	†156	232	62·3	37·6	50·2	0·36	36
Total of 13 large Towns . . .	6122894	34·4	4216	3014	2999	66 0	35·0	50·1	0·20	20
	(1863)				Week ending Sept. 29.	Week ending Sept. 29.				
Vienna (City) . .	560000	..	..	..	..	..	..	§ 66·4	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·998 in. The reading decreased from 30 35 in. on Sunday to 29 76 in. on Saturday.

The general direction of the wind was N.E.

* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 57·9°.

APPOINTMENTS FOR THE WEEK.

October 20. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p m.

METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH, 7½ p.m. Meeting.

22. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

23. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

24. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

HUNTERIAN SOCIETY, 8 p.m. Mr. Bryant, "The Value of a Retracted Nipple in the Diagnosis of Diseases of the Breast."

25. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

26. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

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GLUTEN BREAD and CHOCOLATE for DIABETES and DEBILITY.
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See Pharmaceutical Journal of May 1, 1856.

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THE PANCREATIC EMULSION,

A NEW REMEDIAL AGENT.

Originated by **Dr. DOBELL,** Physician to the Royal Infirmary for Diseases of the Chest.

Vide The Lancet, *Nov.* 11*th* and 18*th*.—"A third report of cases of consumption treated with Pancreatic Emulsion at the Royal Infirmary for Diseases of the Chest."

THE IMPORTANCE OF PANCREATIC EMULSIONS of Solid Fat over Cod-liver Oil, in the treatment of Tuberculosis, must be as great as that of supplying a plant with good soil instead of putting it into water."—Page 50. "On Tuberculosis," by Horace Dobell, M.D.

This Preparation is now made on an extensive scale, and the Price is therefore considerably Reduced.

N.B.—The TRUE PANCREATIC EMULSION has an acid reaction, and is readily miscible with water or milk.
Preparations in IMITATION of it have an alkaline reaction, and are not miscible with water or milk.

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CHEMISTS TO HER MAJESTY THE QUEEN, HIS ROYAL HIGHNESS THE PRINCE OF WALES, HIS IMPERIAL MAJESTY NAPOLEON THE THIRD, AND HIS MAJESTY THE KING OF THE BELGIANS.

ORIGINAL LECTURES.

LECTURES ON CATARACT,

AND THE

MODERN OPERATIONS FOR ITS TREATMENT.

DELIVERED AT
King's College, London,
DURING THE SUMMER SESSION, 1866,

By J. SOELBERG WELLS,
Professor of Ophthalmology in King's College, and Ophthalmic Surgeon to King's College Hospital.

LECTURE I.

By the general term "cataract" is understood an opacity situated in the crystalline lens: to such only should it be applied. When the opacity is in the capsule of the lens, it is called "capsular cataract." When both the capsule and lens are involved, it is designated "capsulo-lenticular cataract." The spurious cataract of old authors, which was the name given to deposits of lymph in the pupil, should be altogether abolished.

There is considerable difficulty in classifying the different forms of cataract in such a manner that their distinctive features shall be easily recognised and remembered. Not only are the minor varieties very numerous, but some of them do not present any marked characteristics, so that their description often proves confusing and unintelligible to the student. For this reason, and also because my time will not permit me to enter into a description of all the different kinds of cataract which may be met with, I shall only call your attention to those forms which are most frequently seen in practice.

I think it most practical to divide lenticular cataracts into two principal classes—1. The cortical, or soft cataract; 2. The nuclear, or hard cataract. The former is the most frequent kind of congenital cataract, and is met with in various forms up to the age of 30 or 35, and is chiefly characterised by the fact that although the whole lens may be involved in the process, there is no hard nucleus. The nuclear cataract occurs generally after the age of 35 or 40, and is distinguished by the presence of a more or less large, yellow, hard nucleus. I am well aware that so general a division is open to the objection that exceptional cases are not unfrequently met with, so that all varieties cannot be embraced within it. Yet in a practical point of view I believe it to be the best, as it enables us to lay down broad rules as to the modes of operation to be selected. For instance, the cortical cataract may be operated upon by division with the needle, by suction, or by linear extraction; whereas the nuclear cataract, on account of the presence of a hard nucleus, demands extraction either through a corneal flap, or by the assistance of some form of traction instrument.

But there is another form of cataract which also requires a special description, as, on account of its peculiar structure, it may often be best treated by an operation which does not interfere with the lens itself. I mean the lamellar or zonular cataract. I shall, therefore, divide cataracts into three classes—I. The lamellar cataract. II. The cortical. III. The nuclear. Cataracts produced by injuries to the lens, and opacities in the capsule, will be considered under the heads of "Traumatic Cataract" and "Capsular Cataract."

Formerly, much attention was paid to the symptoms which distinguished cataract from glaucoma and amaurosis. But since the discovery of the ophthalmoscope, these diseases could not be mistaken for cataract, except through the grossest ignorance or carelessness.

A fully formed, mature cataract may be at once recognised even with the naked eye. The pupil is no longer dark and clear, but is occupied by a whitish, opalescent body, which lies close behind it. It is different, however, when the affection is incipient and but slightly advanced, more especially when the opacity commences at the edge of the lens, for it may then be easily overlooked except the eye is carefully examined with the ophthalmoscope and the oblique illumination. In elderly persons complaining somewhat of dimness of sight I strongly advise you to examine the condition of the lens, even although they may apparently be only suffering from presbyopia, and are able to read the smallest print with suitable convex glasses; for amongst the aged cataract is most common, and often commences at the very edge of the lens in the form of small spicular opacities, which might easily escape detection. Wherever you suspect incipient cataract, the pupil should be dilated by a weak solution of atropine, and the lens examined with the ophthalmoscope and the oblique illumination. If there is any objection to dilating the pupil, you may obtain a very fair view, even of the margin of the lens, by directing the patient to turn his eye to one side and then looking very slantingly behind the iris.

But you must be on your guard against mistaking the physiological changes which occur in the lens in old age for commencing cataract. These changes consist in a thickening and consolidation of the lens substance, especially of the nucleus, which assumes a yellow tint. If this physiological cloudiness is very marked, it might easily be mistaken for incipient cataract. The chief distinctive features are, that in the former case the sight is perfect (any existing presbyopia being corrected by suitable glasses), the opacity remains absolutely or almost entirely stationary for a very long period, and the cloudiness is not observable with the ophthalmoscope, although perhaps very evident with the oblique illumination.

The catoptric test for the diagnosis of cataract has fallen into complete disuse since the discovery of the ophthalmoscope and the introduction of the oblique illumination.

The examination with the oblique illumination is to be thus conducted:—A lamp being placed somewhat in front and to one side of the patient, at a distance of from two feet to two feet and a half, and on a level with his eye, the light is concentrated upon the crystalline lens by a strong bi-convex lens of from an inch and a half to two inches focus. The observer's eye is then to be placed on one side of the patient, so as to catch the rays reflected from the eye of the latter. By shifting the cone of light from one portion of the crystalline to another, we may rapidly, yet thoroughly, examine its whole expanse and detect the slightest opacity. In order to gain a larger image, we may use another lens as a magnifier. Opacities of the lens will appear by the oblique illumination of a light grey or whitish colour. The slighter forms are best seen by only a moderate amount of light.

In employing the ophthalmoscope for the diagnosis of cataract, the mirror alone is to be used (without any lens in front). To gain a larger image, a convex lens may be placed behind the mirror. The illumination is to be weak. Incipient cortical cataract, composed of centripetal stripes, will appear in the form of well-defined dark streaks upon a red background. Punctiform opacities also appear as dark spots, but are often not so observable as with the oblique illumination.

I will now briefly describe the characteristic appearances presented by the different forms of cataract.

I. *The Lamellar or Zonular Cataract* (Schichtstaar of Von Graefe).—This is frequently met with in childhood, being either congenital or developed in early infancy. But as it often does not materially impair vision, it may escape detection until much later in life. Its appearance is very characteristic, and its diagnosis easy. On dilating the pupil with atropine, we observe an opacity of the lens measuring from 2—3½ lines in diameter. It is quite uniform from the periphery to the centre, and is sharply defined against the transparent margin of the lens. The cataract consists, in short, of a layer of opaque lens substance lying between the nucleus and a transparent portion of the cortical substance. Hence it has been designated Schichtstaar, or lamellar cataract. The nucleus of the lens is transparent, which is proved by the uniform character of the opacity, which is not more dense in the centre than at the periphery, and by the relatively fair sight which such patients enjoy even when the pupil is not dilated. Moreover, with the ophthalmoscope, a reddish-brown reflex shines through the central portion of the lens.

With the oblique illumination, the opacity appears of a uniform light grey colour, sharply defined, and surrounded by a more or less broad margin of transparent cortical substance. It will now also be seen that there is a clear portion of cortical substance between the opacity and the anterior capsule. In the centre of the opacity may often be remarked one or more small white dots. With the ophthalmoscope, the opacity has the appearance of a well-defined dark disc, the centre of which affords a reddish-brown reflex. If the margin of the cortical substance be clear, the details of the fundus will be visible through it. If there are opacities in it, they will appear as fine dark stripes or specks upon a red background. Some of the varieties of lamellar cataract are very pretty. For instance, I have seen cases in which little stripes ran from the opacity into the cortex, their extremities being studded with small pearl-like opacities. Lamellar cataract is either stationary or very slowly progressive. It is therefore of consequence, before deciding upon an operation, to determine whether the cataract be progressive or not. In deciding this we must be chiefly guided by the condition of the marginal cortical substance. If this is perfectly clear and transparent, the cataract is stationary; if it is diffusely clouded, or presents punctiform or striped opacities, it is progressive. Von Graefe thinks that its progress is most rapid when the stripes are broad and the interjacent lenticular substance is somewhat opaque and studded with coarse specks. If the opacities consist only of very fine dots, or a few delicate narrow stripes, the progress is very slow.

According to Von Graefe, lamellar cataract may also be formed later in life in dislocated lenses, and after iritis.

Vision may be relatively good if the opacity is not dense; for instance, large print may be read. But the sight is always improved by dilatation of the pupil with atropine, for this permits the rays from the object to pass through the clear marginal portion of the lens. I have seen cases in which the difference in the sight, before and after dilatation of the pupil, has been most marked; so that persons who, prior to it, could with difficulty decipher large letters, were afterwards able to read the smallest print. The accompanying diagrams (Figs. 1 and 2) will explain this. Fig. 1, *a*, the undilated pupil occupied by the opacity (*b*) which extends beneath the iris as far as the dotted line *c*, where the transparent margin (*d*) commences. As the latter is completely covered by the iris, the rays can only pass through the central opaque portion—hence the indistinctness of sight. But on dilatation of the pupil (Fig. 2) the transparent margin (*d*) is exposed, and the rays can now pass through it to the retina. The solution of atropine to be used for dilating the pupil should be extremely weak (gr. j. to 8 or 12 ounces of water), so that we may obtain complete dilatation of the pupil without any paralysis of the accommodation. If this point is not attended to, we may easily be misled by the fact of the patient's complaining that after the dilatation the sight is dim and misty, which may be due simply to the fact that the accommodation is paralysed by the atropine, which was too strong.

FIG. 1.

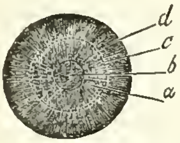
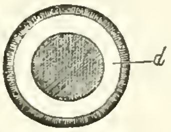


FIG. 2.



Persons suffering from lamellar cataract are often supposed to be shortsighted, as they hold small objects (a book, for instance) very close to the eye, in order to gain larger retinal images. In time, however, this constant accommodation for very near objects may really give rise to myopia of even a considerable degree.

In practice, it is important to remember two facts with regard to lamellar cataract—1. That the opacity is surrounded by a more or less clear margin of cortical substance, which, if it be sufficiently wide and transparent, may admit of excellent sight when the pupil is dilated. 2. That the greater portion of the lens is transparent and in a normal condition, and will therefore swell up far more than a cataractous lens, after laceration of the capsule, and the admission of the aqueous humour, as, for instance, in a needle operation.

II. *Cortical Cataract.*—The opacity generally commences at the margin. Small greyish-white stripes are observed running towards the centre of the lens. At the very commencement, the interjacent lens substance is either perfectly transparent or but sparsely studded with little opaque dots. Soon, however, the cloudiness becomes more general and diffuse, until the whole lens is involved. Sometimes, the stripes may be observed both on the anterior and posterior cortical substance, the lens between them being transparent. The difference in their position may be easily recognised with the oblique illumination. The anterior stripes are close behind the pupil, whereas the others are far back in the eye, and appear concave, the concavity being turned towards the observer.

On examining an incipient cortical cataract with the ophthalmoscope, we notice dark well-defined stripes intersecting the red background, and radiating from the margin of the lens to the centre. Between them, at the very edge of the lens, there is often a fringe of short stunted stripes. Punctiform opacities, which, with the oblique illumination, appeared of a grey colour, now look like little dark dots strewn about on and between the stripes.

In rare instances, the opacity, instead of being striped, consists of innumerable little dots with clear portions of lens substance between them. With the naked eye it looks like a diffuse uniform opacity.

The following symptoms are characteristic of a fully formed, mature cortical cataract. The opacity is of a grey or bluish-white colour, which increases somewhat in density towards the centre. On account of this white tint the movements of the pupil appear peculiarly marked and distinct. If the volume of the lens be increased through the imbibition of fluid, the iris may be slightly arched forward, and the pupil somewhat dilated and sluggish. The stripes are broad, white, and often very opalescent, like mother of pearl. There is no admixture of yellow in the colour of the opacity, which proves at once that the nucleus is not hard. With the oblique illumination, we notice that the outer layers of the cortical substance, although opaque, are somewhat translucent, so that we can see through them into the deeper layers. This is of importance with regard to the consistence, for in the very soft or the fluid cataract the dense white opacity reaches quite up to the capsule, and is not at all diaphanous.

Von Graefe (a) calls attention to a peculiar form which is sometimes met with in early infancy. Its diagnosis is of special importance, as it is very frequently complicated with lesions of the deeper structures of the eyeball. It commences as a milky-white cloud in the outer portions of the cortical substance, and soon reaches quite up to the capsule. The opacity is either completely homogeneous, or studded with small white dots which reach close up to the capsule. The lens, which is at first somewhat increased in volume, soon diminishes again in size on account of the absorption of its fluid constituents. In cases, therefore, in which the volume of the lens is much diminished, and considerable opacities are lodged in the central portions of the anterior capsule, the degree of sight and the state of the field of vision should always be carefully tested prior to an operation, in order that the existence of any deep-seated lesion may be detected.

The progress of cortical cataract is generally rapid, more especially in children, in whom it may become mature in the course of a few weeks or months. In adults it may increase but slowly, particularly if the stripes are narrow and few in number. Broad stripes and large flocculent opacities indicate a rapid progress. This form is not unfrequently confined to one eye. As cataract is not of very common occurrence even before the age of 50, we should always ascertain whether it may not have been produced by some special cause, such as injury to the lens or internal inflammation of the eye. If both eyes are affected, the urine should be tested for the presence of sugar, as diabetes is a not unfrequent cause of cataract.

Cortical cataract is always soft. In children it may be almost fluid. Although its consistence increases with advancing years, it is generally up to the age of 30 or 35 free from a hardish nucleus, and sufficiently pulpy to be readily removed by linear extraction.

When a mature cortical cataract has existed for some time, it may undergo certain retrogressive changes. Its fluid and fatty constituents may become absorbed, and the cortical substance more dry and consolidated. As absorption proceeds, the cataract shrivels up, the anterior capsule becomes wrinkled and recedes from the pupil, so that a more or less deep posterior chamber is formed.

The capsule sometimes looks like a little wrinkled bag, containing small white chalky chips of lens. In very young subjects the greater portion of the lens may become absorbed, so that finally there is nothing left but a small white shrivelled disc, of a hard chalky consistence. This is the chalky or siliculose cataract of old writers. Although this form may occur simply as the result of the absorption of the softer constituents of an ordinary cataract, it is still more frequently met with in deep-seated inflammatory lesions of the eyeball, as, for instance, in the later stages of irido-choroiditis. But the fluid constituents, instead of becoming absorbed, may increase, the structure of the lens breaking down, so that the cataract may become extremely soft or even fluid, which is especially the case in children. In adults, more particularly after the age of 30, the harder nucleus sets a limit to the process of softening, which can then only affect the cortex and not the whole lens. Now, if in such cases the cortical substance becomes fluid, the hard yellow nucleus will sink down in it, and thus the so-called "Morgagnian cataract" will be produced.

(a) *Archiv f. Ophth.*, i., 2.

The chief characteristics of fluid cataract are, that the opacity is of a milky-white or dirty grey colour, that it is homogeneous, and that it reaches quite up to the anterior capsule, on the inner side of which are often observed small white dots. There are no opalescent stripes, and the anterior layers of the cortex are not translucent.

III. *The Nuclear or Hard Senile Cataract.*—It has been already stated that after the age of 30-35 the lens undergoes certain physiological changes. The nuclear portion becomes firmer and more consolidated, and assumes a yellow tint. This condition may exist for many years without any marked increase, without deterioration of sight, or without any opacity being observable with the ophthalmoscope; but the division between the physiological and pathological consolidation and cloudiness is only one of degree. When these senile changes increase to such an extent that the sight is perceptibly impaired, and when the opacity of the lens is progressive and becomes marked even by transmitted light, I think that we must then no longer consider it as a physiological condition, but as commencing nuclear cataract. In the latter case the nucleus presents a marked yellow or yellowish-brown tinge, and is easily distinguishable from the cortical substance, which may remain clear, except perhaps in the immediate vicinity of the nucleus. With the oblique illumination the cataract will appear as a round yellow opacity, situated some distance behind the pupil. The anterior layers of the cortical substance are translucent and transparent, so that we can see through them into the centre of the lens, and the pupil throws a deep shadow upon the surface of the opacity. The nuclear cataract may be very dark, even black in colour, which is due to the imbibition of hæmatine. The black cataract may easily be overlooked if the eye is not examined with the ophthalmoscope or the oblique illumination.

Pure nuclear cataract is but rarely met with. In the great majority of cases of senile cataract the cortex is also affected, so that we have in truth a mixed form—viz., a hard yellow nucleus with a more or less firm cortical substance. I think it well, however, to retain the name of "nuclear" cataract for the senile form, as indicating the presence of a hardish nucleus.

Senile cataract generally commences at the periphery of the lens in the form of small centripetal stripes, between which we may often notice smaller and shorter spikes situated at the very margin of the lens. The stripes may run along the anterior or posterior surface of the lens, the interjacent substance being clear. The opacity gradually becomes more general, and involves more and more the centre of the lens; the intervals between the stripes become clouded and perhaps studded with small opaque dots or patches. As the cataract progresses the distinction between the nucleus and the cortex becomes more marked, the former showing a distinct yellow tint.

Sometimes the stripes commence in the posterior cortex, extending from the margin to the posterior pole of the lens, where they coalesce, the opacity thus assuming a stellate appearance. The intervals between the stripes may remain transparent for some time, as also the nuclear portion of the lens, so that we can see quite to the back of the latter. The view of the background of the eye is of course obscured in the centre by the confluence of the stripes, but if the segments between them are clear, we may yet at the periphery distinguish the details of the fundus; such forms are often extremely slow in their progress. When opacities commence at the posterior pole of the lens, either in the form of centripetal stripes or of circumscribed spots or patches, the general condition of the eye should be carefully examined, as this form of cataract (posterior polar cataract) not unfrequently shows itself in the later stages of sclerotico-choroiditis posterior, retinitis pigmentosa, detachment of the retina, and other deep-seated lesions. The co-existence of any such complication would, of course, materially affect our prognosis of the result of an operation.

We occasionally meet with incipient cataracts in which there is a marked difference between the amount of the opacity, according to whether the oblique illumination or the ophthalmoscope be used for examination. On account of the great opalescence of the stripes, it is very apparent to the naked eye and with the oblique illumination; yet, on testing the vision, we find it surprisingly good, and with the ophthalmoscope we can, with a little management, clearly distinguish the details of the fundus. I have noticed this peculiarity several times in myopic patients; the progress has generally been very slow.

ORIGINAL COMMUNICATIONS.

RADICAL CURE OF HERNIA.

By JOSEPH FAYRER, M.D., F.R.S.E.,
Professor of Surgery in the Calcutta Medical College, and First Surgeon to the Medical College Hospital.

I have not yet met with any account of the post-mortem appearances in a case where a successful operation for the radical cure of inguinal hernia has been performed, nor am I aware that there is any such case on record. Having recently had the opportunity of examining the body of a man who died from the results of an accident three months and seven days after undergoing this operation, I made a careful examination of the parts, and now have the satisfaction of recording the evidence of complete success:—

J. B., aged 20, a very healthy French sailor, of short stature but extraordinary muscular development and power, was admitted into my ward in the Medical College Hospital on the 28th December, 1865, with an inguinal hernia on the right side. It descended into the scrotum when he stood up or made any effort. He said that the hernia was caused by lifting a heavy spar on board ship about a month prior to admission. When he was engaged in raising the spar, he experienced a sensation of something having given way. A tumour appeared in the site of the rupture, which subsided and reappeared. The erect posture, or the exertion of walking, invariably caused the descent of the gut into the scrotum.

On January 1, 1866, the operation for the radical cure of inguinal hernia was performed with the wooden plug and ligatures. On the 4th, at 8 a.m., free suppuration having occurred, the plug was withdrawn. There was no constitutional disturbance, and on the 16th it was reported that he was in all respects doing well. The wound had nearly healed, and, with a pad and spica bandage applied, he was able to walk about. The invagination, up to this period, had remained firmly in the canal. On the 24th he was put to a variety of tests, such as lifting weights, jumping, climbing up a pole, but the hernia did not return. On the 29th he was discharged apparently cured, after remaining under treatment for about twenty-nine days.

I lost sight of him from this date, but once meeting him in the street, some time after his discharge from Hospital, he said he was quite cured, and free from any signs of rupture.

On April 27, 1866, almost three months after his leaving my wards, he was readmitted in a sad state of drunkenness, and much injured by a fall from a house. He had fractured the left angle of the lower jaw, and frightfully bruised his head, face, and body generally. The right femur was dislocated into the ischiatic notch, and the gluteal region, as well as the whole of the limb, was much contused and swollen. I observed at the time, in his condition of semi-consciousness, when struggling from pains and restlessness, that the hernia did not protrude. There was no trace of the invagination left. A small cicatrix in the abdominal wall, and another in the scrotum, were the sole indications of the passage of the needle.

The following day, when he had somewhat recovered from the intoxication and shock of the accident, I reduced the hip dislocation. It was evident that there had been much laceration and injury of the soft parts, for the head of the bone could not be retained in position. Pyæmic symptoms set in, and a large abscess formed on the anterior and upper part of the chest. The gluteal region, thigh, and leg passed into a state of diffused suppuration, and the whole limb became infiltrated with pus. Pyæmia was rapidly developed, and he expired of exhaustion on the night of May 7.

Post-mortem examination eight hours after death, or on the morning of May 8, revealed extraordinary mischief. The limb, pelvis, hip-joint, and thorax were more or less infiltrated with pus. The head of the femur was dislocated from the acetabulum; the muscles and ligaments were much lacerated. The left angle of the lower jaw was fractured across. On opening the head, a clot as large as a hazel-nut was found in the grey matter of the superior and posterior portion of the right cerebral hemisphere. As there was no contusion over the site of this clot, it was conjectured that it might have resulted from *contrecoup* of the violence which broke the angle of the jaw on the opposite side. I examined the seat of the former hernia, and of the operation by which it had been cured, most carefully, and the result was most satisfactory; for it was clearly proved that the cure had been radical and complete. On the integument of the abdominal wall, just over the internal ring, there was a small, slightly depressed, but perfect, and quite movable cicatrix. This indicated the point where the needle had emerged and the ligatures had been tied. There was a similar cicatrix on the scrotum, indicating the spot at which the invagination had been formed and the needle entered. It is to be noted particularly that no trace of the invagination remained. On reflecting the integument, there was some slight adhesion and thickening of the areolar tissue and fascia where the needle had passed. The two layers of fascia covering the inguinal canal were found to be strong and well developed and slightly thickened at this point. The aponeurosis of the external oblique was then examined. The external abdominal ring was tolerably well defined; the cord was covered by a strongly developed intercolumnar fascia and cremaster, with the blending of the remains of the hernial sac; the cord and testicle were perfectly healthy; the margins of the external abdominal ring were perhaps not quite so clearly defined as in the natural state, but there was not much change. On slitting up the inguinal canal from towards the point of the hip, the tendon was found to be adherent to the internal oblique at a point corresponding to the track of the needle; the lower margin of the internal oblique and transversalis muscles were universally adherent to Poupart's ligament, and the cord seemed rather to pass through than under them; the connexions of the cremaster with these muscles appeared more distinct than usual. On turning down the abdominal wall to examine the internal ring from the inside, the usual depression was observed well marked; the peritoneum around the ring was thickened and firmly attached, sending a prolongation or infundibuliform process through it, which became blended with the cord. Doubtless this was the remains of the hernial sac. The opening was hermetically closed by firm and strong fibrinous bands of adhesion, which crossed it and became blended with the transversalis fascia. This was very strong; in short, the closure of the internal ring was so perfect that it was completely protected against the passage of anything through. The testicle and the component parts of the cord had not sustained any damage whatever; the epigastric artery was also uninjured.

Remarks.—The appearances in this case prove that it is not necessarily to the invagination that we must look for the occlusion of the peritoneal opening, but rather to changes in and about the aperture itself, or in the parts which pass through it. The internal abdominal ring in this case was found to be completely closed by organisation of inflammatory exudation, and by the consequent fusion of this with the peritoneum, transversalis fascia, and cord, into a comparatively dense tissue, which not only occluded the opening, but rendered it more firm and unyielding than in the natural state. It was certainly remarkable how very little the natural relative position and appearance of the parts were otherwise altered. Not a trace of invagination remained, and beyond the complete occlusion of the internal abdominal ring, and the prolongation of the peritoneum in the form of an infundibuliform process into the inguinal, where it terminated and became blended with the tissues of the cord near the external ring, there was little or nothing to mark any difference from the natural condition of the parts. It is evident that the needle, in perforating the abdominal wall from the apex of the invagination, must have passed through, or underneath, the margin of the internal ring, and that in all probability the peritoneal sac was perforated, unless indeed the sac had been pushed aside by the invagination. Be that as it may, the result has been the formation of adhesions which have so effectually shut up the ring as to render a recurrence of hernia well nigh impossible. The history of the poor fellow's case proves that this was really the fact, for he was exposed to all possible causes that might have brought back the hernia had the cure not been completely accomplished. He lived a life of uninterrupted debauchery, and exposed to all kinds of physical privation. He wore no truss, though provided with one on leaving the Hospital. He fell from a house, and neither the muscular exertion consequent upon this, nor his struggles during intoxication, and the subsequent suffering he underwent for the reduction of the dislocation of the head of the femur, sufficed to cause a recurrence of the hernia. I observed on his re-admission that though he rolled about and struggled much in bed, there was not the slightest tendency to a return of the hernia; and when he recovered from the intoxication his constant request was that I would cure him of this accident as thoroughly as I had done of the hernia. It is evident from this case that an essential condition of success is to invaginate the portion of scrotum so effectually that when the needle perforates the abdominal wall it shall pass close to, if not through, the internal abdominal ring. As noted in the examination after death, the internal epigastric artery seemed to have escaped, notwithstanding the proximity of the needle to it; and I think that even if it had been wounded there would not have been much additional danger, as the immediate tightening of the ligature would have the effect of preventing hæmorrhage. I have already, in the *Medical Times and Gazette* (p. 193, August 19, 1865), described the operation and the instruments with which I perform it.

Calcutta.

PULMONARY TUBERCULOSIS COMPLICATED AND OBSCURED BY ŒDEMA OF THE GLOTTIS—TRACHEOTOMY—VALUE OF THERMOMETRIC OBSERVATION.

By FREDERIC BATEMAN, M.D.,
Physician to the Norfolk and Norwich Hospital.

As thermometric observation in the investigation of disease is just now engaging the attention of the Profession, the following case may be of some little value as tending to elucidate the subject; the clinical history of the patient also presents some points of interest to the laryngeal specialist.

James E., a bricklayer, aged 32, was admitted under my care in the Norfolk and Norwich Hospital on November 18, 1865, with the following antecedent history. He has not felt quite well for two years; twelve months ago he expectorated a teaspoonful of blood, and has had slight cough with scanty expectoration and dyspnœa for six months, but has been able to do his work until within the last fortnight, when he was obliged to discontinue it in consequence of the increase of dyspnœa. His father died of heart disease, and his mother of phthisis.

On admission the first and principal symptom that attracts attention is a stridulous noise in his breathing, as if something was pressing upon the trachea or large bronchi. There is tenderness on pressure over the cricoid cartilage and upper rings of the trachea, and the patient speaks only in a faint whisper, the aphonia being of five months' duration. There is no evidence of œsophageal obstruction, but there is an occasional feeling of soreness during eating at the back of the trachea.

The physical symptoms observable in the chest are as follows:—There is no abnormal prominence to be seen, pulsation felt, or bruit heard. The expansion is deficient on both sides, both apices, however, being fairly resonant on percussion; there is no vesicular breathing, and it is evident that very little air can enter the lungs, but a loud blowing noise is heard, as if transmitted from the larynx and trachea through a consolidated or obstructed lung. The digestive functions are healthy; the urine is loaded with lithates, but its analysis reveals no other symptom worthy of notice. He has no numbness down either arm, but the right pupil contracts very sluggishly. A laryngoscopic examination discloses an œdematous condition of the glottis; there is no appearance of ulceration, and the œdematous state of the aryteno-epiglottidean folds and of the superior thyro-arytenoid ligaments obscures the true vocal cords. The temperature of the body, as carefully noted for several days in succession after admission, varied from $101\frac{2}{5}$ to $101\frac{4}{5}$.

From a careful analysis of these symptoms it will be seen that the elements of an exact diagnosis could scarcely be said to exist. It was evident that one cause of his distress was the disease of the larynx, but a variety of opinions were expressed by the numerous Medical friends who were interested in this comparatively rare case, as to the disease with which the laryngeal disorder might be complicated, and indeed aneurism and mediastinal tumour were both suggested as a possible solution of the difficulty. Although, from the free ingress of air into the lungs being prevented, stethoscopic examination gave a negative evidence, still the hereditary predisposition and the continued high temperature led me to infer that in all probability the signs of pulmonary tuberculosis would show themselves if the mechanical impediment to the entrance of air into the lungs could be removed.

Daily details of the treatment of this case would be tedious; suffice it to say that my attention was directed to the condition of the larynx, for which I prescribed iodide of potassium and other alteratives, with counter-irritation to the nape of the neck and inhalation of vapour impregnated with tincture of conium. These measures not affording the desired relief, the inhalation of tannin was tried, according to Professor Trosseau's suggestion, and Luer's laryngeal pulveriser was procured from Paris, by means of which the tannin solution was applied in a fine spray direct to the part affected. This appeared to do good at first, but eventually disappointed my expectation. I then tried the effect of a solution of nitrate of silver (ʒss. ad ℥j.) applied by Dr. Gibb's laryngeal brush; this afforded some relief for a time, by modifying the condition of the parts and lessening the œdema, but I was obliged to discontinue it, as the relief obtained in one way was more than counterbalanced by the irritation caused by the remedy. Feeling satisfied that further Medical treatment would be nugatory, and the dyspnœa having alarmingly increased, I requested the assistance of my Surgical colleague, Mr. Crosse, who performed tracheotomy on January 15, two months after admission. The result of the operation was an immediate cessation of the stridulous breathing and of the distress which accompanied it, but the mechanical impediment to the ingress of air being removed, the stethoscope now revealed moist crepitation at left apex, and also at the back of the same lung, and the patient died with all the symptoms of pulmonary tuberculosis about seven weeks after the operation, no opportunity being afforded for a post-mortem examination, in consequence of his friends removing him from the Hospital a few days before his death.

There are several interesting features in this case, time only allowing me to allude to one—that is, the testimony it affords to the value of thermometric observation in cases where, from mechanical obstruction to the ingress of air into the lungs, the physical signs of phthisis are obscured.

Although the use of the thermometer as a means of diagnosis was employed as far back as the middle of the last century, it had fallen into comparative desuetude, until the attention of the Profession was called to its value by Professor Wunderlich, in a paper published in the *Medical Times and Gazette* for June, 1858, and quite recently Dr. Sidney Ringer has published a valuable treatise on the temperature of the body in tuberculosis, in which he gives the result of his experience in a series of carefully recorded cases. Without wishing to exaggerate the importance of this revived means of investigation, I think the case I have reported, *quantum valeat*, tends to establish the fact that thermometric observation may, in certain obscure forms of disease, prove a most valuable aid in arriving at a correct and unassailable diagnosis.

Norwich.

A NURSE ATTACKED WITH GANGRENOUS ERYSIPELAS AFTER ATTENDING TWO CASES OF MALIGNANT DIPHTHERIA.

By JOHN WARD COUSINS, M.D.Lond., F.R.C.S.,
Surgeon to the Royal Portsmouth Hospital.

M. O., aged 62, a widow of good constitution and spare habit, nursed two children during the month of January, 1863, who died of malignant diphtheria. For some days she was in constant attendance upon them, and the room was so dreadfully offensive that she completely lost her appetite, and often complained of sickness. Directly after leaving the house she was seized with severe shivering and great depression of the whole system, and the next day some tenderness and swelling commenced in the left submaxillary region. On the 30th the patient came under my care, and she was then suffering from erysipelatous inflammation of the left side of the neck, extending upwards to the lower maxilla, and downwards to the sternum and clavicle. The throat presented no appearance of inflammation; the febrile disturbance was moderate, and the pulse quick and feeble. During the next three or four days the gravity of the disorder rapidly manifested itself. The inflammation now covered the whole front of the chest, as far down as the scrobiculus cordis, and it was attended with severe pain and brawny swelling. Notwithstanding early and free incision, the diseased surface rapidly became dusky, and sloughing of the skin followed in large patches. Her danger was now imminent, and the constitutional depression extreme. The treatment consisted in large doses of bark with an occasional opiate to relieve the pain and procure sleep; at the same time stimulants and fluid nourishment were freely and persistently administered. In the course of a few days large sloughs of cellular tissue separated, healthy suppuration ensued, and the vital powers remarkably rallied. The large wounds which remained contracted very slowly, and several sinuses had to be divided, but, after a few months, the whole surface was soundly cicatrised, and her health completely restored.

Remarks.—The germs of miasmatic diseases are often intimately associated, and appear to be propagated under very similar conditions, and the human system, when exposed to their influence, may at the same moment be capable of resisting one, and yet be ready to receive and develope another. To attempt to explain the phenomena of this case by the theory that diphtheria and erysipelas are interchangeable diseases would be wholly unphilosophical. It is a fixed and certain law with all specific communicable diseases that, having produced their own peculiar effect upon the system, which is invariably attended by a definite set of symptoms and a constant series of morbid lesions, they can only propagate their kind by the reproduction of their own specific poison. Thus diphtheria can only generate diphtheria, scarlet fever reproduce scarlet fever, and small-pox develope small-pox; yet the presence of one of these diseases is by no means antagonistic to the development of another. It is now clearly established that contagious diseases can concur in the same subject—for example, measles and erysipelas, scarlet fever and erysipelas, scarlet fever and small pox; and therefore a compound disorder of diphtheria and erysipelas would certainly have followed in my case if both poisons had found materials for development within the system. The fact, however, that there was no complication of symptoms present clearly proves that the disorder was not a compound of these two diseases. Whenever contagious diseases coexist together, each affection can be seen through the other, or, in other words, the prominent and characteristic symptoms of both are more or less manifest. The phenomena could all be referred to cellulo-cutaneous erysipelas, and, apart from the history of the case, there was nothing present even to suggest the possibility of such a complication. The poison of erysipelas appears to be capable of generation under a great variety of outward conditions. How often it makes its appearance during the prevalence of other miasmatic diseases, such as puerperal fever, typhus, scarlet fever, and small-pox. The history of epidemics proves this association with other disorders; and it is certain that the atmospheric and local influences which are favourable to the development of one organic poison, are also favourable to the development of another. The specific material of erysipelas is moreover constantly evolved from the decomposing matter which infests crowded and ill-ventilated houses, and in an atmosphere loaded with the gaseous exhalations from the dead and the dying. It is very probable that my patient contracted the disease in this way, and that the virus of erysipelas was associated with the virus of diphtheria in the tainted air of the sick chamber; for it is evident that she must have been exposed within a very short period to the influence of two organic poisons, and that one had its specific effect upon the system while the other was efficiently resisted. Our daily experience constantly reminds us that individuals under exactly similar circumstances are affected very differently by contact with any specific communicable disease, and that one system is proof against the action of a poison, when, at the same time, another, apparently vigorous and healthy, is ready to receive and develope it; but my case points out that it is even possible for the human system to manifest a susceptibility to one specific disease, and at the same moment to possess a power of repelling another. Now the subtle forces within the organism which regulate these remarkable results are at present completely beyond our ken. We observe a power of resistance on the one hand, and a deficiency on the other; but they admit of no explanation, and we must receive them, like many of the other phenomena connected with miasmatic diseases, as ultimate pathological facts.

Sydney Infirmary.—In consequence of complaints having reached the Government in reference to inefficiency in the general arrangements of the above institution, a commission has been appointed to inquire into the present state of the establishment, and to report to the Government any recommendations that may occur to them for improving its efficiency. The Commission held its first meeting at the Colonial Secretary's Office on August 22.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

NEW TREATMENT OF CANCER.

THE MIDDLESEX HOSPITAL.

The ingenious method of treating cancer, which was originated by Dr. Broadbent, and communicated by him to the British Medical Association at the last annual meeting at Chester, has been employed on various occasions in the cancer wards of the Middlesex Hospital. We have already, in our report of the Pathological Society, and also p. 426, referred to Dr. Broadbent's plan. The full results of this new method cannot of course be yet stated; but, so far as they appear at present, we are glad to have the opportunity of publishing them. The principle of the treatment is that of injecting acetic acid into the cancerous tumour, upon which it appears to act chemically, while the morbid substance is alive, as we are accustomed to see it act when cancer-cells already dead are placed under the microscope. We are informed by Mr. Moore that he has not thought it right to resort to the use of the acid when extirpation of the tumour in the usual way has been advisable. The following cases, therefore, are such as either by the objection of the patient, or from the local condition of the disease, were not proper for the ordinary operations:—

RECURRENT CANCER OF THE BREAST—INJECTIONS OF ACETIC ACID.

(Under the care of Mr. MOORE.)

Ann W., aged 46, a slender, but healthy-looking person, single, and employed as a nurse, underwent the operation of removal of the right breast for cancer in February of the present year. The operator was Mr. Square, of Plymouth, and the operation was performed a few months only after the discovery of the disease. A small diseased spot of skin below the inner part of the scar was taken away on April 7.

Upon her recovery she came to reside near London, and in the course of the summer she was advised by Mr. Square to consult Mr. Moore respecting a small tumour which had grown in the axilla.

May 7. — The axillary tumour proved to be a small movable cancerous gland, lying low down on the thoracic side of the axilla. The scar was not perceptibly unhealthy; it was thin, and movable over the pectoral, and the adjoining surface was quite level, the entire mamma having been removed.

By May 28 a second gland had enlarged and become globular and hard. The glands were then taken away by Mr. Moore by the ordinary cutting operation, and the wound was sponged over with a strong solution of the chloride of zinc, after the method of Mr. De Morgan. The patient soon recovered, and went home.

On August 28 she returned, having four small cancerous nodules near and below the inner half of the scar in the mammary region. They were abruptly spherical and hard, and three of them were of the size of peas, subcutaneous and movable; the innermost was of twice that size, and was somewhat adherent to the skin and to the inner extremity of the scar.

September 5.—The integument having been frozen by Dr. Richardson's ether spray, the innermost and largest nodule, and another situated within half an inch of it, were pierced by the injection canula through a single aperture in the skin. About half a teaspoonful of acetic acid and water, of the strength of one part of the acid to three parts of water, was injected into and about the nodules.

16th.—Similar treatment was used for the third and fourth nodules, which were situated within an inch of one another, a little below the middle of the scar, and two inches from the first and second tumours. These last are now somewhat swollen, softer, and indistinct.

27th.—The inner two nodules and the œdema surrounding them have much diminished. Around the third and fourth tumours a swelling has formed, the outer part of which is soft, and which is altogether ten times as large as either tumour before injection.

October 1.—The first and second tumours are no longer distinguishable, having gradually dwindled away. The soft swelling around the third and fourth is a little smaller. A belladonna plaster was applied over the whole mammary region.

22nd.—The plaster was removed. There is no trace of the tumours which were first injected; the third, or the fourth, or both together, formed a globular firm swelling of twice the bulk of a cherrystone, surrounded by a little œdema. Though lessened in size since the application of the plaster, this swelling appears to contain a nucleus of solid growth considerably larger than before injection. It may therefore be necessary to inject it again.

CANCER IN THE FLOOR OF THE MOUTH AND IN THE SUBJACENT LYMPHATIC GLANDS—TREATMENT BY THE LIGATURE OF THE LINGUAL ARTERY AND DIVISION OF THE GUSTATORY NERVE, AND BY INJECTIONS OF ACETIC ACID.

[Cancer Department.]

(Under the care of Mr. MOORE.)

The following case will serve as an excellent illustration of what skilful and careful Surgery can do to relieve the pain and distress of cancerous affections when the disease cannot be removed by operation. We give the particulars of the case also partly as an expression of some of those views which Mr. Moore has recently put forward in reference to the pathology of cancer.

A middle-aged man, tall and slender, having a florid and healthy look, surprised us by showing a cancerous growth of considerable bulk on the floor of his mouth. His aspect was, Mr. Moore considered, a striking illustration of the healthy general condition of those who may be attacked by this disease, and his report of his previous health corresponded with his appearance.

The mouth was filled up to the level of the lower teeth by a solid mass of cancer entirely ulcerated. The tongue lay on it unaltered on its upper surface, tip, and sides, but much restricted in its movements by the adhesion of its inferior part to the firm growth beneath. On his attempting to lift the tongue, a deep chasm, all ulcerated, was seen, separating a portion of the disease connected with the tongue from that in the floor of the mouth. The gums of the lower jaw were swollen with deposit of cancer, both inside and outside, and the teeth, blackened and loose, appeared to be set in sockets of the morbid growth. The glands beneath the jaw formed a cluster of hard growths. There was much pain in the diseased parts, and in both temples, and the salivary glands were constantly filling the mouth with saliva, of which more than a pint and a half was spit up every day. Deglutition was very difficult, and little more than fluid food could be got down.

Mr. Moore told the man that, although the disease had gone on to a degree which was well nigh hopeless, he thought it possible to arrest its progress, and at any rate to relieve much of the pain and salivation which it produced. He accordingly began the treatment, October 18, by placing a ligature on the right lingual artery, and by dividing the right gustatory nerve. An attempt to secure the facial artery in the same small wound by which the lingual was reached, proved unsuccessful. Before the patient recovered from the chloroform sleep, some acetic acid, diluted with three parts of water, according to the plan proposed by Dr. Broadbent, was injected by about ten punctures into the cancerous mass beneath the tongue, and especially on the right side, as well as into the outer gum.

The result of the division of the gustatory nerve was immediate. The usual injection of morphia after the operation was not needed. The pain in the tongue and the temples was removed, and the salivation much lessened; and it was afterwards ascertained that there was absolute loss of sensation on the right half of the front of the tongue; the anæsthesia ended precisely at the mesial line. This effect of the division of the gustatory nerve was important, both as showing that the irritation propagated to the temple and salivary glands by the fifth nerve was not derived from the cancerous jaw, but from the area of the gustatory, and it justified the decision of practising the operation only on the right nerve, although the disease was not limited to that side of the mouth.

On the third and fourth days following the operations there arose pain in the neck, from swelling about the lower wound, and also behind the last molar tooth, where the nerve had been divided. From both causes swallowing became uneasy and difficult. There was, moreover, some inflammation of the front of the mouth, in consequence apparently of the numerous injections of acid which had been made.

On October 24 the swelling of the neck and the soreness in swallowing had diminished, and the patient felt better. There is yet, however, no perceptible change in the state of the cancerous growths.

We shall continue to report on cases of cancer treated by various methods, and shall give the further results of the treatment of this case.

MARYLEBONE INFIRMARY.

CASE OF CANCER OF VERY LARGE SIZE OCCUPYING THE SIDE OF THE FACE AND NECK—TREATMENT BY INJECTIONS OF ACETIC ACID.

(Under the care of Dr. BROADBENT and Dr. RANDALL.)

The following case illustrates chiefly the destructive effects of acetic acid injections on malignant tumours of large size and rapid growth; but it is not without instructive suggestions on other points, such as the limitation of the action of the acid to the cancerous structure.

In a case of this kind absorption was not to be looked for, and necrosis was the result expected. The amount of destruction, however, which followed the first injection astonished all who were watching the case. Equally remarkable was the slight amount of suffering attending the process. The absence of fœtor noted is characteristic of this process of treatment. One of the dangers to be anticipated in a tumour of this size in this situation is hæmorrhage, but the acid seems to spare the vessels; and as those at first exposed in the neck are now hidden by granulations, there is much less ground for apprehension on this score. As to the future prospects of the patient, the tumour is now limited to the face, in the bones of which it apparently took its rise, and it will be difficult to eradicate the disease at this part, especially as the acid cannot be retained in the morbid structure in any considerable quantity. Further destruction of skin would be undesirable, and to avoid this the later injections have all been made from the wound, which facilitates the escape of the fluid. Up to the present, the treatment is gaining considerably on the disease, and while this is the case, the present cautious mode of proceeding will be persevered in; but, if necessary, more energetic measures can be taken. On the whole, it seems probable that the old woman's life will be prolonged by the treatment, and that it will diminish her aggregate of suffering. The further progress of the case will be reported in some future number.

The patient, an old woman aged 73, had been for some time in the Marylebone Workhouse. The tumour had been growing twelve or eighteen months, and as it had attained a size which might very fairly be characterised as enormous, its rate of increase must have been very rapid. It occupied the right side of the face and neck, the centre appearing to be about over the angle of the jaw. The skin was red and tense, and the tumour was elastic to the feel, but firm. It had occasioned no great suffering for some time at first, but had recently become the seat of some pain, and it interfered with mastication and deglutition. The larynx was pushed aside, and the facial nerve having been destroyed in the progress of the disease, the mouth was drawn to the left, increasing the deformity.

Dr. Randall and Dr. Broadbent decided on the acetic acid treatment, although it was very doubtful whether the patient would have strength to endure the removal of so large a mass, supposing this to be possible. There was reason to hope, however, that the process would be attended with little or no suffering, and it seemed to offer some slight chance of relief in a case otherwise entirely hopeless.

On October 2, therefore, about 40 minims of acid of the strength of one part in four, making 80 minims in all, were injected at two points. The operation gave no pain. Some glutinous colloid matter exuded from the punctures, which matter on examination was found to contain small cells, some of them bi-nucleated, and minute highly refracting particles, scattered and in groups.

For two or three days afterwards there was increase of tension in the tumour, and greater difficulty of deglutition, so that fluids only could be swallowed. A little discharge made its way into the mouth, and the skin then gave way, a large quantity of matter escaping.

Oct. 9.—A large opening existed, which was occupied by a loose grey slough; the tumour had diminished very considerably—more than one-half—and the remains occupied only the face, where numerous hard nodules could be felt. The patient could swallow comfortably. She had suffered very little pain, and her strength was apparently not at all diminished. A noteworthy feature in the case was the entire absence of fœtor from the wound or discharge. Two injections of 40 minims each were made into distinct nodules. No pain. A poultice containing acid applied.

16th.—Slough entirely separated from lower part of wound, which is now perfectly clean and healthy-looking. The muscles are laid bare, and the carotid is seen pulsating at the bottom of the cavity. At the upper part of the wound the angle of the jaw is readily made out, covered by a grey soft material. The nodules last injected had disappeared. Patient cheerful and comfortable, swallowing and eating better. No injection till it is seen how the carotid and its branches behave.

19th.—Lower part of wound granulating, and opening contracting rapidly. Upper part as before. A little acid was injected into the soft matter covering the angle of the jaw, but this it readily ploughed up and escaped. Injections were practised into remains of the tumour upwards towards the malar bone and downwards over the body of the jaw; the latter only was well retained. The diseased parts to be sponged with the dilute acid.

23rd.—The granulations in the lower part of the wound progressing rapidly, and the opening in the skin contracting. A considerable mass of disease still left over the superior and inferior maxillary and malar bones. The sponging with acid seemed to have been of use. A large cavity exists where the successful injection was made on the 16th. Acid injected in various directions from the wound, but little was retained. The patient is cheerful and comfortable, and, on the liberal diet allowed her, gains strength.

HOSPITAL FOR DISEASES OF THE THROAT.

LARGE GROWTH ATTACHED TO THE LEFT VOCAL CORD—APHONIA OF SIX YEARS' STANDING—EVULSION OF GROWTH—RECOVERY OF VOICE.

(Under the care of Dr. MORELL MACKENZIE.)

The following case is a very important one. It shows the great value of the laryngoscope in diagnosis. This instrument will have an influence on the treatment of laryngeal disease similar to that which the ophthalmoscope has on the treatment of defects of sight due to changes in the deeper parts of the eye. Both have done much good by restraining routine treatment. In the following instance the laryngoscope led to a happy Surgical procedure, which, without this instrument, could never have been thought of, even if the diagnosis of a growth in the larynx could have been made.

For the notes of the case we are indebted to Mr. Wasdale Watson.

Eliza P., aged 31, a stout healthy-looking woman from Gravesend, was sent to Dr. Morell Mackenzie in June, 1865, by Mr. John A. Kingdon. She stated that in the winter of 1858-59 she had had a bad cough and cold, and that the hoarseness that came on at that time passed in a few months into a complete loss of voice; since then she had not been able to speak a word out loud. In 1860 she was an in-patient in a provincial Hospital; and there shower-baths were used, but in vain, to restore the voice. In the following year she was admitted into one of the metropolitan Hospitals; and here the treatment consisted in blistering the neck, twenty-seven blisters having been applied consecutively; afterwards iodine, mustard poultices, and turpentine stupes were used, and general remedies (quinine, iron, &c.), but all without effect. She further stated that she always now suffered from shortness of breath, and that lately she had had two attacks of great difficulty of breathing, which had lasted for several days. On making a laryngoscopic examination, an irregular lobulated growth about the size of a sparrow's egg was seen to be attached to the entire length of the left vocal cord; it projected up into the laryngeal cavity and across the glottis. At the patient's second visit Dr. Mackenzie first attempted to seize the growth with his tube-forceps, and on the first trial a large piece was seized and brought away. On several other occasions fragments were removed, but at several visits the attempts to seize the tumour were quite unsuccessful. On account of the distance at which the patient lived, she was not able to attend at all regularly, and long intervals often intervened between her visits. Accordingly, it was not till

March 7, 1866, that Dr. Mackenzie succeeded, with a pair of ordinary forceps (opening in the anterior posterior direction) in completely clearing the larynx. Dr. Pratt was present on this occasion, and made a laryngoscopic examination, both before and after the removal of the last piece. The patient attended twice at the Hospital afterwards, and the larynx was seen to be perfectly healthy. The voice was clear and natural. A portion of the growth was examined by Dr. Andrew Clark, and pronounced to be "an ordinary cauliflower or warty growth."

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Medical Times and Gazette.

SATURDAY, OCTOBER 27.

THE CHOLERA EPIDEMIC.

In his return for the week ending October 13, the Registrar-General remarked on the diminished fatality of cholera in the preceding six weeks as compared with the mortality from that cause in the corresponding period of 1854, whereby, after allowing for an augmented population, a balance of 7351 lives saved this year was deduced. At the same time it was plainly intimated that this encouraging circumstance ought not to induce a falling-off in the vigilance of the local authorities, which would indefinitely protract the danger of the whole metropolis. To facilitate the extirpation of cholera, the Registrar-General has again organised his daily returns, which were suspended for a week, and, with the view of keeping the health officers up to the mark, he has suggested that they should report regularly to him what proceedings were taken in their several districts, so that he might learn whether the information he was at the trouble of supplying by means of his daily return was properly applied by the local authorities. To this matter, however, we shall advert in a subsequent article.

Cholera is still pursuing its erratic course in London. After increasing in the two preceding weeks, it declined last week from 207 to 144 deaths, but whether this decrease is due to a reduced temperature or to the fall of rain, which had been *nil* for a fortnight before, or to some other occult influence, none can tell. The atmospheric conditions of last week, as compared with the previous week, were, a lower mean temperature, lesser movement of the air, and greater humidity—complete saturation being attained on Thursday, and only one degree short of that point on the two succeeding days.

We hope that the meteorologists are fully alive to the great importance which attaches to their observations at such a time as the present. The public is not likely to have forgotten that certain theories have been advanced relative to the connexion between the activity of zymotics and specific conditions of the atmosphere (such as ozone), especially with regard to the cholera epidemics of 1849 and 1854; and the experience of 1866 will be carefully noted as a test of the value of meteorology as an inductive science in relation to disease.

The following table shows the weekly progress both of cholera and diarrhœa in the three epidemics of 1849, 1854, and 1866, and will be useful to our readers in studying the peculiarities of the disease in its different manifestations:—

Weeks of the Years.	Cholera.			Diarrhœa.		
	1849.	1854.	1866.	1849.	1854.	1866.
22nd .	9	2	2	16	22	19
23rd .	22	1	3	20	31	22
24th .	42	1	3	36	31	20
25th .	49	1	1	17	38	43
26th .	124	—	6	30	25	67
27th .	152	1	14	46	32	102
28th .	339	5	32	89	46	150
29th .	678	26	346	131	58	221
30th .	783	133	904	224	84	347
31st .	926	399	1053	179	142	354
32nd .	823	644	781	173	195	264
33rd .	1230	729	455	188	192	194
34th .	1272	847	265	240	214	129
35th .	1663	1287	198	234	243	128
36th .	2626	2050	157	272	276	132
37th .	1682	1549	182	280	232	110
38th .	839	1284	150	238	190	98
39th .	434	754	177	163	165	67
40th .	288	411	182	135	98	69
41st .	110	249	207	91	102	47
42nd .	41	163	144	51	78	55

Taking cholera and diarrhœa together, there is less fluctuation in the last few weeks than is observed if they are taken separately. The combination of the milder "English" or "summer" form of cholera with the "Asiatic" or malignant epidemic cholera which kills a patient in a few hours, is a necessary consequence of the imperfect condition of nosology; but that it is a bar to anything like a satisfactory identification of the full force of the cholera virus in its transmission through individuals during an epidemic cannot be doubted. In the last two weeks, when cholera increased diarrhœa declined, and *vice versâ*; and this is frequently observed, so that the relation existing between the two diseases needs the closest investigation.

With regard to the diffusion of cholera over the metropolitan area, we subjoin the proportions ruling in each group of districts at different points of time:—

Districts.	Weeks ending					
	Aug. 4.	Sept. 6.	Sept. 29.	Oct. 6.	Oct. 13.	Oct. 20.
West . .	1	3	7	9	15	9
North . .	4	8	20	20	18	21
Central .	3	5	16	17	19	19
East . .	87	61	31	28	31	24
South . .	5	23	26	26	17	21
	100	100	100	100	100	100

It would be, however, unsafe to attach too much importance to the results here given without going a little farther and ascertaining how the ratios are affected by deaths in Hospitals of persons brought from other neighbourhoods. For instance, as between the North and Central Districts, Islington, in the former group, had no less than 7 deaths from cholera in the London Fever Hospital of persons brought from St. Luke's in the latter group. This is mentioned by way of a caution, lest too sweeping an inference should be drawn in any direction, but it does not affect the evident conclusions as to the diffusion of the disease to the relief of the original sufferers in the East London Districts. The West Districts suffered less last week than in the week preceding. Two deaths of children occurred at 6, Nutbourne-terrace, Notting-hill, from Asiatic cholera of 11 and 12 hours' duration; but St. Paul, Hammersmith, had only 2 deaths, as compared with 7 and 6 in the previous weeks. Another death from Asiatic cholera has occurred in Pear-street-house, St. Margaret's, Westminster—a place we have before called attention to, and which has had 7 deaths in five successive weeks from cholera. Of 17 deaths in St. Pancras, 11 occurred in the University and Royal Free Hospitals. Six deaths were recorded in West

London North from cholera, all of them in St. Bartholomew's Hospital. In Spitalfields 10 deaths are returned from cholera (all occurring in the Cholera Hospital), against 22 in the previous week. Four deaths from cholera occurred last week in St. Peter, Walworth, there having been only one death from that cause in the sub-district during the previous five weeks. In Greenwich East there have been 2 deaths in one house (in Marsh-lane), where the inmates are now suffering from diarrhœa, and the occupier complains of want of drainage to the house. It is much to be regretted that particulars are not more frequently given where fatal cases occur twice in the same house, because with proper vigilance such an event would rarely happen. To whom has the occupier of the house at Greenwich complained? or is there no sanitary authority with power to remedy the evil? We may depend upon it that for any negligence now we shall in all probability suffer hereafter; and as the community is so vitally concerned in this matter, it is to be hoped that the full weight of public censure will be unsparingly administered where any default of duty can be proved.

Dr. Frankland's analysis of the London waters for this month is less satisfactory than for the month preceding, so far as the Southwark, Lambeth, and East London Companies are concerned, the organic impurity having increased to double the amount shown in the earlier analysis. A remarkable instance is given of the effect of filtering water through animal charcoal, which yields a marvellous result in the removal not only of organic, but also of mineral impurities. A sample of the East London Company's water was taken from the daily supply of about 700 inhabitants, the tenants of Miss Coutts, in Columbia-square, Shoreditch, and the influence of the animal charcoal is thus exhibited:—

	Solid Matter in 100,000 parts of the Waters.	Organic and other Volatile Matter included in preceding Column.	Amount of Oxgen required for oxidation of organic Matter.	Total Hardness.
Water as supplied to consumers	30·20	1·25	·0425	20·2
Water after filtration through animal charcoal . .	21·76	0·28	·0073	7·1

Dr. Frankland remarks that the charcoal removed more than three-fourths of the organic and other volatile matter from the water, and that the "residual quantity contains but mere traces of organic matter, since the filtered water on evaporation leaves a snow-white residue which is scarcely perceptibly altered in colour on ignition; the hardness is also reduced from 20° to 7°."

We do not know how the London water companies will view these results, but the public will hardly fail to insist that a safeguard so easy of application, so effective, and so inexpensive withal, shall be adopted without delay. If the companies are wise, they will anticipate the inevitable demand, and so weaken to some extent the case against them.

CHOLERA PREVENTIVE SERVICE.

The London Medical Officers of Health are passing through a season of very heavy and onerous duties, and to their zealous performance thereof ample testimony has been borne by the Registrar-General, who, from his official position, naturally watches their proceedings and cordially co-operates with them. Reciprocally, the Health Officers feel a pleasure in complying with any request which the Registrar-General makes to them for information on matters connected with the health of their districts; and they do so the more readily that whatever trouble they take in this respect is repaid by the knowledge that questions are asked for the public satisfaction, and that their replies go forth as a measure of the interest they take in their work.

A little while ago the sudden cessation of the daily returns of cholera caused some public excitement, because, it was said, we had no means of knowing how the enemy was working amongst us from day to day, and consequently there was paralysis of the preventive service generally.

On resuming the publication of his daily return, the Registrar-General addressed the following inquiries to the London Medical Officers of Health, and solicited a reply in the nature of a weekly report from them thereon:—

"1. What is the number of Medical visitors and nuisance inspectors employed in your district? Are they under your control?

"2. What steps are taken to secure the early treatment of diarrhœa?

"3. What measures are employed to disinfect or destroy chemically the dejections of cholera patients?

"4. Is every house in which a cholera patient is attacked visited, and is the disinfection of beds, linen, etc., carried out under inspection so as to secure its efficiency?

"5. Are the linen and beds destroyed immediately replaced by the authorities?

"6. Have you anything to remark generally in connexion with the hygienic state of the houses in which deaths from cholera were registered last week?"

The replies on these points are printed in the Supplement to the last Weekly Return so far as they had been received up to Monday last, and others will appear next week.

Dr. Ballard heads the list with a description of his own mode of procedure at Islington, characteristic for its particularity of detail throughout. We extract such points in the replies as seem most worthy of attention. Dr. Ballard says:—

"Our first case of cholera happened on July 23, and on the 27th there was an outburst of 5 cases; 5 more occurred on the 28th, 3 on the 29th, 5 between this date and August 1, 8 cases on August 1, and 9 more between then and August 5. Since then the cases have numbered from 10 to 4 per week. At first, when the disease appeared in limited localities, three Medical visitors and an assistant were employed, and two stations established by the vestry for relief of diarrhœa cases. We have now, with my concurrence, only one Medical visitor, but the ordinary sanitary staff has been increased to eight inspectors and six men, whom I occupy in disinfection and other works about dwellings, burning bedding, etc.

"My practice has been to visit personally every case of cholera or severe choleraic diarrhœa immediately on hearing of it, and, if the case be a fit one to remove, I have endeavoured to persuade the patient to go to one of our Hospitals, either to the cholera ward of the London Fever Hospital or to the Great Northern Hospital. Until this is done, or if the case be one it would be unsafe to move, I see that it is properly in charge either of one of my visitors or of some Medical man. If the family are destitute, I am empowered to order relief, either in the way of food or blankets, etc., and to engage a nurse where none of the family can undertake that office. I watch the case either until death or recovery. When death takes place I see that the body is coffined as soon as possible with some MacDougall's powder, and removed to our dead-house when the friends do not object. So long as a patient remains at home I have been unable to persuade the friends to vacate the apartment. The result in many instances has been the occurrence of several cases in the same family or house. On the removal or death of a cholera patient I direct the closing of the room until the room and its contents have been satisfactorily disinfected and cleansed. In some instances where several cases have occurred in the same house I have closed the house altogether, and then, having no house of refuge provided, have found lodgings for the family or families as best I could, and made arrangements for providing them with an ample diet. I have hitherto met with no instance in which the disease has spread to the houses into which the families have been removed, although I cannot but regard the arrangement as not free from danger. It has been considered, however, by our Diseases Prevention Committee that the cases at present could be sufficiently provided for in this way.

"As regards disinfection, etc., my practice is this:—On occurrence of a case of cholera or choleraic diarrhœa, I send a man at once to pour carbolic acid into the privy and inlets of house drains in the invaded and adjoining houses, and take care that carbolic acid is also supplied for use in the utensils, or else Burnett's fluid, which is preferred by patients on account of its freedom from smell. This disinfection is repeated day by day for three or four days, and the whole adjoining streets similarly treated. Notice is given to owners of houses of any sanitary requirements discovered by our inspector, and especially for the cleansing of water receptacles. Dust accumulations are disinfected with MacDougall's powder, and then ordered for removal; and MacDougall's powder is scattered about the floors and staircases of the house, and about the yard. When death takes place, and the body is removed, or when a patient is removed to a Hospital, the key is turned and brought to me, and I again visit the house and examine the bedding and articles in the room, and condition of floors, walls, etc. In nearly all instances I have ordered the bedding to be destroyed, seeing it first soaked with carbolic acid; any filthy clothes, or rags, or dirty pieces of carpet are similarly treated; other things which appear worth preserving or are not much stained, such as sheets, blankets, or articles of clothing, I see put into a solution of Burnett's fluid, or a weak solution of carbolic acid. The carbolic acid is apt to damage such articles unless tenderly used. I have not felt myself at liberty to leave this most disagreeable task to the discretion of assistants. I hold that while it is the most unpleasant, it is the most important duty laid upon the Medical superintendent by the Privy Council order. No house or family is safe so long as a particle of the virus is left undestroyed. The floors in all cases, and, if dirty, the walls and ceilings of the room, and sometimes of the entire house, are then smeared or washed over with carbolic acid and water, and a notice given to the owners to cleanse and limewhite under the Sanitary Act. The owners of articles of clothing which have been disinfected are then permitted to wash them. I have met with no instance where the washer has suffered if the clothes have been thus treated previously, but I have met with a case where choleraic diarrhœa followed upon the washing of clothes not disinfected, and where the person had not waited for my orders upon the subject. After disinfection of a room or house I have all the windows thrown open, and keep the house or room empty for at least a week, until it is fit to be reoccupied. In addition to this, certain general precautions are taken. I send my Medical visitor from house to house daily for some days in the invaded street and other suspicious streets in the vicinity, and he distributes hand-bills to each family. The streets and courts where cholera is likely to occur, and especially those adjoining upon parishes where it prevails much at the time, are visited every few days, and the privies and drains disinfected with carbolic acid. The main sewers throughout the parish have been twice disinfected with carbolic acid thrown in at all the gully openings, and an active general inspection of the low streets in the parish is being carried out."

Dr. Ballard also gives a synopsis of the measures adopted by him in regard to certain recent cholera cases, but they are more or less embraced in his general statement.

Mr. F. J. Burge (Fulham) has six Medical visitors and four inspectors of nuisances under his control. He reports prompt treatment, disinfection, and replacing of destroyed beds and linen; he also calls attention to a large open creek (a tributary of the Thames) in the centre of the town of Hammersmith, which receives a considerable quantity of sewage, and is always in an offensive state.

Dr. Aldis reported that in the parish of St. George, Hanover-square, no Medical visitors have been appointed, but that a staff of six additional nuisance inspectors have completed a house-to-house visitation throughout the parish; handbills have been distributed; Condy's fluid and carbolic acid used as disinfectants, the former to the water receptacles, the latter to the drains; and that there are abundant supplies of medicine and attendance for the prompt treatment of diarrhœa.

Mr. L. J. Beale (St. Martin-in-the-Fields) has the Medical and sanitary inspectors both under his control, but the cholera cases have been few in his district. Three dispensaries are open for gratuitous administration of medicine in cases of diarrhœa, and 1330 patients have been treated, exclusive of those treated at Charing-cross Hospital. Disinfectants are freely used, and distributed gratuitously if required. The disinfection of beds, etc., has been so efficient that there has been "no instance of the spread of the disease to any attendant or resident in the house beyond those originally attacked."

Dr. Buchanan (St. Giles) reports the general efficiency of the preventive service of his district; he adds, with regard to the removal of cholera cases to the Hospital—

"Upon recent inquiry, it appeared that out of twenty instances, where the first cholera case had been so removed, cholera had attacked a second person in the same house once only; whereas, in some fourteen instances where the first patient was not so removed, it had happened seven times that a second or third person was attacked in the house, in spite of all the disinfection that could be done by the authorities."

Dr. Liddle (Whitechapel) alludes to the beneficial results from the information contained in the daily return of deaths, which enables him to send a Medical visitor to a house where a death is recorded, who is empowered to destroy infected clothes, bedding, etc., and to inquire into the sanitary condition of the locality.

Dr. Iliff (Newington) has a staff of house-to-house visitants and a water-butt cleaner all under his control. Disinfectants and medicine are freely supplied, and Dr. Iliff personally visits every house in which a cholera patient is attacked. Linen, beds, etc., are replaced by the authorities.

This concludes the first series of replies, and it is pretty clear that if the like energetic measures are unremittingly pursued all over London as are indicated above, cholera, so far as it is amenable to human power, must be driven out of our midst. We are glad to see that item about the replacing of bedding, linen, etc., by the authorities on the list of the Registrar-General's inquiries, and we hope the invariable answer will be in the affirmative. It would be monstrous to destroy the property of poor wretches, even for the sake of their own safety, without recouping them for the loss; and we trust that the motto of the authorities in this respect is everywhere *Bis dat qui cito dat.*

THE NAVAL MEDICAL SERVICE.

Soon after the appearance of the Admiralty Circular of the 12th of last July, having reference to the pay and position of Naval Medical Officers, we were induced to offer a few remarks in regard to it. We ventured to doubt whether the offers therein made were such as would content the men now serving, or induce a sufficient number of qualified candidates to offer themselves in order to keep up the necessary supply.

At that time we felt fully satisfied that, as that Circular had been issued by a Board which had never lost an opportunity of inflicting every injury that lay within its power upon Medical officers, from the day it assumed duty until the day it left office, and to whose acts and edicts the service and the country are indebted for almost the entire degree of unpopularity which exists among Medical men in regard to the Navy at the present hour—we felt satisfied, we say, that the earliest opportunity would have been taken by the present Board to remedy the crying evil which exists; but as no sufficient action has been taken to make a real impression upon the schools, and as every hour's delay increases the amount of existing dislike, we would earnestly solicit the present Board to act with vigour, and at once put a stop to the discontent in, and the prejudice which prevails out of, the service.

We are not ungrateful; we have noted the defined rank and separate list of Staff-Surgeons with great satisfaction, as well as the first great step of four selections on the ground of merit for that list and rank. We have heard with great pleasure of a Staff-Surgeon's rights being secured to him in spite of the determined opposition of the local authorities in a certain port, and in fact we have good evidence of the kindest intentions; but unfortunately the service in the meantime is starving, and will continue to starve until something else than intentions becomes evident, and we therefore urge the present Board to lose no time in amending the late Circular. As far as we can make out, this requires to be done in the following particulars:

—By altering the pay of Assistant-Surgeons and Surgeons, as well as continuing gradually to increase that of Staff-Surgeons beyond the period of twenty-two years, where all increase stops at present; by permitting officers to retire on completing twenty-five years' service, and increasing materially the retiring allowance when retirement is in any case compulsory after that length of service; by altering the scale of allowances to officers serving in Hospitals, which at present are simply ridiculous; by conferring similar honours upon naval as have been most justly conferred upon military Medical officers; and by giving such orders, and making such alterations in the general instructions, as will check the growth of class-feeling, which, we hear, is taking a prominent position in the service.

THE PHILOSOPHY OF FOOD.

In 1842 Liebig, in his "Organic Chemistry," broached the idea that all articles of food were capable of arrangement into two great groups, the one devoted to the reparation of the tissues, the other to the production of animal heat. These were respectively denominated the plastic or nutritive, and the calorifacient divisions. Up to the present date this distinction has been looked upon as perfectly established, and as such is quoted in all our physiological text-books even of the most recent date. Many of our readers will therefore, we doubt not, be somewhat astonished when we say that such a grouping can no longer be upheld – in short, that our ideas as to the various purposes fulfilled by different articles of diet must undergo a complete revolution.

In his "Letters on Chemistry," Liebig tells us that "the sulphurised and nitrogenous constituents of food determine the continuance of the manifestations of force; the non-nitrogenous serve to produce heat. The former are the builders of organs and organised structures, and the producers of force; the latter support the respiratory process—they are the materials for respiration." No doubt, when this notion was first brought forward, it was a very great advance on the knowledge men previously possessed as to the functions of the different kinds of food, but the story we have got to tell just shows as clearly the danger of accepting anything as ultimate in such a science as Medicine.

As will be seen from the quotation made above, Liebig assumed that all force or energy depended on the oxidation of muscle, and that these organs could only be repaired or nourished by azotised articles of food; in other words, that nitrogenous alimentary matters were the only substances capable of giving rise to force, and that only after their conversion into muscle. Liebig's doctrines did not even then go altogether unchallenged, for Mayer opposed them almost as soon as they were announced; but all contrary views had been well nigh forgotten when the doctrine of the "conservation of energy" began to be applied to animal as well as to inorganic physics, and this has furnished the clue necessary to the elucidation of the problem as to what is the real function of food, and the true origin of force. The inquirers who have been most successful this way have been Dr. E. Smith, and Professors Fick, Wislicenus, and Frankland. The researches of Dr. Smith, although undertaken for a different purpose, have been highly instrumental in bringing about the result hinted at, but the others have devoted themselves solely to the determination of the question. Messrs. Lawes and Gilbert had also, by pursuing a line of inquiry entirely different from that adopted by the above-mentioned gentlemen, arrived at conclusions almost identical with theirs. But, to enable our readers to form their own opinions, we must point out the different steps in the inquiry.

Seeing, as is universally admitted, that muscular contraction is the great, if not the sole, motive power within the body, and seeing also that chemical change universally accompanies, in fact may be said to be *the condition* of, the development of this force, the products of oxidation (for all admit the change to be of this nature) must always bear a direct ratio to the force developed, so that the latter may be measured by the former. There are two great channels for the escape of refuse material from the system—the lungs and the kidneys. By the former, burnt-up carbon, in the shape of carbonic acid, passes out; and by the latter, decomposed nitrogenous substances, in the shape of urea, uric acid, and hippuric acid, make their exit. According to Liebig's notions, the carbonic acid is derived from the oxidation of the calorifacient articles of food, the heat evolved during the change keeping up the temperature of the animal to a fixed standard, whilst the urea (for the amount of the others is so slight that they may be left out of the question) mostly originates in the change of muscular tissue when in a state of activity. Assuming this as true, the carbonic acid exhaled by the lungs should be, to a certain extent, a measure of the amount of non-nitrogenous matter consumed in the body, whilst the urea would serve to indicate the amount of muscular force expended. In the *Philosophical Transactions* for 1859 and 1861, Dr. E. Smith published the results of a very remarkable series of inquiries which first of all threw upon this doctrine a shadow of doubt; for in the first of these he showed conclusively that the carbonic acid which passed out from the lungs varied extremely from time to time, and that the great agent in causing this variation was bodily exertion. Food, no doubt, has, to a certain extent, the power of increasing the expired carbonic acid; but it goes on with great uniformity in the entire absence of food. Thus he estimated that, whilst in people sitting quietly 26·193 oz. of carbonic acid are exhaled in twenty-four hours, those who work expire 31·824 oz., the hard-wrought daily labourer evolving as much as 43 oz. Putting this in the comparative form, which is even more striking, it will be found that the amount of carbonic acid exhaled in 1 hour, when a person is walking at the rate of two miles an hour, is equal to that exhaled by one sitting quietly, during $1\frac{4}{5}$ hour with food, or in $2\frac{1}{3}$ hours without food. Again, the carbonic acid exhaled by one walking at the rate of three miles during an hour is equal to the carbonic acid exhaled by the same individual in $2\frac{3}{4}$ hours whilst sitting and with food, or in $3\frac{1}{2}$ hours without food. But the difference is still more remarkable in one working at the treadmill, for the carbonic acid evolved in one hour is as much as would appear were he sitting in $4\frac{1}{2}$ hours with food, or in 6 without food.

Dr. Smith's next step was to ascertain, as food evidently had some effect upon the amount of carbonic acid expelled by an individual, what kinds of food had most influence this way. Here again his results are surprising to those who are still inclined to hold with Liebig, for he came to the conclusion that the substances which are most powerful as exciters of respiration, or of the evolution of carbonic acid, are the nitrogenous articles of food, milk, tea, coffee, rum, beer, sugar, cereals, and potatoes; whilst the great heat producers of Liebig—starch and fat—have actually no effect whatever on the exhalation of this substance except exercise follows their absorption. One more point had to be settled—viz. the amount of nitrogen which passes out of the body in a state of quietude and in a state of exertion. To this inquiry Dr. Smith, after a long-continued series of investigations, was able to return an answer, and that too in no doubtful tone, that whereas exertion did not appear to have any influence over the excretion of urea, food had a very powerful one; in other words, that the nitrogen expelled from the body did not vary with the work done by the nitrogenous tissues, but with the quantity and quality of the food consumed. Such deductions could not do otherwise than excite at least a suspicion, in the minds of inquiring men, that things were not exactly as they were represented to be, although absolutely conclusive data were still wanting.

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But by this time the correlations of the physical forces had been firmly established, and Mr. Joule, of Manchester, had been able to show the exact bearing heat had to force, in his well-known "unit"—viz. that the concussion produced by the fall of one kilogram through 425 metres produces enough heat to raise one kilogram of water 1° C. in temperature. The heat produced then was to be taken as a measure of the amount of force developed in the body, and this heat was to be measured by estimating the temperature which would result from converting albumen into urea, the amount of this last substance being known. Professors Fick and Wislicenus, of Zurich, devoted themselves to the inquiry, and the plan they hit upon was to ascend a mountain known as the Faulhorn, as it happened best to suit their purpose. For some time before and during the experiment, no nitrogenous food was taken, starch, fat, and sugar forming their only aliment. The conditions of their experiment were, therefore, to ascertain the exact amount of nitrogenous matter escaping from the body, thence to deduce the amount of heat evolved in the formation of these from albumen, by which means the amount of force developed could be easily ascertained. Again, the height of the mountain was known, and the weight of the experimenters, along with their accoutrements, was readily determined, so that the amount of work to be done would be ascertained by multiplying the one into the other. But the ascent of the mountain was not the only work done by the muscular system, for both respiration and circulation had to be kept up. From certain data, to which we need not here allude, the amount of force so consumed in Fick's case was estimated at 5197 metre-kilograms for the former, and 25,344 metre-kilograms for the latter, which, added to the amount of apparent work done, came to 159,637 metre-kilograms as the total work performed by Fick, that by Wislicenus being estimated at 184,287 metre-kilograms. At the time of which we speak, the heat evolved by burning albumen had not been ascertained, so that their experiment was necessarily incomplete, but this final step in the investigation has been made by Dr. Frankland, of the Royal Institution, so that we are now in a position to solve the problem.

From the inquiries of Ranke and Thiry it is known that little or no nitrogen escapes by the skin or by the lungs, but that the whole passes out by the kidneys. Accordingly, the urine passed by the experimenters for some time before, during, and after the ascent was carefully analysed, and the amount of nitrogen contained in it accurately determined, as was also the weight of muscle which would contain the given amount of nitrogen. Now, from the conditions of the experiment, little or no nitrogen could have existed in the state of urea within the system prior to its commencement, and it may be assumed that as little remained behind at its termination. We see, then, that by combining the exact researches of Frankland with those of our Continental brethren the amount of energy developed in the conversion of albuminous muscular tissue into a known weight of urea and uric acid can be exactly determined, and this estimate compared with the work known to have been accomplished. First of all, the amount of muscle consumed amounted to 37·17 grams in the case of Fick, and 37 in that of Wislicenus. Now the force capable of being generated by the oxidation of these quantities of muscle (within the body) amounts only to 68,690 metre-kilograms of force for Fick, and 68,376 for Wislicenus, so that by contrasting this with the work known to have been performed we find—

	Fick.	Wislicenus.
Total ascertainable work done in metre-kilograms	159,637	184,287
Work accounted for by the oxidation of their muscles.	68,690	68,376
Unaccounted for . . .	90,947	115,911

But great as this amount may be, it is not the whole, for it must be borne in mind that all the heat developed is not converted into force; even in the best constructed steam-engine only one-tenth is so transformed, but the human system—a far more perfect machine—does not allow of so much waste, insomuch that, as Helmholtz calculates, one-fifth of the energy developed can be made to appear as work. Assuming, however, the higher estimate of Haidenhain, we find that the work ascertained to have been accomplished must at least be doubled, since we are calculating from heat, giving us, therefore, 319,274 metre-kilograms of work done for Fick, and 368,574 for Wislicenus, so that scarcely one-fifth of the energy actually put forth can be accounted for by the disintegration and oxidation of muscular tissue. Were it necessary, we might quote other instances from Dr. Frankland's lecture delivered at the Royal Institution (June 8, 1866), for all observations read by the light of our recently-acquired knowledge lead to the same conclusion. Dr. Smith, Haughton, Playfair—all, in fact, who have in any way engaged in the investigation—will unite with us when we say that our ideas as to food and muscular action must be materially changed, for their researches indubitably show that force does not necessarily depend on the oxidation of muscle, nor even that it can all be accounted for, by the nitrogenous articles of diet usually consumed. Nor does the statement just made depend on the scientific proof adduced by the above-mentioned investigators alone; for Messrs. Lawes and Gilbert, from their experiments on the best means of feeding cattle, even before the ideas just enunciated had been brought forward, were able to say that the value of fodder as an article of diet for graminivorous animals did not depend on the amount of nitrogenous matter, but rather on the non-azotized substances which it contained. They further found that by merely increasing the amount of nitrogen in the food of an animal, they could double the amount of urea excreted by it, although the conditions as to muscular exertion were identical in the two cases.

What, therefore, results from all this? It seems to us that there can be but one answer to such a question, and that is that the ideas even now prevalent as to the values of different articles of food are altogether wrong, and that we must make up our minds to a total alteration in our notions as to their applicability to the cases we had hitherto assumed them best adapted for. But it shows something more, if we mistake not; for had we all this time attended to the teachings of experience, we might have known otherwise, since we invariably see, that wherever a large amount of work has to be done, the diet of the workers contains a much larger percentage of non-azotized matter than when but little exertion is required. Yet, on the other hand, it is quite true that a sufficient amount of nitrogenous matter will enable an animal to subsist and to perform almost any amount of work. How otherwise could we account for the existence of purely carnivorous animals? Again, from the observations of Sir Francis Head, made during his excursion over the Pampas of South America, we know that the food of the Guachos who inhabit that district consists of nothing but beef, and that so lean and tough, says he, that no one would be induced to eat more of it than was absolutely necessary to sustain life. Among the trappers and hunters of North America, it is a common thing for a man to be months without tasting bread or anything of the kind, their only substitute for salt even being gunpowder. Turn, on the other hand, to the food of the agricultural labourer in Scotland; we find them there subsisting, from one year's end to the other, on oatmeal and milk, whilst in harvest, when they usually work twelve hours a day, small beer is sometimes substituted for the milk, thus still further lessening the supply of nitrogenous matter. The navigators, again, who construct our railways, as noticed by Dr. Frankland, feed to a great extent on bread and fat bacon; and it is a well-known fact that the brown bread, so often used among the well-to-do classes, is invariably rejected by workmen in favour of white bread—that is, the bread which contains the greatest amount of nitrogen is rejected for that which contains most carbon. When there were slaves in America, almost the only animal food (except what was procured by hunting) they obtained was fat bacon; and all know well that fat pork, so much relished by the hard-working classes, is almost, if not entirely, unknown on the tables of those who have but little exertion to go through, being there replaced by highly azotised substances, such as, we shall say, the different kinds of game. Still further, does not fat salted pork furnish one of the most important articles of diet in the case of that very hard-worked class, sailors; and, in fact, wherever much exertion has to be made, do we not find the same rule prevail? Dr. Piccard tells us that when chamois hunters are starting on a long and toilsome expedition, they take with them as provisions only bacon-fat and sugar, which, say they, contain most nourishment in least space.

What say our friends who have been accustomed to diet their patients on scientific principles to all this long array of facts? Surely there can be but one conclusion, and that is, that experience is better than science as a guide to the management of the human frame. Upon what scientific foundation, shall we say, do the curative effects of quinine in ague rest, putting in the meantime Dr. Bence Jones's researches out of view? yet who would hesitate to prescribe it in any case of the kind? So say we, with regard to diet, what a man finds good for himself, let him stick to; what he finds to disagree, let him avoid. No one man can in this case be a guide to another, except he be placed in exactly the same position in every respect; and how rarely do we find this to be the case!

Fick, in his paper (*Phil. Mag.*, June, 1866), makes good use of the steam-engine as a simile, and really the correspondence of this with the human body is closer than would at first sight be suspected. The steam-engine is a composite machine, made up, we shall say, of iron and brass. So is the body composite; but without the motive power in the shape of fuel it is motionless. So with the body and food. But steam-engines wear out and require repair; so do albuminous muscles, and, therefore, a certain amount of nitrogenous matter must be taken into the system, that the organism may be sustained in a proper condition. But a steam engine, although in the highest state of repair, is nothing without fuel; so the body requires food, a certain quantity of a nitrogenous kind no doubt, but the rest may be either nitrogenous or non-nitrogenous, so long as its oxidation originates force. In both cases certain *debris* is left behind; but because we find iron and brass in the one case and urea in the other, we cannot therefore conclude that the working of either machine has produced these and these only. In both cases we must look for the carbonic acid evolved. Notwithstanding all this, we cannot in the face of ascertained facts go as far as Fick and Traube, who would have us believe that it is only non-nitrogenous matter that can be converted into force through the agency of muscle. That we can scarcely admit; still their researches are of great value, were it only to show that we have not arrived at the uttermost bounds of scientific knowledge even in that direction where its limits were supposed to be so well defined. Finally, we must again affirm that science is good, none can appreciate it more than we do, but when science contradicts the accumulated experience of ages, then, say we, *cedant arma togæ*—experience for us, let science go to the wall.

THE WEEK.

HOW CHOLERA IS PROPAGATED.

Whilst Dr. Ballard and his *confrères*, and, we may add, the sanitary authorities of London generally, are doing their best to extirpate cholera from the houses of the poor, we may suggest that cases occurring in good hotels, and in the houses of the rich, may be more dangerous to the community at large. For in such houses the public authorities are not called in, the matter is hushed up, and there is no security that proper means of disinfection are carried out; more especially, the bedding is not destroyed. We call especial attention to the following extract from an able Report by Dr. Whitmore, of St. Marylebone, and may add that the first case cited is that of a gentleman who died at an hotel in Mayfair, as described in the *Medical Times and Gazette* of September 8, under the heading "Put out the Sparks!" Unluckily the sparks were not put out before one nurse and one woolstapler caught the infection.

> "With a few exceptions, I have been enabled to trace something of the history of all the fatal cases that have occurred in this parish, and it will be some satisfaction to know that six or seven at least were imported from other districts. In five cases I was enabled to trace the cause to direct infection; two of these are worthy of notice. A healthy man, aged 30 years, by trade a journeyman woolstapler, was employed to remove some articles of bedding from an hotel in a neighbouring parish, for the purpose of cleansing and purifying them, on which a foreign gentleman had died of cholera. In two or three days afterwards he was seized with cholera in its more malignant form, and was removed to the iron Hospital, where he expired three hours after admission. A hardworking woman, clean and temperate in habits, was employed to wash the bed and body linen of a gentleman who had died of cholera in Paddington. It was brought to her room on the Thursday, washed on the Friday, and sent home on the Saturday. On the Sunday morning she was attacked by the disease in its virulent form, and died in twelve hours. A young child, eighteen months old, who slept in the same bed with her, fell a victim also to the same disease."

THE PARIS MEDICAL CONGRESS.

We have this week received the programme of the Medical Conference to be held in Paris from August 16 to the end of that month next year. With their accustomed liberality our neighbours insist on bearing all expenses, so that strangers proposing to become members have only to intimate their wishes to M. le Dr. Jaccoud, 4, Rue Drouot, Paris. The subjects proposed for discussion are—Tubercle and tuberculisation; the causes of death after operations; the measures proposed for limiting the spread of venereal diseases; the influence of food as employed in different countries on the production of certain maladies; the influence of race, country, and condition of life on menstruation; the acclimatisation of European races in tropical countries; and lastly, human entozoa and entophytes. All communications intended to be read must be sent to Dr. Jaccoud by July 26, and only twenty minutes will be allowed to one paper. Papers read will be the property of the Congress, and its *Transactions* will be published. Medical students are to be admitted, but may not take any share in the discussions.

LINCOLN COUNTY HOSPITAL.

An attempt has been recently made to improve the nursing of the Lincoln Hospital by placing it under the superintendence of educated ladies, and, as our readers are aware, the experiment has led to the death of two ladies—Miss Nevile and Mrs. Whitehead—who contracted fatal disease in the wards. We are sorry to hear that it is but too likely that this sacrifice has been made in vain. It seems that the Hospital is a scene of internal discord. The new system does not appear to have found favour with some of the staff and with the Hospital matron, and the upshot has been that the Lady Superintendent has tendered her resignation. If we are to believe the speeches of the Bishop of the diocese and Chancellor Massingberd at the last quarterly meeting of the Board of Governors, nothing could be worse than the system of nursing which existed before the present experiment was tried. Mr. Broadbent, one of the Medical Officers, seems to think that the nursing under the new system has not been much better; to which allegation the Bishop answers that it has not been fairly tried. His lordship believes that the ladies have failed from want of co-operation on the part of the other officials, and also in consequence of their health suffering from the badly-drained condition of the Hospital and the malaria of the wards. Two have died, and a third volunteer has been confined to her bed from sickness.

We are not in a position to express any positive opinion on the matters in dispute, although, judging from the experience of London Hospitals, the superintendence of educated women is invaluable in Hospital nursing. We are therefore glad that the Board of Governors have hesitated before accepting the resignation of the Lady Superintendent. But the subscribers may naturally ask, considering the state of things described by the Bishop—the malaria, the bad drainage, and the nursing difficulties—what must be the chances of recovery for any unfortunate labourer who finds himself with a compound fracture of the leg, or with double pneumonia, in the wards of the Lincoln County Hospital?

DR. DAY, LATE OF ST. ANDREW'S.

THE large number of our Medical brethren who graduated at St. Andrew's when Dr. Day presided over the Examining Board of that University, and who cannot fail to retain a lively sense of gratitude to him for the courtesy, gentlemanly consideration, and impartiality with which he conducted the examinations, will be glad to learn that he has so far benefited by his three years' residence in the more genial climate of South Devon that he proposes to receive into his family two or three young-lady invalids, who would have the advantage of being under his Medical care, and continuing their education under highly favourable circumstances in his house. In common with all who have had an opportunity of appreciating Dr. Day's varied and scholarly attainments and his Professional skill, we have sincerely lamented the very severe accident which he met with some years ago. There are none of us probably who are unable to sympathise with him in the trial of being suddenly cut off, in the very prime of life, from all active participation in the labours and honours of our Profession, and reduced to a state of great physical debility, which, as many of our readers are doubtless aware, is due to his having an ununited fracture of the right humerus and an arthritic affection of the right knee as the sequelæ of the accident which befell him while he was making a walking tour in the Lake district. We have made this announcement of Dr. Day's wishes, in the hope that, if his numbers have not been filled up, it may arrest the attention of those of our Medical brethren who have not been carried away by the *furore* for Mentone, Nice, and other foreign sanatoria, and who still believe that weak-chested, strumous subjects may fare better in the mild equable air of a well-sheltered, well-drained, and picturesque spot like Torquay, where they can enjoy all the great advantages of a nutritious diet, of home influences, and a thoroughly moral tone of society, than they would do if they were exposed to the trying winds, the bad water, imperfect drainage, unsuitable food, strange associations, differences of religion, and social and conventional eccentricities, which are often the unavoidable concomitants of a winter residence abroad.

HOMES OF HOPE.

THE Sixth Annual Report of these valuable institutions has just been forwarded to us. They are intended to arrest the downward progress of fallen women, to save some from falling, and especially to assist young mothers. We are glad to see that their funds are increasing, and that the results obtained are so promising. We most heartily commend these "Homes" to our readers, and through them to their patients. Contributions in any shape will be gladly received, and any information afforded, by the Secretary, Mr. W. Hornibrook, 6, Regent-square, W. C. Friends are invited to visit the Home at the above address.

DWELLINGS FOR THE POOR.

How to supply comfortable and healthy homes to the poor at a cheap rate is just now one of the greatest desiderata we know. Mr. Barrow Emanuel, of 32, Moorgate-street, E.C., proposes, as a partial remedy, to convert the railway arches now so plentiful in London into houses which can be let at a low rate and yet be perfectly comfortable. We fear, from our experience of these arches, that water will be very likely to make its way through the roof; but, this objection apart, we do not see why the scheme should not be carried into execution. Certain it is, we have seen families living in these arches, though scarcely in a comfortable condition. Should, however, Mr. Emanuel's cottages look as well in reality as they do on paper, we shall be very glad to see them.

THE VETERINARY ART.

A CLINICAL Note-Book for the Use of Veterinary Students and Practitioners has been forwarded to us by its author, Mr. Armatage, Professor of Anatomy in the Glasgow Veterinary College. Its appearance and style are creditable to its author, and we are sure that its systematic employment will be attended with beneficial results, tending, as it does, to introduce careful and minute investigation, as well as registration of the nature of the disease. Its compact and portable character renders it also a very convenient pocket companion.

HER MAJESTY'S CUSTOMS.

THE Tenth Annual Report of the Commissioners of her Majesty's Customs for 1865 gives several very interesting facts. Of wine, in 1856, 9;481.880 gallons were imported, and 7,365,874 retained for home consumption. In 1865 the quantity imported was 14,269,750 gallons, and that entered for home consumption 12,061,386 gallons Still, the quantity imported in 1865 was not so great by about 200,000 gallons as in 1864. It is the imports from Spain which have fallen off, whilst those from Portugal and France have increased. The Medical philosopher will notice with pleasure the decided and steady increase in the importation of the wholesome wines of France. The quantity was 1,010,888 gallons in 1859, 2,445,151 in 1860, 2,723,233 in 1864, and 2,915,355 in 1865. As a set-off, we feel compelled to add that what the Commissioners of the Customs call "the *wines* from South Africa, and the Hamburg *mixtures*, have rallied considerably from the great depression they experienced in 1864." Wine increased in consumption 5 per cent. in 1865 as compared with 1864, tobacco 2 per cent., tea 10 per cent., spirits 7 per cent., and unrefined sugar 11 per cent. There was a very large increase in the importation of animals, especially of sheep and pigs. The Commissioners warmly defend themselves against any imputation of neglect as regards the cattle plague, and deny that any animals affected with it were imported until long after the outbreak of the disease in London. The Report includes the Medical Report by Dr. Walter Dickson, to whom the Commissioners pay a high compliment for his "energy, assiduity, and skill." Dr. Dickson's annual Reports are interesting as instances of the registration of sickness, as well as of mortality, in civil life, of the quantity of time lost by sickness amongst a definite class of men, and of the relative value of various causes of sickness and death Dr. Dickson makes abundantly clear—what is pretty well known—that amongst such causes the weather, primarily or secondarily, stands first; lung diseases and rheumatism carry off the palm from the zymotic and every other class. The large number of visits paid to officers at their own houses, and the consequent decrease of malingering, form no bad examples of the quantity of work done by Dr. Dickson and its beneficial results.

SEWING MACHINES.

If we were asked to name one invention which in our own day had contributed more than any other to the comfort and moral and physical well-being of the female sex, we should quote the sewing machine. In private houses it converts a most tedious and annoying drudgery into a recreation, and in factories it lightens the labour and adds to the emolument of the women employed. But, a few weeks since, a paragraph appeared in one of the French Medical journals, accusing those sewing machines which are set going by the alternate movement of the legs as being a cause of what is veiled, in the phraseology of modern pruriency, under the term "peripheral irritation," with leucorrhœa, backache, and other signs of irritation and debility of the female sexual organs. This bit of sensational pathology has unfortunately been adopted by a London Physician of whom better things might have been expected, and has made its way even into respectable newspapers, such as the *Daily News*, in a form which was never intended for any female eye to see. Now the sewing machine is not the only machine whose motive power is given by the alternate action of the feet. There are hundreds of machines set going by the *treadle*, and used by both sexes; for, let it be observed, if the requisite movements irritate the female, they must of necessity, from the conformation of the organs involved, do so much more to the male. Let us ask, then, the turners, the potters, the grinders, the jewellers—let us ask the women who for ages have used the common spinning-wheel, or who have been condemned to the treadmill, whether any such effects are known? Is the use of the Rantoone or Velocipede objectionable on this score? Nay, does the friction of a long walk do so? Can a young lady blow the bellows of an organ or harmonium without fear? Are such things heard of in America, the fountain-head of these machines? We can only say that Americans in London are surprised and disgusted at the accusation. Of course, women who sit long at these machines, or at any other kind of factory work, cannot be exempt from the influences of close confinement, bad ventilation, and irregular living; but we would respectfully call on the propounders of this new phantom piece of etiology to tell us in what greater proportion women who work at sewing machines are liable to these most common infirmities of their sex, above other women who get their bread by other sedentary occupations?

FROM ABROAD.—THE CHOLERA AS OBSERVED AT ROUEN AND PARIS—CONDITION OF NURSE-CHILDREN IN FRANCE.

At the last meeting of the Academy of Medicine M. Leudet gave some account of the cholera as observed this year at Rouen. About 300 cases occurred in the town, and of M. Leudet's 69 patients at the Hôtel-Dieu he lost 38; while, in the epidemic of 1849, of 167 patients treated at the same establishment 89 died. The disease proved especially fatal to patients of more than 40 years of age. There was no instance of a case arising within the walls of the Hospital, although no isolation of cholera patients took place. As at Paris this year, the disease assumed an adynamic form. In a certain number of cases there was but little vomiting, and this rapidly subsided. The suppression of evacuations, so far from indicating improvement, was the commencement of an adynamia which proved gradually fatal.

M. Besnier (*L'Union Méd.*, October 18), alluding to the cholera as observed in Paris, remarks that the epidemic of 1866 was clearly distinguished by its mode of progress from the epidemics of 1849 and 1854, the evolution of which was infinitely less rapid. In this respect it resembled that of 1832, which attained its culminating point in less than a fortnight. It has been also generally remarked that the attacks were more sudden, *cas foudroyants* more numerous, and consequently that the mean duration of the disease was shorter, and that the results were more fatal. One peculiarity which seems to have been specially characteristic of the epidemic of 1866, distinguishing it not only from other epidemics of cholera, but also from all other epidemic diseases, was that the gravity of the disease did not diminish in the same proportion as did the number of the persons attacked; so that quite recently, when the number of cases admitted into the Hospitals had become considerably reduced, cases were met with just as refractory to treatment and as rapidly fatal as during the height of the epidemic. Nay, more, the mortality actually increased while the number of cases diminished. Thus, of 166 cases treated at the Hôtel-Dieu from July 13 to August 7—*i e.*, 25 days—the general mortality was from 54 to 55 per cent., while of 126 cases treated from August 8 to September 7—*i.e.*, 30 days—the mortality rose to 58 or 59 per cent. Another peculiarity of the present epidemic has been the comparative rarity of premonitory diarrhœa, this having been several times absent in series of cases.

The Academy of Medicine has just commenced a discussion upon a subject of great interest and importance in France—viz., the system of hireling nursing, which so extensively prevails in that country. This has been shown to be alike fatal as regards the unfortunate infants (the "petits Parisiens," as they are termed in nursing phraseology) who are sent annually into the country to be nursed, and the children who are abandoned by those of the nurses who resort to Paris for employment. The children who are sent away under the auspices of the Public Assistance are much better off than those who are paid for or promised to be paid for by their parents, for they are under an efficient system of surveillance, which prohibits great abuses arising. But those children for whom nurses are provided at the private bureaux are the victims of neglect and ill-treatment, no means of supervision being organised, and the parents too often neglecting or being unable to perform this duty. Indeed, in some cases they abandon them to the nurses until they are old enough to do something for their living, when they claim them *in formâ pauperis*, and the law allows them to take them away without reimbursement. A society has of late been organised in Paris for the protection of infants and effecting a surveillance of the nurses; but the evil has become so gigantic that it evidently calls for additional legislative measures; and as it is represented now as one of the main causes of the slow rate of increase of population that prevails in France, it is not unlikely that some new remedy may be tried. Great difficulties exist in the matter, for in point of fact very good regulations do exist, but they are ill-observed; and short of rendering the supply of nurses a huge monopoly in the hands of the Public Assistance, which is naturally regarded by many as very objectionable, the course to be pursued is anything but clear. Certainly the new-born infant has much to struggle against in France, for scarcely is it born when it has to be bodily transported to the registrar of births, no matter at what distance or in what weather, and is then, at least in the cities, at once consigned to the care of a hireling nurse, concerning whose capabilities, honesty, and sanitary condition only the most meagre information can be obtained, if indeed it is sought for. The abuses which often result are represented as frightful; and some writers go so far as to say that three-fourths of the viable children born in the cities of France die before they are a year old, the remainder being more or less enfeebled owing to the indifference of their mothers and the carelessness and cupidity of their mercenary nurses.

The Cholera in Edinburgh.—Since the opening of the Cholera Hospital on the 9th inst., there had, up to Sunday night, been thirty-nine cases admitted, and of these twenty-seven had proved fatal, and only seven cures had as yet been reported. There had also been a good many cases in private practice of cholera and severe diarrhœa, occurring under apparently favourable hygienic conditions, and not exempting either any district of the town or any class of the community.

CHOLERA LITERATURE.

The problem which the third Commission of the International Sanitary Conference had to solve was the prevention of any further invasions of Indian cholera into Europe and the indication of practicable measures adapted to the accomplishment of this end. As a preliminary matter they first considered the relative inconvenience to trade of an invasion of cholera, or of restrictions of the nature of quarantine, and arrived at the conclusion that the latter are less injurious on the whole than the inconvenience which an outbreak of cholera is sure to give rise to; and they came to the further conclusion that such restrictions are likely to be less onerous and more efficacious in preserving Europe from invasion. the nearer to the cholera centre that they may be applied. The following are the points to which their attention was directed:—

1. Measures which should be taken in India.

The Commission consider that it is not an impossibility to extinguish cholera in India as a spreading or invading malady, but to this end the disease has to be further studied in order to ascertain the special conditions which produce and maintain cholera as an endemic disease, and the relations which exist between endemic cholera and epidemic explosions of the malady. At the present time we are not certain that we know all the localities where cholera is endemic. But, besides discovering this, there will have to be studied the peculiarities of the soil in such localities, and whether these localities have any exclusive characteristics in respect of situation, the dwellings of the people, or certain customs newly contracted. It would be a matter for study whether, where cholera is endemic, the principle of the disease is regenerated spontaneously outside the human frame—as, for instance, whether it is a product of some peculiar form of organic decomposition, or whether, once produced, it is regenerated by the human system alone, the soil and all upon its surface constituting merely more or less favourable receptacles in which it is preserved, and from which it is disengaged. Another question would be whether every epidemic has its origin in an endemic centre.

They consider that an effort should be made to lessen the number of pilgrims, by requiring them to obtain before their departure an authorisation, which should only be granted on proof being given that they had sufficient means to provide all that is necessary for the voyage; that a sanitary police should be instituted at all places of pilgrimage, and that it should comprise all the hygienic measures which are now in force, and those of which experience has shown the value; and lastly, that in the event of cholera breaking out among the pilgrims their return should be prohibited until the epidemic has completely ceased, and all have undergone a process of disinfection.

They are of opinion that, in order to prevent the exportation of cholera out of India by sea, the "Native Passenger Act" of 1858 should be applied indiscriminately to all flags and in all countries, and be rendered more perfect as respects its sanitary provisions; and that every ship leaving an Indian port should be furnished with a bill of health from a sanitary authority constituted for this purpose, which authority should also see to the carrying out of the regulations pertaining to the embarcation of the pilgrims They think, too, that inquiry should be made as to the possibility, in the event of an epidemic at any place, of suppressing, postponing, or restraining the embarcation of pilgrims at that point, and whether, as is done by the Dutch Government, it is practicable to require every Mussulman pilgrim to prove that he has the means to defray the expenses of his voyage, and to support his family during his absence.

2. Measures which should be taken in the countries intermediate between India and Europe.

First, with regard to the importation of cholera from India by sea.—They consider that a most important step would be the institution of a sanitary establishment at the entrance of the Red Sea; but the practical difficulties which surround the project are such as to throw serious doubts upon its realisation. Two ends have to be attained; the one being a strict surveillance over vessels entering the Red Sea, and the other the establishment of a quarantine station, all the requirements for which are not easily found combined. They suggest the Isle of Perim as adapted for the one purpose, but not for the other; as a quarantine station where vast numbers of pilgrims may have to be detained and supplied with provisions, they suggest either Bab-el Mandeb or some part above the Straits. Any such establishment would of course involve much expense, and a military and naval force sufficient to insure proper respect, and they suggest that these expenses should be shared by the Powers interested, and be placed under the superintendence of a mixed council of delegates from each Power. The sanitary condition of every ship entering the Red Sea should be investigated, and either authority should be given to prosecute the voyage, or the ship be detained if considered dangerous. They suggest that the regular packet boats, even if they have cholera on board, should not be interfered with, but that some specific guarantee should be given to undergo quarantine at a place to be assigned them. [To this part of the Report Dr. Dickson appends the following manuscript note:—The British Commissioners object to the establishment of any international sanitary commission in the Red Sea, and they deem the Egyptian administration fully capable to carry out quarantine measures; they, moreover, believe that the Mohammedan pilgrims will more readily obey these measures when imposed by a Mussulman authority than they would when enforced by Christians. They consider Perim to be objectionable as an intercepting station for vessels entering the Red Sea, because small coasting craft would elude the vigilance of the authorities placed there; and it would not prevent cholera getting into the Hedjaz by land from the ports of Arabia. Mocha might answer well as another station for the interrogatory of pilgrim ships. The establishment of a lazaretto at the entrance of the Red Sea is a very difficult matter to accomplish, on account of the want of safe anchorage and the hostility it would probably encounter from the natives. The island of Camaran appears to be a much more eligible locality for a lazaretto for pilgrims. The French possession of Obokh outside the entrance of the Red Sea was named as another locality, but nothing is known of this spot.]

Next comes the question of the Mecca pilgrimage:—1. They consider that a sanitary staff should be established on the shore of the Red Sea. They recommend that a sanitary officer should be placed at Koseir, at Souakin, and Massoawh on the African side, and two for the present on the Arabian coast—viz., at Djeddah and at Yambo. They propose the establishment of two lazarettos—one at El-Wesch, for pilgrims exclusively; the other at Tor, for other persons arriving with cholera. An international commission sitting at Suez should exercise power over the sanitary arrangements on the Red Sea. [Dr. Dickson sends us a note to the effect that Tor is too far from Suez for the application of a quarantine on mail packets arriving from Bombay; it would therefore be preferable to choose for the purpose some spot nearer Suez—as, for instance. Agoon Moosa.] 2. The Mohammedan law provides that any one undertaking a pilgrimage must have the means of prosecuting it and of providing for his family during his absence; they recommend that this law should be enforced. 3. The Ottoman Government has already taken steps to insure certain hygienic precautions in the places to which pilgrimages are made, such as for the removal of filth, the establishment of an *abattoir* outside the town of Mecca, the removal to a distance of the pits for the maceration of the hides, the establishment of a Hospital for mendicants, the cleansing of the reservoirs used for ablution and for drinking purposes by the pilgrims, as well as of the conduits which bring drinking water into Mecca, the providing of *latrines* and pits for the reception of blood of slaughtered animals, and of others at a distance for the reception of refuse. The Commission suggest that not only should these precautions be continued, but also that means should be taken further to improve the water supply, and that the *latrines* should be of a temporary character and daily disinfected with quicklime and filled up, that the offal of the sacrificed animals should be also disinfected, and that steps should be taken to obviate crowding and its results, and the separation of the sick in the event of cholera breaking out. In addition to this, that a good supply of corn should be kept in store for necessitous cases. 4. With respect to those measures which should be adopted in the Hedjaz to prevent the importation of cholera, they are not clear, on account of the difficulty of barring the passage of pilgrims by land. 5. Should cholera break out in the Hedjaz, they recommend the temporary interruption of all maritime communication between the Arabian and Egyptian shores of the Red Sea, and the adoption of other precautions fully detailed in the Report.

Thirdly.—They considered the measures which should be taken in the event of an eruption of cholera in Egypt, and ask whether it would not be well to break off temporarily the maritime communications of Egypt with the whole basin of the Mediterranean. This is intended, Dr. Dickson informs us, only to apply to goods and passengers, but the proposal was opposed by the British Commissioners, on the ground that arrivals from Alexandria could very well perform a quarantine at Malta, or upon some other island in the Mediterranean, before proceeding on their course to Europe.

But cholera may not only be transported from India by sea, but also by land, and hence the Commission had to consider the precautions necessary to be taken in Persia to prevent the incursion from India, and by Turkey and Russia to prevent invasion from Persia.

1. As to Persia. They regard the prevention of invasion of Persia as scarcely practicable, and hence almost entirely confine their recommendations to the measures which should be taken in the interior of the kingdom, and especially to the control which should be exercised over the pilgrimages, the most important of which is that to Kerbelah and other places in the vicinity of Bagdad. One custom especially is referred to—namely, that of carrying with them the corpses of their relatives and friends for burial near the tombs of their venerated imams. The result is that a most offensive odour constantly accompanies the caravans; and although it has not been observed that it has ever occasioned an outbreak of cholera, yet the miasm is calculated to increase its severity should it occur. On two occasions the Persian Government have prohibited pilgrimages during times of cholera, and the Commission think that a rule of this kind should be established permanently. They further recommend that the exhumation and transport of dead bodies should only be permitted during the winter months, and then only after embalming and enclosing in metallic cases.

2. As to the Turco-Persian frontier. Along the whole line of this frontier a line of sanitary posts of defence are established, but various circumstances, especially the great extent of this frontier, render importation very difficult to obviate. The Commission urge the improvement of their means of prevention upon the Ottoman Government, and, especially when invasion is threatened, that a friendly concurrence of action should take place between the governors of the provinces of Bagdad and the Persian authorities, so as to control the pilgrimages to the holy places.

3. As to the importation of cholera by way of Bokhara and the steppes of Tartary, the Commission believe there is little to fear. It is true that in 1829 cholera crossed the steppes from Bokhara to Orenburg, but it extended no further. Still this fortunate result may not occur again should a similar event happen, and they recommend vigilance on the part of the Russian authorities as the safeguard.

4. As to the Russo-Persian frontier. Three times has cholera been imported from Persia into Russia (putting the Orenburg invasion out of the question), viz., in 1823, 1830, and 1847, and on the two latter occasions it has extended in Europe. Its line of passage was very circumscribed, being bounded by a zone upon the south-west shore of the Caspian Sea; on arrival at the delta of the Kour it showed a tendency to spread to the north and to the west, in order to reach Europe both by the way of the mouths of the Volga and by the Black Sea. It is upon these spots, then, that the Commission think that the vigilance of the Russian Government should be concentrated.

REVIEWS.

Lectures on Animal Chemistry, delivered at the Royal College of Physicians. By WILLIAM ODLING, M.B., F.R.S. London: Longmans. 1866.

THESE lectures form a valuable little volume on Animal Chemistry, which differs from other works on this subject in not being a mere chemical history of the various substances found in the body, followed by an account of the mixtures of these which go to make up the several animal fluids. This work is an attempt to explain the nature of some of the changes which take place in the organism by the light of the chemistry and physics of the present day.

In the first lecture the author refers to the vast development of chemistry within the last fifteen years as necessitating his dwelling upon some of its rudimentary principles. He then points out the difference between chemistry and physics, and describes chemistry as *statical* and *dynamical*—a distinction, we venture to believe, he would hardly adhere to on further consideration. He next illustrates the advances which have been made in our knowledge of animal products, such as leucine, tyrosine, etc. Then comes a clear account of the "chemical types of construction and double decomposition"—hydrochloric acid, water, ammonia, marsh gas—with a tabular arrangement of the elements in accordance with these types.

The mutual relationship of these typical combinations is explained and illustrated; and as it is by a consideration of these relations that the complex constitution of organic bodies is unfolded, we shall extract some of our author's remarks:—"If under suitable conditions we act upon hydrochloric acid HCl, water $H(HO)$, and ammonia $H(H_2N)$, by a metal—say potassium—we obtain in each instance the same reaction. The one atom of potassium turns out one atom of hydrogen; and from each of the three molecules, instead of chloride, oxide, and nitride of hydrogen, we get the chloride, hydrate, and amide of potassium, which may be regarded as compounds of potassium K, with the residues or radicles, chlorine Cl, eurhyzen HO, and amidogen H_2N. Hence caustic potash and potassamide may be regarded as the hydrated and ammoniated forms of chloride of potassium; and in a similar manner to nearly every chloride. mineral or organic, simple or compound, there exists a corresponding hydrate and amide, bearing to it the same relation that caustic potash and potassamide respectively bear to chloride of potassium. If we consider chloride of potassium, for instance, as a compound of metallic potassium with the residue from hydrochloric acid, we can in the same way consider caustic potash as a compound of the metal with the residue from water, and potassamide as a compound of the metal with the residue from ammonia; and hereafter it will appear that some of the most complicated products of tissue metamorphosis are but the ammoniated forms of comparatively simple bodies, just as potassamide is the ammoniated form, and caustic potash the hydrated form, of chloride of potassium. . . . Physiologists regard urea as a complex organic body altogether *sui generis*. The chemist regards it merely as the ammoniated form of one of the simplest mineral acids; for the relation of phosgene $COCl_2$ and carbonic acid $CO(HO)_2$ to urea $CO(H_2N)_2$ is identical with that of hydrochloric acid and water to ammonia, and with that of chloride of potassium and caustic potash to potassamide. . . . The formula $C_2H_5ClSO_3$ represents chlorethyl-sulphurous acid, and if in this body we replace the atom of chlorine by an atom of peroxide of hydrogen, we obtain isethionic acid; whilst if we replace it by amidogen, we obtain *taurine*—taurine, isethionic acid, and chlorethyl-sulphurous acid being respectively the amidated, hydrated, and chlorinated forms of one and the same body, being, in fact, ethyl-sulphurous varieties of hydrochloric acid, water, and ammonia. You perceive that this establishment between most complicated and diverse bodies of relations similar to those subsisting between hydrochloric acid, water, and ammonia—between chloride of potassium, caustic potash, and potassamide—furnishes us with a key to the metamorphoses of a whole host of organic compounds; but the generalisation is capable of being pushed much further."

In Lecture II., after indicating the characteristics of organic bodies, the author considers at some length the doctrine of residues touched upon in the extract we have made from the first lecture. In the majority of instances a minute chemical examination of apparently complex organic bodies has led to the conclusion that they are formed, so to speak, by the agglomeration of certain less complex molecules; not, however, of complete molecules, but only of residues of them. Thus *stearin* is not formed of the complete molecules *stearic acid* and *glycerine*, but of residues of these; for if we add the number of elementary atoms in three equivalents of stearic acid to those in one equivalent of glycerine, we shall get more atoms than are in the molecule of stearin—six atoms of hydrogen and three atoms of oxygen more. "Organic chemistry has achieved this great analytic success. The compounds so elaborately built up by living organisms it has taken to pieces, and the pieces themselves it has arranged into natural series and groups of associated bodies, into series of bodies of similar constitution and similar properties that are not susceptible of mutual metamorphosis, and into groups of bodies of dissimilar constitution and dissimilar properties that are susceptible of mutual metamorphosis."

The nature of organic *groups* and *series* is then discussed, and the lecture concludes by an application of the preceding principles to unravel the constitution of hippuric acid, urea, taurine, etc. Hippuric acid $C_9H_9NO_3$, for instance, may be considered to consist of a residue of benzoic acid and a residue of glycosine, which last consists of a residue of ammonia and a residue of glycolic or oxiacetic acid.

Lecture III. is devoted to the consideration of the destruction and construction of the complex molecules, the residues of which, by their various combinations, form tissue products in vegetables and animals. Oxidation tends to reduce complex molecules to others containing fewer and fewer carbon and hydrogen atoms; deoxidation tends to combine separate carbon and hydrogen atoms into complex molecules. The synthesis of organic bodies is then dwelt upon. The belief that organic bodies cannot be built up by chemical means has no longer any foundation, so that the power of forming them is not peculiar to living matter.

Lecture IV. consists of a further account of the synthesis of organic bodies, which will be found very interesting, and of an endeavour to demonstrate that in the characteristic actions of vegetable and animal life there are only the ordinary forces of nature working in a manner strictly parallel to that in which they do in the inorganic world—that there is no peculiar vital force. The forces exerted in our bodies are, as in all nature, derived from the sun in the form of heat and light. Be life what it may, it is not a generator, but only a transformer of force. To profess to explain the distinctions existing between living and dead matter by declaring the former to be possessed, and the latter dispossessed, of vital force, is only another mode of saying that dead matter differs from living matter because it is dead, while living matter differs from dead matter because it is alive.

We believe that Dr. Odling's clear treatment of this subject will serve to largely diminish the number of those who still hold the doctrine of the existence of a vital force. His readers will find that he describes the body as an organic machinery for *transforming* force, and that he confines himself exclusively to the consideration of the *nature of the results* of this transforming capacity. Although so much to be desired, we possess no knowledge at all of the cause of this transforming power, just as we know nothing at all of the cause of the transforming capacity of water, by which it converts heat into mechanical force in a steam-engine. Such capacities are, however, passive properties of bodies; there is nothing *dynamical* or pertaining to force about them, any more than there is about the filtering property of a layer of sand. In the number of this journal for April 7, Dr. Beale has opposed Dr. Odling's views concerning vital force. If our readers bear the above remarks in mind, we venture to believe they will be better able to judge how far Dr. Odling's position has been successfully assailed.

In Lecture V. the source of muscular force is shown to be proximately the oxidation of muscular tissue, and ultimately solar heat and light. The latter part of the lecture is occupied by an account of some of the products of oxidation of muscle and other nitrogenous bodies.

In the last lecture the most important and interesting of the oxidation products of nitrogenous tissues, *uric acid*, is dwelt upon at some length. We fear, however, that the chemistry of uric acid must prove too complex to be satisfactorily followed out by any but those tolerably familiar with recent researches in organic chemistry and the higher principles of the science. The remainder of the lecture consists of remarks on the nature of alterative medicines, which are surely somewhat out of place, more especially in a short course of six lectures on animal chemistry. The probability that alterative medicines owe much of their power to a susceptibility of undergoing at one time oxidation and at another deoxidation, is pointed out. Bodies having great chemical stability seem to prove, as a rule, inactive as alteratives.

Dr. Odling's lectures will require some thought and study for their mastery by those who have not hitherto attended much to the relations of chemistry and physics to vital phenomena. But we think they will be found to be a great boon to those of our Profession who are anxious to become familiar with the present state of these relations. To the advanced Medical student they will serve to show the great importance in the study of vital actions of a knowledge of the sciences of natural philosophy and chemistry.

Cancer: a New Method of Treatment. By W. H. Broadbent, M.D., Assistant-Physician and Lecturer on Physiology at St. Mary's Hospital. John Churchill and Sons.

We must welcome with pleasure any new or feasible suggestion for combating this most fearful disease, especially when it proceeds from such a Physician and physiologist as Dr. Broadbent, and which is, as he remarks, "a step towards rescuing cancer from the domain of irregular practice and secret remedies."

The main facts of the present pamphlet were brought before and discussed at a late meeting of the British Medical Association. The treatment consists in the hypodermic injection of dilute acetic acid into the tumour, "with a view of altering its structure, modifying its nutrition, and retarding or arresting its growth."

The reasons selected by Dr. Broadbent for the adoption of acetic acid are as follows:—

"(1.) This acid does not coagulate albumen, and might, therefore, be expected to diffuse itself through the tumour. The effect would thus not be limited to, and concentrated in, the point infected.

"(2.) If it entered the circulation it could do no harm in any way, either as a poison or by inducing embolism.

"(3.) Acetic acid rapidly dissolves the walls and modifies the nuclei of cells on the microscopic slide, and might be expected to do so when the cells were *in situ*.

"(4.) It had been applied with advantage to open cancer and to cancerous ulcerations."

In the cases appended to the pamphlet the injection of the acid appears certainly to have had the effect of breaking down and locally destroying the mass, and at all events of preventing a rapid return, but the instances are of such recent date that we can as yet hardly give any definite surmise as to the eventual recurrence of the disease. The opinions held as to the curability, operative or otherwise, and as to the recurrence or non-recurrence of cancer, are so varied and opposite, that we must be simply content, for the present, with watching with interest an important addition to the treatment of this formidable malady.

Atlas of Surgical and Typographical Anatomy. By B. J. Beraud. Illustrated by one hundred plates, drawn from nature by M. Bion. Translated by Robert Thomas Hulme, M.R C S. Baillière. (To be completed in ten monthly parts.)

We have the greatest pleasure in being able to give a very favourable criticism upon the second monthly number of this valuable work.

Typographical anatomy is a subject which has not, to our knowledge, been sufficiently followed out in works in our own language, and therefore an English translation of M. Beraud's atlas and letterpress must be highly acceptable to those who are constantly in the habit of requiring anatomical and surgical knowledge for the performance of operations, but who cannot readily refer to the dead body for such information.

The comparative difficulty of obtaining subjects enough in our own dissecting rooms, renders this method of relative anatomy almost impossible. We are compelled to teach or learn from some two or three cut-and-dried processes. and of course cannot afford out-of-the-way sections and views of regions which we should like to see or make, owing to this dearth of material. On the Continent, however, and especially in Paris, no such obstacle exists, and so naturally works like the present are developed there.

In order to meet our want, the present work has been translated and published at a cost within the reach of all. It is of course not so comprehensive, but to the generality of students far more comprehendable than Pirogoff's splendid atlas, and far more useful as to regional anatomy, with a view to operative proceedings.

The present portion of the series is devoted to the regional and typographical anatomy of the orbit, and part of the nasal fossæ, taking, firstly, the superficial and deep dissections of the parts above and below the eye in the forehead and face; then the eyelids their structure and anatomy; after that a series of views of the muscles, vessels, nerves, and aponeuroses of the orbit, the lachrymal apparatus, and the eye itself; and concluding with the walls of the orbit, their connexions, and the nasal fossæ—twenty plates in all. At the foot of the explanation of each plate is a short digest of "Applications to Pathology and Operative Surgery," which, though somewhat sketchy, appears to be very carefully and instructively written. The translation is very accurate, and the plates particularly good and clear, and reflect the greatest credit upon M. Bion, who, in addition to being a draughtsman, is a thorough artist. We sincerely trust that the publication will be appreciated, as one better calculated to supply the place of actual dissection we have rarely seen.

Army Medical Department. Statistical, Sanitary, and Medical Reports. Vol. VI., for the year 1864. [Presented to both Houses of Parliament by command of Her Majesty.]

We have repeatedly called the attention of our readers to these annual reports. The present volume is even above the ordinary standard of excellence. It is not to be imagined that because it is an Army report it concerns military officers only. On the contrary, it embraces contributions upon every branch of Surgical and Medical practice, and records facts having such a bearing upon Medical theory that any person who desires to keep pace with the times should be acquainted with them.

Amongst the rest there are published, in anticipation of the volume due for the year 1865, several most admirable, full, and comprehensive reports upon cholera, for the issue of which we must all feel just now indebted to the heads of the Medical Department. Thus there is a report of the cholera epidemic of 1865 in the Maltese islands, by Surgeon A. Leith Adams and Assistant-Surgeon Welch, of the 22nd Regiment; a report upon the cholera epidemic in Gibraltar during the summer and autumn of 1865, by Deputy-Inspector-General Rutherford; an extract regarding the outbreak of cholera in the ship *Renown* on her passage from Gibraltar to the Cape of Good Hope, by Deputy-Inspector-General Lawson; a narrative of the outbreak of Asiatic cholera on board the steamship *England*, by Deputy-Inspector-General Barrow; a report upon the station and vicinity of Neemuch with reference to outbreak of cholera in the left wing 45th Regiment from May to October, 1865, by Assistant-Surgeon Martin, 45th Regiment; and a paper on the outbreak of cholera at Baroda, by Dr. Belcher, Assistant-Surgeon R.A. Now, the great value of these papers lies in the illustration which they afford of the origin, mode of outbreak, and progress of the disease in a variety of circumstances and climates; and hence they are useful in confirming or in modifying the conclusions we civilians may be disposed to draw from our own observations at home. If we were required to select one of these reports as more perfect and exhaustive than another, we should pick out the Maltese report by the Surgeons of the 22nd Regiment. It is a treatise in itself, and is accompanied with a map showing the progress of cholera from Alexandria to the various places in the Mediterranean basin, marking the dates on which the first cases appeared in each locality; several charts showing the temperature of the body at various stages of the disease in thirteen cases taken indiscriminately; and another chart exhibiting the diurnal fluctuations of cholera during the epidemic in Malta and Goza, with the daily variations of meteorological conditions.

We cannot refrain from quoting the summary of the observations made by these officers. Their conclusions are as follow:—

"1st. That cholera is communicable by human intercourse, and that this was the chief method of its diffusion throughout the Mediterranean basin. 2nd. That the influence of the atmosphere was limited merely to the effects produced upon the conditions that favour the propagation and production of the virus by great variations of temperature. 3rd. That wherever the disease lingered, there were clearly defined and remediable causes for the same. 4th. That it is impossible to draw a distinction between cholera and choleraic diarrhœa; that both are essentially due to the same virus and require the same precautions against communication. 5th. That when cholera is rife in the neighbourhood of a barrack, and the amount of diarrhœa is increasing among the inmates, it is advisable not to wait for cases of the disease to occur, but at once to effect a removal to an encampment on an isolated, dry, airy site, which, as was clearly proved, need not be at any great distance. 6th. The 'atmospheric constitution' or epidemic or pandemic wave influence, as alleged causes for the propagation of cholera, receives no corroboration from any meteorological or other appearances displayed during this epidemic. The whole evidence diametrically opposed such an opinion."—P. 349.

There are, moreover, a Report of the Progress of Hygiene, by Professor Parkes; Remarks on the Cystoid Worms, by Staff-Surgeon Dr. Davidson, of Netley; Some further Observations on Pandemic Waves, by Deputy Inspector-General Lawson; A Sketch of Sherman's March, by Dr. Muir, C.B., Inspector-General; and a variety of reports of most interesting Medical and Surgical Cases, such as, if they had occurred in London Hospital practice, would have naturally found a place in the several Hospital reports, by the side of which these Army reports ought to stand on the Surgeon's or Physician's book-shelves.

PROVINCIAL CORRESPONDENCE.

IRELAND.

DUBLIN, October 24.

Our small island, as you are aware, has been the scene of an attempt by the late Government, in its dying hour, to foist upon an unwilling people sundry rules, in the form of a supplemental charter, totally at variance with the ideas of two-thirds of those of all religions who have been educated in the Queen's University. It will be remembered that this charter passed in a packed senate only by a majority of two, and although the whole subject, which we have not space at present to enter upon, will be brought under the notice of the legislature, we cannot but regret that any Government, more especially one assuming the cognomen of Liberal, should have renewed in this island differences which the progress of opinion with us, as well as elsewhere, was fast removing. We have that confidence in the good sense and improved feeling of all classes here, that induces us to think that, though it may cause for a time some unpleasantness, yet that the unmistakable sound which the Convocation has given will induce the Parliament to do away with the obnoxious work of the late administration, and leave learning to settle among us untrammelled by a measure upon which Convocation has so decidedly pronounced.

It is not a little remarkable that the intelligence to which, in conjunction with certain advantages derived from our insular position and the general prevalence of health-giving Atlantic breezes, we may, under Providence, in no small degree attribute our immunity so far from the prevalence of cattle disease, has done little or nothing for us in providing measures for the prevention of the access and diminution in the severity of cholera.

There have not been wanting among us those who strongly represented to those having authority in such matters the vast importance of surveillance of all arrivals in our ports of vessels from infected districts and of all cases that might unfortunately occur among us; but many difficulties inseparable from the great liberty enjoyed by British subjects prevented the adoption of any such measures.

And now that the disease has obtained a footing among us, certain sanitary defects and habits of life common with too many of our lower orders render them an easy prey to the ravages of the disease.

Most unfortunately, the keeping of pigs and cows in many of the most densely peopled parts of our city, as well as in our provincial towns and villages, is carried on to an extent and under circumstances most prejudicial to health. The storing of manure is also an important, though now illegal, custom also largely pursued by certain classes. These conditions, coupled with ill-ventilated tenements, the waking of the dead, and intemperance, which is undoubtedly practised at present by many with the idea of driving away the fear of cholera, with a diet too often deficient in quality if not in quantity, render the prevalence of cholera at present a matter requiring much vigilance on the part of the proper authorities.

We deeply regret to add that a few of the guardians of the South Dublin Union, to whose care the management of affairs is much left by the bulk of the representatives of the several wards, have, for some reason or other, not held out encouragement to the Medical staff, and have not put on a sufficient number of Medical officers to meet the present emergency; thus, while Kingstown, Carlow, Waterford, and many other places have followed the example set by the authorities in France and with you in England, our Medical officers have been offered the munificent sum of three shillings and threepence per day for day and night duty—that is, for sitting up every third night and being on constant day duty.

We trust that the majority of the guardians will at once speak upon this matter, as it is too bad that men who have risked their life, largely lost their private practice, and who are frequently obliged to obtain sick leave, should be obliged to seek in other quarters for some recompense for the constant labour, risk, and sufferings which they undergo in their duty, which is at present so onerous.

We regret we cannot compliment our municipal authorities on their share in attempting to lessen the present evil; civic feasts and political meetings but too much engross their time and thoughts while sickness increases among us.

GENERAL CORRESPONDENCE.

DIAGNOSIS OF HYSTERIA.

Letter from Dr. C. B. Garrett.

[To the Editor of the Medical Times and Gazette.]

Sir,—Will you excuse my supplementing Mr. Skey's admirable lecture on hysteria with a few observations on the diagnosis of that pantomimic malady? The morbid sensibility would appear to be pretty much (if not wholly) located in the skin. Take a case of excruciating pain under the left mamma. It is possibly put down as pleurisy, or, at least, pleurodynia. Say that there is a doubt. Well, then, either pressure or a sponge dipped in hot water applied to the spine about the lower dorsal vertebræ will cause an immediate and excessive aggravation of the original lateral pain; but pinching up the skin is an infallible diagnosis, for the pain becomes instantly intolerable. The same thing happens to the joints and any other parts where hysteria may develope itself; so also with those puffy tumours so often seen on the abdomen. I do not allude to the spine in these instances, but the pinching up the skin over the peccant part.

A curious case came under my care a few years ago, in which there was a lamentable failure in diagnosis. A young lady of the sort of temperament described by Mr. Skey took a long ride on horseback. On the following day her left elbow became painful and puffy. Leeches, etc., were had recourse to, and, as always happens in hysteria, depletion made matters worse. Blisters, mercury, and iodine followed in mournful succession. In about thirteen months after its first appearance she came under my care. The elbow was of great size and the joint immovable; the case was clearly hysterial. Having administered the mist. ferri co. and tinct. valerianæ ammon. for a few days, I thought the time had arrived for attacking the anchylosis. My patient was placed erect in a chair; I supported the elbow with my right hand, and administered a smart blow or slap with my open left hand on her wrist. She screamed out that something had snapped, and freedom of motion was instantly restored to the elbow-joint. It would appear that in these cases there is a powerful antagonistic action set up by the flexors and extensors against each other, which is obstinately maintained till the balanced opposition is overpowered. Thus luxation of the lower jaw often takes place in hysterial subjects during gaping. I may here add that in the management of hysteria we must make it our motto to use kindness without sympathy, firmness without harshness.

I am, &c.

Hastings, October 13. C. B. Garrett, M.D.

ON CONDY'S FLUID IN DIPHTHERIA.

Letter from Dr. N. Evans.

[To the Editor of the Medical Times and Gazette.]

Sir,—An excellent paper, by Dr. Newman, in the *St. Bartholomew's Hospital Reports*, vol. ii., just issued, entitled "Practical Observations on Diphtheria," induces me to send the report of a case which lately occurred in this neighbourhood. A lady in weak health, suckling her second child, sent for me on the evening of August 21. She had been seized in the morning with shivering, soon followed by undue heat and slight sore-throat. As she had had attacks of feverish cold while nursing her other child, and had had one with this, I did not think seriously of it; but the throat soon grew worse. The right tonsil swelled; a viscid, glairy mucus was freely secreted; the glands at the angles of the jaw were enlarged and tender, and on the evening of the 23rd a thin diphtheritic exudation appeared at the top of the tonsil, and in the course of the 24th and 25th spread over the right tonsil and uvula to the left tonsil, in spite of the free application of caustics and constant gargling with dilute hydrochloric acid. There was the usual debility of diphtheria, which was not benefited by port wine and liquid food given very frequently.

At 9 a.m. on the 26th, after a bad night, the patient was worse in every way. Pulse 158, very weak; deglutition, which had not been difficult before, was now very painful. She had given up talking for two days, and now could hardly utter a word, but there was no cough nor other sign of laryngeal affection. The secretion from the nose was tolerably free, but not abundant. A good view of the throat could hardly be obtained on account of the strings of mucus, which could not be spat out nor removed, hanging from the palate to the tongue, but the thin whitish exudation was general over the fauces, and with a pair of forceps I took a small cast off the uvula. Caustics were of no use, and almost in despair of saving her life I gave the following gargle—potass. chlorat. ʒj.; Condy's fluid ℥ss.; aquæ ℥ vss.—and ordered wine and food, as much as could be taken, at very frequent intervals, with bark and chloric ether every three hours, as steel disagreed. At 1.30 p.m., when I went again, the improvement was so marked as to appear, as my patient said, magical. All pain about the throat was gone; she could speak and swallow with comparative ease. The pulse had come down thirty beats in the minute, and improved in power. The gargle had been used four times; the first time was in my presence, and it certainly, even then, had a very decided effect in clearing away the viscid mucus which was so troublesome before. From this time the improvement was rapid. The exudation diminished at once, and in twenty-four hours no trace was left. In two days she was moved from her room, and on September 3 (nine days from the commencement of the improvement) was taken 100 miles to the seaside, and bore the journey very well. Since then, though recovery has been slow, there have been no marked signs of defective innervation to retard her progress.

Under the head of treatment, Dr. Newman says, "In diphtheritic affections, just as in the wider division of fevers, a cure is not to be sought for. As yet no specific has been found which will enable the Medical attendant to cut short the attack." And though he further on remarks, "As an addition to the patient's comfort, the permanganate of potash (Condy's fluid) with six or seven parts of water may be employed to cleanse the mouth from stringy saliva and offensive discharges" in cases where fœtor exists from decomposition of the secretions or from commencing sloughing, yet this case may fairly, I think, be cited as a cure by that useful antiseptic. The improvement was so rapid and marked that it could not have been due to the food, stimulants, or internal medicines, which the patient had been taking as freely for forty-eight hours previously as on the morning of the 26th. That it was due to the gargle and nothing else I feel as convinced as the patient herself and her friends are. Of course it is unfair to draw deductions from a single case, nor do I expect that Condy's fluid will always, or even often, prove successful in diphtheria. Nothing but further experience can prove the utility or otherwise of any drug; still what has happened once may occur again, even in such an unmanageable disease as severe diphtheria frequently is. I shall try the gargle again, and watch its action with interest in future cases; and though it may fail to stand the test of further experience in practice, the principle of its action is intelligible. It can do no harm, and need not interfere with the use of other and more potent applications if they are thought necessary. I am, &c.

Cheshunt, Herts, Oct. 11. N. Evans.

P.S.—I should add that the case was also satisfactory in proving the connexion between defective drainage and diphtheria. The floor of the water-closet underneath the pan was quite rotten, and the ceiling of the passage below, when broken down, was found to be black with sewage infiltration, while the odours which came back from the out-door drain—a badly trapped and badly flushed brick one—rendered the kitchen and scullery almost unbearable at times after the house had been shut up during the night. It was a wonder that no other members of the family were attacked.

THE CHOLERA IN ST. PETERSBURG AND CRONSTADT.

Letter from Dr. T. B. Belgrave.

[To the Editor of the Medical Times and Gazette.

Sir,—Having recently visited the principal military and general Hospitals in St. Petersburg with a view more particularly to investigate the Medical treatment of cholera in that capital, it occurs to me it may not at the present juncture in England be uninteresting to record some of the information elicited during my visit.

I may remark that independent inquirers visiting the institutions for the sick in the Russian metropolis are uniformly treated with a frankess and obliging courtesy such as the travelling Physician experiences but under exceptional circumstances in other cities in Europe.

The present epidemic in the St. Petersburg district commenced on June 26 (new style), and from that day to September 16 the statistics are as follow:—

	Male.	Female.	Total.
Cases	11,308	4,503	15,811
Cures	8,748	3,466	12,211
Deaths	2,228	965	3,193
Remaining under treatment.	332	72	404

The numerical disparity in the sexes among the ordinary population of the city, arising from the concentration of troops within its boundaries, accounts for the preponderance of male cases in the returns.

A feature in the Russian statistics of importance to the English student is, that all fatal or severe cases of so-called "choleraic diarrhœa" are registered under the term "cholera."

The Profession in Russia recognise three varieties, or rather stages, of the disease—"cholerina," the "mild choleraic diarrhœa" of British writers; "*choléra algide*," the most common form of the disease, characterised by rice-water evacuations, a certain duration, etc.; and "*choléra foudroyant*," which usually runs an exceedingly rapid, and, in St. Petersburg, an invariably, fatal course.

All cases of cholerina are treated by district Physicians appointed for the purpose.

This form of the malady, when treated early, rarely lasts longer than three days; when, however, the symptoms continue longer, or increase in severity, the case is considered one of fully developed "cholera," figures in the statistics as such, and is sent to the Hospital.

The treatment of the disease has varied much in the majority of the Hospitals and with most of the Physicians, but is now becoming a matter of routine. The treatment by medicine may be classed under three heads—the "stimulant," the "astringent," and the "depurative." The external treatment for promoting reaction, or giving relief to pain, consists in the application of either extreme moist heat or extreme moist cold, the latter plan is becoming the favourite, and is even used in a limited manner in some Hospitals where its application to the entire body is much disapproved of.

Friction of the whole body, with or without the aid of stimulating liniments, is in general use, but appears to be invariably had recourse to in those Hospitals where the warm bath is most in favour.

At the commencement of the epidemic the astringent plan was the most general treatment, but, with the exception of the large Hospital at Cronstadt, where they have lost the almost incomparably (with reference to the Government of Petersburg) large proportion of 50 per cent. of their cases, this method is now the least in favour.

The routine treatment of "cholerina" begins with one or, at most, two doses of castor-oil, it being so frequently found that the Russian peasant attacked with choleraic diarrhœa has been guilty of some obvious indiscretion in diet. After the action of the aperient, a mixture is prescribed consisting in each dose of 20 minims each of the compound tincture of valerian and Hoffmann's anodyne, with from 3 to 5 minims of the tincture of opium. Cataplasms, turpentine stupes, and the other ordinary applications are employed to relieve abdominal pain; and a milk diet is ordered. This treatment is reported to check a majority of the cases; but when it fails, some prescribe vegetable astringents, and some the tincture of the sesquichloride of iron in small doses.

"Choléra algide" is treated for the most part by a combination of the methods previously named, being either stimulant and astringent, or stimulant and depurative. The muriated tincture of iron is almost the only astringent used in this stage of the disease. It was introduced by Dr. Lhankiu at the Abouchoff Hospital, and is rising in favour. This Physician states he has found the vomiting and hiccup yield more speedily to this than to any other remedy, and that it exerts a powerful salutary influence on all the symptoms. His statistics, however, do not support the favourable opinion he expresses. It appears that out of 194 patients (women) treated chiefly by this remedy, 71 were cured, 99 died, 24 being still under treatment. Of 449 men received into the same Hospital during the same period, and subjected to the same remedy, 180 were cured, and 221 died, 48 remaining under treatment. In estimating these results we must bear in mind that from the situation of this Hospital it receives the poorest patients and the worst cases. The external treatment was by warm baths at 32° Reaumur, frictions with stimulating liniments, and subsequently enveloping the patient in hot flannels.

In the "Abouchoff," cold is only occasionally applied, in the shape of a fomentation, to relieve epigastric distress. It is more common to employ a combination of the astringent and stimulant plans; the medicines of the latter class being tincture of musk, Hoffmann's anodyne, and the compound tincture of valerian, an addition being often made of a little opium and nux vomica.

The plan most generally followed throughout the city appears to be a combination of the stimulant and depurative systems. Camphor and calomel, each in doses of two grains, are given every two or four hours, the above stimulating draught being also given at as frequent intervals.

The calomel is said to be prescribed only with a view to stimulate the function of the liver, and is continued until the colour of the fæcal evacuations shows a return of the biliary secretion.

It has been remarked that salivation is a rare consequence of the treatment.

All Practitioners permit their patients to drink at pleasure, and "ice pills" are given them in great abundance to swallow, for the purpose of checking the vomiting and hiccup.

The external treatment adopted in the Mary Hospital, the "first military Hospital," and several others, is truly what is known as the "wet pack" by hydropathists; only the Russian Physicians steep the sheets in ice-cold water, or in freezing mixtures. It is reported to be very efficacious in inducing reaction, and is usually applied about three hours, being often followed up by "frictions." When there is great difficulty in establishing reaction, musk in doses of three grains is given and wine. Where there is much difficulty in breathing, dry cupping to the nape of the neck is had recourse to. Nearly every case of "cholera foudroyant" has proved fatal. Bleeding, transfusion of saline solutions or of calves' blood, electricity, and a variety of remedies, ordinary and extraordinary, have been tried with little avail. The transfusion of blood, however, has given some slightly encouraging results.

If the official returns be correct, and the efficacy of their treatment can be estimated by the recoveries which have taken place, the St. Petersburg Faculty may be justly congratulated on the results of their labours, though they lament the nearly total loss of those patients who have suffered from one form of the disorder. 12,214 recoveries out of 15,811 cases is an infinitely more favourable proportion than London or any large city subject to the epidemic can boast of.

I am, &c.
T. B. Belgrave, M.D. Edin.
London, September 24.

ABSCESS OF LUNG FROM THE PRESENCE OF A FOREIGN BODY.

Letter from Dr. A. R. Croucher.

[To the Editor of the Medical Times and Gazette.]

Sir,—I am induced to send the history of the following case, as I believe it to be of rare occurrence:—A youth aged 17 years was walking with a piece of straw in his mouth on June 15, 1865, and met an acquaintance with whom he entered into conversation. Suddenly the straw was drawn into the trachea by inspiration. The lad was nearly suffocated, and was with difficulty restored at a neighbouring drinking-fountain, where he ejected a piece of straw. He went home and complained of a tickling cough, for which three days after he was treated by a chemist, but continued his occupation as a messenger in the docks. On June 25 I was sent for, as he had rapidly become worse, and found him suffering from severe dyspnœa, purulent expectoration, which was of most offensive odour, and decidedly suffering from extensive empyema of the right lung. The poor fellow died on the 27th.

I made a post-mortem examination, and found about fifteen ounces of pus in the right pleura, the lower part of the right lung being broken up into an abscess; and on cutting into the lung at a point about three-fourths of its length, in the centre, or rather upper part, of the abscess, I found the cause of all the mischief in the shape of an ear of barley $1\frac{2}{8}$ inch long, which fully accounted for the severity of the symptoms at the latter stage, although I was surprised to find that during the first few days there had been comparatively little irritation, or not so much as might have been expected from the presence of a foreign body of that irritating nature in the lung.

I am, &c.
Wellclose-square. A. R. Croucher, M.D.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, October 16.

Dr. Peacock, President.

Report read by Dr. Wilson Fox on the pathological appearances observed in the stomach and intestines of patients dying of cholera, by himself and Dr. Ringer, at University College Hospital, during the autumn of 1866.

The changes in the stomach and intestines differed in most cases but little from those described as existing in previous epidemics. The stomach, as a rule, showed the signs of acute catarrhal inflammation, as evidenced by general fine injection of the membrane, which only in one or two cases had proceeded to slight degrees of ecchymosis. The internal surface was usually covered with a very thick tenacious mucus, in which casts of the secreting glands could sometimes be found. The membrane was almost universally swollen, softened, and of a dead opaque white colour. Enlargement of the solitary glands in the neighbourhood of the pylorus was very common, proceeding in one case to such an extent as to resemble the *cutis anserina*. The affection of the lymphatic apparatus throughout the whole gastro-intestinal membrane was very marked. In some cases, instead, of isolated solitary glands, scattered thickly through the tissue of the stomach, the whole of the submucous tissue and that intervening between the secreting tubules was swollen, white, and infiltrated with cell elements and structures, resembling those which ordinarily occur in the solitary glands and Peyer's patches of the intestines.

The solitary glands in the duodenum were almost always enlarged, and in some cases attained the size of hemp seeds, and were seen forming thick clusters in this portion of the intestine. The same enlargement was marked through the whole of the small intestine, but the enlargement of Peyer's patches at the end of the ileum was in one or two cases so great as almost to resemble the stage of medullary swelling of typhoid fever.

In the colon the solitary glands had frequently given way at the surface, forming small pits or depressions, and in one instance, a child, the same appearance was observed in the stomach, producing an appearance corresponding with the follicular erosion of some authors. As a rule, the changes in Peyer's patches were less marked than in the solitary glands, but the membrane over these was frequently more injected than other parts, and in some cases markedly softened, in comparison with that in other portions of the canal.

Opacity of the villi and studding of these with minute white points arising from distension of the lacteals were almost invariably observed. The mesenteric glands presented very variable degrees of alteration. Sometimes they were little affected; in some cases they were hyperæmic, swollen and milky, and softened. The degrees of hyperæmia of the intestinal canal varied considerably and to a greater proportionate degree than did those of the stomach, where the injection was, as a rule, finely capilliform, and where in only one case was ecchymosis observed.

In a few instances the membrane was generally pale throughout, and in some that had presented the most severe symptoms during life the colon was found pale and almost unaffected. In others, fine punctiform injection occurred universally, while in some this was limited to the membrane covering Peyer's patches.

Ecchymoses were not unfrequent, and were in one case so thickly scattered over the surface of the small intestine as to give it the appearance of having been finely sprinkled with Cayenne pepper.

In three cases only had the hæmorrhage under the submucous tissue occurred to any marked extent, and in all of these its chief seat was in the colon and cæcum, where large tracts of the submucous tissue were infiltrated with blood, which in one case had caused sloughing of the mucous membrane. In a fourth case blood was found in the small intestines, but without any visible trace of its source being discoverable.

In most of the cases where the colon had suffered, minor degrees of the same condition were also found in the small intestine. The total number of cases where hæmorrhage or ecchymosis was observed amounted to 6 out of 34 post-mortem examinations. Ulcerations were noticed in three cases independently of other alterations; in a fourth they were associated with tubercle, where they presented the somewhat interesting feature of various degrees of cicatrisation occurring without contraction. The tuberculising process appeared in no respect to be affected by the choleraic changes.

In two of the others they existed to a very marked degree, and affected chiefly the cæcum and colon. In one case the change was in portions apparently induced by sloughing caused by the extravasation of blood below the mucous membrane; but independently of this there were numerous ulcerations affecting large tracts of the cæcum, which gave no traces of such an origin, and which bore a strong resemblance to another case where diphtheritic sloughs, ragged, blackened, and ash-grey, occurred in sizes varying from a shilling to half-a-crown in the cæcum and first part of the colon.

In a third case, where the colon was unaffected, ulceration was seen commencing over Peyer's patches in the lower portion of the ileum.

In another case it was interesting to remark that in a patient who was admitted in the early part of the epidemic with symptoms of choleraic diarrhœa the disease subsequently ran the course of dysentery and ended fatally, and in her nearly the whole of the large intestine presented an appearance of dysenteric ulceration, scarcely a trace of healthy mucous membrane being left.

Microscopic examination of the stomach and intestines revealed but little that is new. The glands of the stomach invariably presented the appearances of acute catarrhal inflammation. The epithelial cells were enlarged, grouped in masses, and in some places irregularly distended the tubes, while in other parts they were broken down, and the tubes were only filled with a granular detritus. Very similar changes were found in the intestinal glands, in which the author could not discover any of the shrinking or shrivelling of the tubes described by one recent distinguished observer, though he thought it possible that this condition might represent a further stage of the breaking down of the epithelial cells which he had observed, though he was certainly of opinion that in the majority of cases the tubes were rather distended than otherwise. Nuclei were often seen crowded in great numbers between the tubes; but in parts where these were not present, the tubes were very closely packed together, pressing upon one another.

The villi were often found denuded of their epithelium, but the author of the report was not disposed to lay much stress upon this appearance, as it is so common a result of post-mortem changes. In addition to this, fatty degeneration was often seen in the deeper structures of the villi.

OBITUARY.

JOHN SOUTHEY WARTER, M.D.

Our readers will not fail to remember that in our impression of last week we published an elaborate original communication by the above lamented Physician, entitled "Remarks on the Healthy Temperature of the Body, and the Effects of Drugs upon it."

We deeply regret to have to announce his untimely death, which occurred on the 20th instant.

Dr. Warter was the second son of the Rev. John Wood Warter, Vicar of Tarring, near Worthing, well known as son-in-law of the poet Southey, and an author of considerable repute. At an early age he manifested a marked taste for studies in natural science and mechanical philosophy. He was educated at Marlborough College. After leaving school, being in weak health, he devoted much of his time to experimental natural philosophy, especially to chemistry and electricity, his powers of handiwork being so great that he invariably made and finished his entire apparatus. His taste was then directed to the study of Medicine, and he commenced his career as a student in the College of St. Bartholomew's Hospital. Here he worked with singular assiduity and perseverance for two years. He next proceeded to Edinburgh, with a view to taking his degree in Medicine. Here, also, he soon became known as a diligent worker and original observer, and in two years' residence took several University prizes and distinctions. He wrote his inauguration thesis upon the *Vis Medicatrix Naturæ*, which received special commendation from the Medical Faculty, and took his degree with honours in August, 1864.

He then returned to London, and recommenced his work now chiefly in the Medical wards of St. Bartholomew's Hospital, where and in the dead-house he was wont to spend many hours of each day. Early last year he became a Member of the College of Physicians, and commenced to practise as a Physician. Every day, and often twice a day, he visited the Hospital. Last year he published a small work entitled, "Observation in Medicine, or the Art of Case-taking," an admirable handbook, intended chiefly for clinical clerks. He paid great attention to the use of the thermometer in disease, and has published a very valuable article on this subject in this year's volume of the *St. Bartholomew's Hospital Reports*. Indeed, we fear we may say he contracted his fatal illness while continuing his thermometrical observations on fevers. On the 10th inst. he had a rigor, and on the next day he took to his bed. Feeling so weak, and discovering from the records of his thermometer, which he used for himself three times each day, that he was on the threshold of some serious illness, he sent for his loved friend and teacher Dr. Jeaffreson to come and see him. In a short time it was obvious that he was suffering from a very severe attack of typhus fever. His case assumed the form that might be expected in a man of delicate constitution and overwrought nervous system, but in spite of all that skill and affectionate nursing could do, he gradually sank on the tenth day of his illness.

Thus has passed from our ranks one of the most promising and energetic young Physicians. The Profession can ill afford to lose such men. Dr. Warter was a man of stern principle, of sterling honour and integrity; further, he was a true Christian and a high-minded gentleman. Of untiring energy even in matters which to others might seem trivial, his spirit of independence was such as would take nothing at second hand, and if his enthusiasm for a moment disturbed a fellow-worker, all feeling of annoyance would melt as a better acquaintance made everybody who was brought into contact with him more sensible of his zeal and search after truth. For the last few years he had sadly overworked his powers, never could be persuaded to take sufficient relaxation, and, unfortunately for himself, would never exceed a most abstemious diet.

As Medical President of the Abernethian Society at St. Bartholomew's Hospital this session, it would have fallen to his lot to preside at the opening meeting on the evening of the day on which he was taken ill (an event to which he had looked forward with considerable pleasure); and on the Thursday evening preceding his death he was to have read a paper on "Typhus and Typhoid Fevers"—subjects which he had been studying hard for some months past.

None who knew him will hear of his early death without the deepest sorrow, and many of his contemporaries will find that they have lost a kind and genial friend.

Dr. Warter, we believe, was in his twenty-seventh year.

BOOKS RECEIVED.

Sanitary Reform: a Model Deputation. By a Member of the Sanitary Reform Association.

*** This is a humorous production, representing an imaginary colloquy between the Bishop of London and Mr. Secretary Walpole. The author lays himself open to the suspicion that he belongs to that numerous class who refuse little reforms of details, which may be effected off hand, and would grow into something better in time, and who sigh for sweeping revolutions. Nevertheless, what he says is true, and is besides so notorious that it needs no Royal Commission to make it more so.

"At present, valuable ground is covered with wretched, dilapidated hovels, in each room of which men, women, and children of all ages huddle together; fever is always present in these dens; morals, temperance, health, decency, to say nothing of Christianity, are impossible. We are breeding disease, and pauperism, and sin of all kinds. Then we build gaols, and reformatories, and workhouses, and asylums; better, Sir, build, decent dwellings for our people, proper baths for them to wash in, and then, maybe, they would come to our churches to worship God, and thank their rulers. They do nothing of this kind now; they drink and blaspheme, they talk sedition, they are disaffected, they prey on society, and are a source of the utmost danger to us all."

Dr. Lankester's Journal of Social Science. October, 1866.

*** Contains an article by Mr. Rumsey, entitled, "Comments on the Sanitary Act, 1866." The Sanitary Act is defective, because the people, high and low, are but half educated as to the subject matter of it. Laws are vain without public opinion to back them; and without this there is no chance of obtaining the enlarged and improved legislation which Mr. Rumsey advocates.

The York Star. From the Asylum, Bootham, York.

*** Contains an account of the visit of the Prince and Princess of Wales to York, a paper on Hindoo life, and various other matters. Considering the interest which this paper carries with it, not only to the outer world, but to the inmates of that asylum, we hope it may go on and prosper.

The Madras Quarterly Journal of Medical Science. London: R. Hardwicke, 192, Piccadilly.

*** This journal has already done much to advance our knowledge of Indian Medicine. Among other valuable matters this number contains a report on the "Leaves of Cinchona," a paper on the "Oxidation of Organic Impurities in Water," a report on "Fever in Bangalore," and, to show that modern scientific Surgery is practised in India, a "Case of Ovariotomy," by Dr. Harris.

The Southern Journal of the Medical Sciences. New Orleans: 112, Gravier-street.

*** The first number has just reached us; (the motto is "*Mens invicta manet*"). We have a paper on "Typhoid Fever in Louisiana," an account of the "Sanitary State of New Orleans," and a report of a case where the greater part of the upper jaw was removed: also an article on sunstroke.

The Ceylon Medico-Chirurgical Journal for the quarter ending June, 1866. Published by D. Sylva, Colombo, Ceylon. No. I.

*** Contains papers of interest to all Medical men, as well as to those whose duty confines them to that quarter of the globe. Among others we would notice the first cases of ovariotomy and of excision of the elbow-joint performed in the colony, a case of hepatitis ending in paraplegia, etc.; but we should be still more delighted should we, in the next number, find an account of some of those diseases which, we might almost say, are peculiar to Ceylon, and about which we Englishmen, who have never gone beyond our own doors, know so little.

The Westminster Review for October, 1866. London: Trübner and Co.

*** Contains a very sharp review on Pike's "English and their Origin." Two other articles are devoted to the subject of our North American Colonies.

The True and the False Sciences. A Letter on Homœopathy. London: John Churchill and Sons, New Burlington-street.

*** No doubt, to all right-thinking Medical men, the subject of this letter is most distasteful, and its discussion, we might say, aggravating; but we really fear that its votaries are far beyond, or it may be beneath, argument. When a system which carries contradiction on its face numbers so many followers, we can only shrug our shoulders, and wonder at the gullibility of mankind.

Medical Missions. An Address delivered in the Corn Exchange, Chester, by Dr. Hibbert Taylor, of Liverpool.

*** Contains an outline sketch of the past history and present condition of some of our principal Medical missions. Considering the valuable results likely to accrue from these, we are glad to do anything which will advance their cause.

The Baths of France. By Dr. Edwin Lee. London: John Churchill and Sons.

*** A new edition of Dr Lee's well-known work, which he has now separated into three distinct portions. Two, already published, refer to the baths of Germany and Switzerland; the present, to those of France alone. In this shape it may be more useful to visitors, to whom it further recommends itself by its neatness and completeness in every way.

Notice sur les Eaux Thermales Sulfureuses de Schinznach (Suisse, Canton d'Argovie). Par le Dr. Aimé Robert. Strasbourg: au Bureau de la Revue d'Hydrologie Médicale.

Notice of the Warm Sulphurous Waters of Schinznach. By Dr. A. Robert. Strasburg: Published at the Office of the "Review of Medical Hydrology."

*** Were we to select some fearful punishment for a malefactor, we should compel him to read through and through all the Continental works on the subject of medicinal waters: we are sure no one could survive it. One knows exactly before he looks into one of these works what to expect; and certainly we have not this time been disappointed. At once the best and the worst we can say of this volume is, that it is like its predecessors.

On the Mercurial and Non-Mercurial Treatment of Syphilis. By R. W. Dunn. London: R. Hardwicke.

*** This is another pamphlet on the subject of syphilis. "No mercury" is its author's motto.

Guy's Hospital Reports, 1866. London: John Churchill and Sons.

*** Under its new editorship (that of Dr. H. Fagge and Mr. Durham), this time-honoured publication continues its successful career. We would draw particular attention to a careful set of experiments on poisoning with digitaline.

MEDICAL NEWS.

◆

Royal College of Physicians of London.—At a general meeting of the Fellows held on Wednesday, October 17, the following gentlemen were reported by the Examiners to have passed the Primary Examination for the Licence:—

Charles Holte B. B. Allen, William Anderson, Albert Henry Baines, ames William Barry, John Bately, Frederick Henry Blenkinsop, Clement Dukes, Branford Edwards, Alfred Henry Garrod, James Frederick Goodhart, and Saltern George Littlejohn.

King and Queen's College of Physicians in Ireland.—The following gentlemen obtained the Licence in Medicine during the months of July, August, and September, 1866:—

D. Anderson, Carlow; G. Archdall, Bundoran; D. Bastable, Kanturk; J. G. Beatty, Dublin; J. T. Begge, Dublin; J. H. Benson, Dublin; T. Bolster, Mallow; A. L. Brown, Boyle; R. B. Carey, Newtownbarry; F. Carr, Inver; G. N. Dunn, Delgany; C. Fair, Oughterard; R. G. Fitzgerald, Dublin; W. T. Harding, 2nd Battalion 19th Regiment; M. Healy, Askeaton; D B. Hewitt, Dublin; Henry Hyde, London; R. J. Ireland, Galway; J. M'Swiney, R.N., Walmer; Jerome Morgan, Rathgar; Bernard Neary, Dublin; D. L. Olden, Dungarvan; D. O'Reardon, Ranelagh; T. O'Reilly, Kilkenny; R. W. Pendleton, Trim; A. Ratigan, Rostrevor; James Ridley, Fullamore; G. Rougham, Ballinrobe; Christopher Watson, Dublin.

The following gentlemen obtained the Midwifery Diploma during the same period:—

Despard Anderson, John G Beatty, Anthony L. Brown, Richard B Carey, Fenwick Carre, Thomas Lurgan Cuppage, Richard N. Dunn, Campbell Fair, Dominic L. Olden, Daniel O'Reardon, Thomas O'Reilly, Richard W. Pendleton, Alfred H. Ratigan, J. Edenderry Saunderson, Christopher Watson.

Apothecaries' Hall.—On Thursday, October 18, the following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise:—

Edward De Morgan, 91, Adelaide road, N.W.; Arthur George Mickley, Buntingford, Herts; Robert Henry Kinsey, 9, Thurlow-road, Hampstead.

The following gentlemen also on the same day passed their First Examination:—

Burford Norman, Guy's Hospital; John Ayleven Bevan, Guy's Hospital; James Baynard Saundry, Guy's Hospital

APPOINTMENT.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Buchanan, James, A.M., M.B, and C.M Glasgow, has been appointed Assistant-Physician to the Perth District Asylum, Murthly.

BIRTHS.

Brown.—On September 5, at Anarkullee, Lahore, Punjaub, the wife of B. Brown, M.D., of a son.

Bull.—On October 21, at Hereford, the wife of Dr. Bull, of a daughter.

Chaldecott.—On Oct. 18, at Beomond, Chertsey, the wife of T. A. Chaldecott, M.D., of a son.

Garron.—On Oct. 17, at 84, Harley-street, W., the wife of A. B. Garrod, M.D., of a daughter.

Smale.—On October 18, at 59, Piccadilly, Manchester, the wife of H. C. Smale, L.D.S., R.C.S.E, of a son.

Swallow.—On October 19, at 61, Kennington Park-road, the wife of J. D. Swallow, M.D., of a daughter.

Worley.—On Oct. 15, at New North-road, Hoxton, the wife of W. C. Worley, L.R.C.P., of a daughter.

MARRIAGES.

Allan—Munro.—On October 17, at Edinburgh, A. Allan, M.D., Assistant-Surgeon, 17th Regiment, to Margaret Birt, eldest daughter of W. Munro, Esq., of Swordale, Ross-shire.

Cookson—Lloyd.—On Oct. 17, at St. Mary's, Stafford, S. Cookson, M.D, to Maria, youngest daughter of E. Lloyd, of Stafford.

Lewis—Greene.—On October 20, at St. Mark's, Hamilton-terrace, F. Lewis, M.R C.S., of 27, Dorset-place, Dorset-square, to Ellen Quarrill, stepdaughter of Henry Greene, of Greville-place, Kilburn Priory, and King William-street, London Bridge.

Read—Lawrie.—On Oct. 16, at Trinity Chapel, Ravensbourne-park, Lewisham, C. Read, M R.C S.E., of Tillingham, Essex, to Margaret, youngest daughter of James Lawrie, Esq., of 17, Rutland-park-villas, Perry-hill, Sydenham.

Stillwell—Morel—On Oct. 18, at St. Michael and All Angels', Paddington, G. J. Stillwell, M D, of Moorcroft, Uxbridge, to Emily, eldest daughter of the late T. Morel, Esq., of Notting-hill.

DEATHS.

Calvert, G., M.R.C.S.E., Staff-Surgeon at Bathurst, river Gambia, on August 31, aged 30.

Duchesne, R., M.D. St. And., of Clifton-lodge, Woodford, at Brighton, on October 22, in his 41st year.

Evans, G., M R C S E. (late of H.E I.C.S., Bengal), at Gloucester-place, Portman-square, on October 22, in his 69th year.

Heise, W, M.D. Gott., of Kinnitty, King's County, on Oct. 9, aged 84.

Holt, J., L.R.C S. Edin., of Glasgow, Surgeon, R.N., on Oct. 7.

Houghton, W., Surgeon R.N., at 4, Thornhill-villas, Radipole, near Weymouth, on October 18, aged 61.

Morgan, C R, M.R.C.S.E., of Barnstaple, Devon, on Oct. 28.

Shooter, Charles, M.R.C.S.E., L.S.A., of Scarborough, late of Altrincham, Cheshire, on October 18, aged 31.

Sparrow, R. P., M.D, R.N., at Dover House, Southsea, on October 19, aged 46.

Walter, J. S., M.D. Edin., M R.C.P. Lond., of 41, Queen Anne-street, Cavendish-square, at West Tarrington-vicarage, near Worthing, on October 20, in his 27th year.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Caistor Union.—Mr. John Locking has resigned the Tealby District; area 14,044; population 1956; salary £24 per annum.

Cardigan Union.—Mr. John Llewellyn has resigned the Third District: area 38,413; population 5306; salary £40 per annum.

Christchurch Union—Mr R. S J. Stevens has resigned the Eastern District; area 14,311; population 4321; salary £70 per annum.

Henley Union.—Mr. William W. Milligan has resigned the Nettlebed District; area 8084; population 1976; salary £80 per annum.

APPOINTMENTS.

Calne Union.—Robert Willmot, M R.C.S.E., L S A, for the Union.

Easingwold Union.—James W. Smith, M.R.C.S.E., L R.C.P., to the Coxwold District.

Halifax Union.—Francis E. Macaulay, M.R.C.S.E., L.S.A., to the Ovenden District.

Thirsk Union.—James W. Smith, L.R.C.P., M.R.C.S.E., to the Kilburn District.

Vacancy.—An Assistant Dental Surgeoncy to the Dental Hospital of London is vacant.

Downing College, Cambridge.—Mr. T. W. Danby (first in the Natural Sciences tripos, 1864) has been appointed Superintendent of the Laboratory and Lecturer in Geology and Mineralogy; and Mr. J. B. Bradbury (second in the Natural Sciences tripos, 1864) has been appointed Lecturer in Comparative Anatomy and Physiology at Downing College.

Royal College of Surgeons, Edinburgh.—At the annual meeting of this College, held on the 17th inst., the following office-bearers were elected for the ensuing year:—*President:* James Dunsmure, M.D. *Treasurer:* John Gairdner, M.D. *Secretary:* James Simson, M.D. *Librarian:* Archibald Inglis, M.D. *President's Council:* James S. Combe, M.D., Andrew Wood, M.D., Robert Omond, M.D., Benjamin Bell, James D. Gillespie, M.D., James Spence. *Ex. Off.:* John Gairdner, M.D. *Examiners:* James Simson, M.D., Richard Huie, M.D., William Dumbreck, M.D., Archibald Inglis, M.D., Andrew Wood, M.D., Robert Omond, M.D., James Dunsmure, M.D., Peter David Handyside, M.D., James D. Gillespie, M D., Henry D. Littlejohn, M D., Patrick H. Watson, M.D., David Wilson, M.D. *Assessors to Examiners:* James S. Combe, M.D., James Syme, William Brown, James Spence. *Conservator of Museum and Registrar of Students' Tickets:* William R. Sanders, M.D. *Officer:* John Dickie.

King and Queen's College of Physicians in Ireland.—At the annual stated meeting of the College, held on St. Luke's day, October 18, the following officers, etc., were elected :—*President :* Dr. Stokes, M D., LL.D., D.C.L., F.R.S., Regius Professor of Physic in the University of Dublin, and President elect of the British Medical Association. *Censors :* Dr. Moore, appointed *Vice-President* by the President, Dr. Belcher, Dr. Jennings, and Dr. Gordon. *Treasurer :* Dr. Dwyer. *Registrar :* Dr. Atthill. *Honorary Librarian :* Dr. Belcher. *Representative on the General Medical Council :* Dr. Aquilla Smith. *Professor of Midwifery :* Dr. Sinclair. *Professor of Medical Jurisprudence :* Dr. Travers. *Examiners in Midwifery :* Dr. Johnston and Dr. Ringland. The following were elected *Fellows :* Dr. Henry Edward Eastlake and Dr. Henry Haswell Head. *Honorary Fellows :* Dr. A. Trousseau, Professor of Clinical Medicine, Paris ; Dr. Alexander Tweedie, F.R.S. ; Sir Thomas Watson, Bart., M.D., LL.D., D.C.L., F.R.S., President of the Royal College of Physicians, London.

Cholera in the Tyneside Towns.—Cholera prevailed very much last week in North Shields, in the respectable quarters of the town, and there were from twenty to thirty deaths, mostly among sickly females, and diarrhœa has been very general. The river side and the districts occupied by the poorer classes have been free of the disease, however, and it is thought that the water supplied to the special district has something to do with the outbreak. Cholera has appeared in isolated cases in Newcastle, Gateshead, and South Shields, but not to an alarming extent. The Tynemouth Poor-law Guardians have employed a properly qualified professional man to make an analysis of the North Shields water.

Cholera, or Poisonous Shell-fish (?).—On Wednesday last week, a party consisting of Mr. and Mrs. Forbes, Mr. and Mrs. Alfred Darling, Mr. and Mrs. Merry, and Mr. Thomas Bain, supped in Ibrox-terrace, Glasgow, on Norwegian crab. On Thursday morning they were all seized with choleraic symptoms. Mr. Bain died on Thursday night, at a quarter to 12 ; Mrs. Darling died at 11 on Thursday night, and Mrs. Merry at 9 on Friday morning. Mr. and Mrs. Forbes and Messrs. Darling and Merry have been only slightly affected, and are all recovering. The Glasgow correspondent of the *Scotsman* says : "Dr. Moore, who attended Mrs. Darling and Mrs. Merry, gives it as his opinion that those ladies died of cholera, and Mr. Bain's case has been reported at the Sanitary-office as one of choleraic diarrhœa. Dr. Gairdner, who was called in at Ibrox-terrace, will not take it upon him to say whether the deceased ladies died from cholera traceable to no particular cause, or whether the deaths have resulted from the eating of the crabs. The latter supposition seems strongly supported by the coincidence of so many persons being seized who had been members of the same supper party. Mrs. Forbes has also been ill, but we understand is recovering."

That Wicked Cholera !—The *Nobles' Gazette*, of Moscow, contains this curious phrase :—" Until now, thanks to the visible protection of Providence, the cholera had only attacked the lower classes ; but at present the terrible scourge attacks the middle classes, and even the nobility."—*Express.*

Recognition of Medical Services.—We are glad to see that the exertions of Mr. Davies, the Medical Officer of Health for Bristol, and his colleagues, to preserve that city from cholera have met with public acknowledgment. At the meeting of the burgesses of St. Augustine's Ward, on Wednesday, October 17, on the motion of Mr. Brookman, seconded by Mr. Attwood, a vote of thanks was passed to the Board of Health and their staff of officers, the name of Mr. Davies being especially mentioned, for their exertions to stamp out the cholera from the city.

Scurvy.—This disease appears to be still flourishing in our merchant navy without let or hindrance. Six large vessels from ports east of the Cape are known to have come up the river during the last ten days with scurvy patients on board, some of these cases being of the worst possible description. The Sailors' Home in Well-street, and the *Dreadnought* Hospital Ship, have each received their quota, and we are informed by the Superintendent of the former establishment that sailors, with (as he expresses it) "legs fearfully swollen and teeth all loose," are frequently inmates of this home. It is obvious that the statistics of the Seamen's Hospital Society afford no adequate idea as to the actual number of cases imported, and that an accurate numerical return as to the victims of this disease would show how much good vital material is annually vitiated and destroyed in our mercantile marine.

Children's Hospital at Bristol.—A new Hospital for Sick Children and the Outdoor Treatment of Women has been inaugurated at Bristol. The following form the Medical staff :—Drs. J. Symonds and J. Beddoe (Consulting Physicians), Messrs. Chas. Greig and W. Ormerod (Consulting Surgeons), Dr. W. G. Carter (Physician), Messrs. T. G. L'Enardi Baretti, C. Steele, and Dr. E. Williams (Surgeons). The resident Medical officer is Mr. H. T. Hetling. A building known as Fort-house, Royal Fort, St. Michael's-hill, formerly the residence of Reynolds, the philanthropist, has been purchased and converted to the use of the institution at a cost of upwards of £1200.

The Beaney Defence Fund.—A Melbourne paper announces that a fund is being formed for the purpose of reimbursing Dr. Beaney, the defendant who was acquitted in the late action for criminal abortion in Melbourne. The following are some of the names in the list of gentlemen who receive subscriptions :—Drs. Crooke, Brunswick-street, Collingwood ; Stewart, Church-street, Richmond ; Girdlestone, Collins-street East ; Turnbull, Russell-street ; Reeves, Richmond-road ; Blair, Collins-street East ; Figg, Williamstown ; Hewlett, Gertrude-street, Collingwood ; and Curtis, Sandridge.

Medical Fees.—The tariff of charges adopted by the Medical Profession in the North Riding of Wellington may interest others than the residents of that locality, and we therefore give the items :—For a visit by day, $1 ; by night, $2 ; if out of the town or village, 50c. for each mile travelled by day, and $1 by night. Consultation fee, besides mileage, $2 to $5. Midwifery cases, from $5 to $20 (with mileage beyond the first two miles), according to the nature of the case, and with $2 extra if protracted beyond 12 hours, and $4 beyond 24 hours. Fracture of the upper extremities, $12 ; of the thigh, $8 ; of the leg, $5. Dislocation of the upper extremities, $5 ; of the lower, $8 ; of the hip, $20. Capital operations, $20. Extracting teeth, vaccination, and bleeding, 50c. Stethoscopic examinations, $1. Advice in office, $1. We fear the double fees for night calls may prevent patients from sending for aid at the earliest period of attack. But it would be well if this system of uniform charges prevailed everywhere, in order, if possible, to remove the temptation to employ an inferior man.—*Toronto Globe.*

The Annual Meeting of the West Kent Medico-Chirurgical Society was held on Friday evening, October 12, 1866, at the Royal Kent Dispensary, Greenwich-road. The following gentlemen were appointed officers of the Society for the ensuing session. *President :* David Hope, M.R.C.S. *Vice-Presidents :* Charles Nind, M.R.C.S. ; James Palfrey, M.D. *Council :* John Anderson, M.D. ; Samuel Henry Cornish, M.R.C.S. ; William Lockhart, F.R.C.S. ; John Nicholas Miller, M.D. ; Robert N. Mitchell, M.D. ; Arthur Roper, M.R.C.S. ; Robert Venables, A.M., M.B. *Treasurer :* Prior Purvis, M.D. *Secretary :* James Henry Allingham, M.R.C.S. *Librarian :* H. W. South Sturton, M.R.C.S.

Assaulting a Lunatic.—Two keepers at the Surrey County Asylum, named Henry Burton and Edwin Morgan, were tried at the Central Criminal Court on October 23, on an indictment that they, being attendants in a lunatic asylum, did unlawfully strike, wound, and ill-treat George Tite, a lunatic confined therein. They were also charged with a common assault. The evidence proved that Tite was a dangerous and violent lunatic, but it also showed that he had received injuries at the prisoners' hands. The jury found them guilty of a common assault. They were sentenced to two months' imprisonment with hard labour.

Use of Indigenous Plants.—Prof. Bentley, President of the British Pharmaceutical Conference, speaks forcibly of the value of botanical knowledge, and indicates the importance of some native plants which have been unjustly neglected for more pretentious, but not more useful, foreigners. The rhizome of the male fern, one of the commonest plants in this country, and one of the best anthelmintics, was for a long time almost lost sight of ; the mallow and marsh-mallow are most valuable demulcents ; the buckbean, centaury, and wild gentian are as good as the foreign gentiana and chiretta ; the indigenous purging flax, buckthorn, spurge, and hellebore might be used as well as more expensive foreign purgatives ; the tormentil and bistort are as good as catechu and kino ; the alkaloids of the willow and poplar might be substituted as tonics in many cases for quinine ; the sweet flag is a good aromatic tonic quite neglected ; and the cuckoo pint might give a supply of starch known as *salep*, and quite as good as sago.

University of Sydney.—By the last Australian mail we learn that at a meeting of the Senate of the University of Sydney, on July 18, Haynes Gibbes Alleyne, Esq., M.D., was appointed an Examiner in the Faculty of Medicine in that University.

Population in France.—The attention of several French writers has lately been turned to the subject of population in that country. It is said that while in the old countries of the European Continent the population increases but slowly, Russia and the United States, before a century is over, may each number a hundred millions of inhabitants. An increase at this rate would quickly overpeople France, and compel her superfluous population to emigrate, but still there is room in that country for more people than it contains. The investigations of political economists have shown France to be one of the European countries in which the increase is the slowest. A well-known writer on such subjects, Mr. Horn, lately elucidated the topic by figures, showing the following to be the annual augmentation on each million of inhabitants:—In the Kingdom of Saxony, 15,000; in England alone, 14,100; in Prussia, 13,900; in the United Kingdom, 12,600; in Denmark, 11,100; in Holland, 8700; in France, 4200: so that the increase in France is only from two-sevenths to one-third of what it is in Great Britain and Germany. It is, moreover, stated that the excess of births over deaths in France is only 11 per cent., while for Europe in general the average is from 40 to 45 per cent. It is interesting to seek the causes of this difference, and many writers have endeavoured to discover them. As the principal of those causes, Mr. Horn alleges the military conscription, which must unquestionably have its effect by condemning to a seven years' celibacy a large proportion of young Frenchmen belonging chiefly to the classes most prone to early marriages. At the same time, adds a writer in the *Times*, these men are released at the age of 27, so that too much importance must not be given to this. The other causes assigned are the clerical conscription (the celibacy of priests, monks, and nuns), the tendency of the rural population to crowd into the large towns, a tendency unnaturally augmented by the great urban works which, under the second Empire, have been constantly prosecuted in Paris and other cities; and, in the fourth and last place, the weight of taxation. This last cause can hardly be admitted as valid in a comparative statement, taxation being heavier in England than in France, and by various writers it has been denied that the other causes assigned explain to the full extent the evil complained of.

The following are the last week's Cattle Plague Returns.

—	1. Attacked.			Back cases reported in the week ended Oct. 13, 1866.	2. Result of reported Cases from the Commencement of the disease.				
	Week ended Sept. 29.	Week ended Oct. 6.	Week ended Oct. 13.		Attacked.	Killed.	Died.	Recovered.	Unaccounted for.
Great Britain .	40	32	11	4	253702	84992	124303	33413	10994

The Return shows that 11 attacks were reported to have occurred during the week ended October 13, being a decrease of 21 on the previous return.

Fresh outbreaks took place in 3 farms or places where cattle are kept; the number of such outbreaks in the previous week being 11. The number of healthy cattle slaughtered, to prevent the disease extending to them, was 3 during the week.

Since the commencement of the disease 51 in every 1000 of the estimated ordinary stock of cattle in Great Britain are returned as having been attacked.

The total number of sheep reported to have been attacked up to the date of this return is 6825. No cases have been reported during the week.

Note.—Two Inspectors who returned cases last week have not reported in time for this Return—viz., for the county of Chester, 1; and Stafford, 1. These Inspectors reported three cases last week.

Multiple Lipomatous Tumours.—M. Danez relates a curious instance of this observed in a man aged 68 who died of kidney disease in the Poitiers General Hospital. As many as 215 lipomata were counted, varying in size from that of a millet-seed to that of a fœtal head. One was as large as an infant's head; two equalled a fist in size; ten, a walnut; twenty-six, a hazel nut; the rest, a millet-seed. The face alone was exempt from them, and they were very unequally distributed over the body, the largest being placed under the left buttock. Several were incised, and found to consist only of adipose tissue. A short time before a case was also observed at the Hôtel-Dieu, Poitiers, on the person of a girl 12 years of age, which was curious as regards the size the tumours attained. These were three in number, the largest, placed between the two shoulders, weighing 15¼ kilogrammes, and the smallest, attached to the left shoulder, having acquired the size of the head of a fœtus at full time. The third was placed between the two others.—*Gaz. des Hôp.*, October 13.

Mortality of Children.—In England the proportion of deaths to 100 living amongst infants under one year is 17·03, in Scotland, 14·89. Discarding all lesser differences in these tables, the striking fact appears, that it is convulsions which is the chief cause of the very high proportion of infantile deaths in England as compared with Scotland. Thus, in England 35 infants died from convulsions in every 1000 infants living, but only 6 died in Scotland in every 1000 from the same cause. There is therefore something terribly faulty in the present mode of treating infants in England, and there is the most urgent necessity for something being done to arrest this fearful waste of human life; for if the English mortality from convulsions were reduced to the Scottish standard, 17,000 lives would be annually saved to England! These 17,000 infants, who annually die in England from convulsions above the Scottish proportion, are truly lives wasted, and their deaths are truly preventible deaths; and the saving of these lives would of itself lower the total mortality of infants in England to that of Scotland.—*Dr. Stark.*

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

The trial of Risk Allah Effendi is going on at the present time. We reserve our notice until its termination.

Hydrofluoric acid is produced by heating together sulphuric acid and fluor spar.

Dr. Robert Hunter.—We take upon ourselves the full responsibility both of the letters and editorial comments which have appeared in our journal.

X. Y. Z.—At the Matriculation Examination, University of London, June, 1866, the number of candidates was 415. There retired from the examination 18; one was excluded for being late; 185 were rejected for incompetency; and 211 passed.

A Subscriber of Nine Years.—It appears from the statutes that the University of Edinburgh only recognises the Examinations in Arts of other universities. The Preliminary Examination at the University of Edinburgh would exempt from the Preliminary at the Hall.

Southampton.—By all means; erect abattoirs in a convenient place, kill your cattle there, and drive dead meat into your town in a butcher's cart, and not live beasts to block up your streets on their road to the private slaughterhouses. We are glad to read in the *Southampton Times* that the town "has maintained a healthful condition, notwithstanding all the aspersions that have been cast upon it." We may add that an "aspersion" can't easily breed illness, and that the true friends of the town are those who honestly expose and manfully set to work to mend its faults. People in the West of England believe that if the presence of cholera in Southampton months ago had been honourably made public, certain poor children from Sherborne would not have gone there and would not have caught the cholera, of which they died on their return.

A Constant Reader must not inflict on us the penance of reading and exposing such philosophical productions as Dr. W. J. Collins' account of his "twenty years' experience" as a public vaccinator. There is a popular and feminine style of logic which argues boldly from the particular to the universal, and which, when it once takes possession of the soul, leaves its victim helpless. This very day we heard some one affirming that he believed sarsaparilla caused the hair to come off, for he had known several people take sarsaparilla, and the hair of most of them came off. He did not take into account the syphilis for which the sarsaparilla was given. Dr. Collins has seen and heard of ill results from vaccination; so we have all. He thinks that ill results are the rule; and that whilst "it is often the medium of conveying many filthy and loathsome diseases from one child to another," it is "no protection whatever against the small-pox." It is a funny thing that the Anti-compulsory Vaccination League are identified with a set of teetotalers who wish compulsorily to suppress the use of wine and beer. Dr. Collins is, we believe, a member of the St. Pancras vestry.

Improved Form of Long Splint.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Dr. Braidwood's "improved form of long splint" figured in your journal of Sept. 29, though ingenious and simple, is open to objection in not allowing of the American plan of extension of the limb, which has such unquestionable advantages. Lest this method should not be known to all your readers, I may mention that it consists in applying a long strip of plaister two inches wide, extending almost from the knee on one side of the leg to the foot, across the sole, where it is left loose to form a loop, and up the other side of the leg to the same height; a few strips are then placed round the leg to prevent its slipping, and through the loop is passed a piece of tape, by means of which extension is kept up, either by tying it to the end of the splint, or by affixing a weight to hang over the end of the bed.

If to the foot of Liston's long splint, on its under edge, be secured a cross piece of wood about twelve inches long, this will afford an excellent fixed point of attachment for the tape in the axis of the limb, and will have the further advantage of preventing any eversion of the foot.

By means of this plan most efficient extension may be kept up without any risk whatever of injurious pressure upon the instep. I am, &c.

The General Infirmary, Hull, Oct. 18. T. M. EVANS, House-Surgeon.

ON THE RESTORATION OF THE CLITORIS AFTER ITS DESTRUCTION BY DISEASE OR REMOVAL BY OPERATION.

By WILLIAM SMITHERS TALIACOTIUS, F.R.C.S. (by examination),
Senior Surgeon to the Society for the Rehabilitation of Females, etc., etc.

The operation which I am about to describe, and which I originated some three months ago, has now been performed so frequently, and has been attended with such remarkable success, that it appears incumbent upon me to give a truthful account of it to the Profession. It is well known that during the last few years many London Surgeons have been in the habit of amputating the clitoris for the cure of most of the imaginary ailments to which women are liable. To such an extent has this operation been performed that it will soon be somewhat rare to meet with a woman whose sexual organs are entire. Just as we commonly inquire of our female patients if the bowels act daily, and if the catamenia are regular, so it will soon become necessary to ask, "Has your clitoris been removed?" and so on. It would ill become me to criticise the operation which has become so fashionable; suffice it that, in my opinion, at no distant date the proceeding will only be remembered as one of the curiosities of the Surgery of this age, though whether it will be abandoned on account of its inutility and cruelty, or because disease will again "change its type," I cannot say. Possibly the latter will be accepted as the correct explanation, for it will be thought absurd to suppose that some one did not profit by "a great scientific fact calculated to benefit thousands upon thousands of those who are affected with the most distressing sufferings." However, as the best operations will sometimes perversely fail to effect a cure, so it is certain that many a woman has parted with her clitoris merely to regret the loss directly afterwards. And as a loss of this kind must be, to say the least, particularly unpleasant, it has struck me that something might be done to restore the organ; not that the absence of the clitoris will either prevent or produce conception, but that an irritable cicatricial knob has all the inconveniences, and none of the advantages, of the natural structure. Of course, it may be argued that Nature, in bestowing a clitoris upon woman, has committed a great mistake—a blunder so momentous that a good and wise man is bound to step in and rectify it. But the fair sex is proverbially difficult to please; and the fact remains that woman unmutilated has now become the envy of her despoiled sisters. To help the latter is my mission, and if I can only succeed in restoring peace of mind to a few "dear ladies" I shall feel sufficiently recompensed for my almost overwhelming labours.

The operation which I have devised after weeks of anxious thought is as follows:—The patient being placed in the ordinary position for lithotomy (as the most decent one that can be thought of), I seize with the forceps a small mass of that erectile tissue, which is found in some abundance at the lower part of the vagina. This mass is gradually drawn from its bed, until a long tooth-shaped portion is produced having a pedicular attachment. The cicatrix left by the former removal of the clitoris is then cautiously dissected off, especial care being taken to preserve the mutilated extremities of the branches of the pudic nerve on either side. A clean, raw surface being produced, it is only necessary, as soon as the hæmorrhage has ceased, to engraft on the wound the pear-shaped portion of erectile tissue just described. A couple of sutures being applied on both sides, the parts are left quiet for three or four days until union is perfect. The pedicle is divided about the fourth day, and shortly afterwards the cure is found complete.

It is unnecessary to recite the histories of those numerous cases in which success has followed upon this simple proceeding. But I cannot help adding that in my opinion the organ thus produced is superior to the original article. And I feel convinced that the poor women who have become insane, epileptic, or phthisical, in consequence of the loss of the clitoris, may now be assured that it is in the power of a scientific Surgeon to effect a radical cure.

Brummagem, October.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 20, 1866.

BIRTHS.

Births of Boys, 1035; Girls, 929; Total, 1964.
Average of 10 corresponding weeks, 1856-65, 1801·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	800	664	1464
Average of the ten years 1856-65	562·3	552·9	1115·2
Average corrected to increased population..	..	..	1227
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	2	2	5	3	1	4	6	13
North ..	618,210	12	3	6	2	12	20	13	35
Central	378,058	2	4	5	..	2	4	8	27
East ..	571,158	7	5	8	1	11	13	11	34
South ..	773,175	1	5	16	5	6	18	17	35
Total ..	2,803,989	24	19	40	11	32	59	55	144

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·924 in.
Mean temperature	49·6
Highest point of thermometer	63·5
Lowest point of thermometer	33·0
Mean dew-point temperature	46·4
General direction of wind	Variable.
Whole amount of rain in the week	0·85

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 20, 1866, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending Oct. 20.	Deaths. Corrected Average Weekly Number.*	Deaths. Registered during the week ending Oct. 20.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3067536	39·3	1964	1400	1464	63·5	33·0	49·6	0·85	86
Bristol (City) . .	163680	34·9	97	73	‡179	65·2	34·0	49·9	0·47	47
Birmingham (Boro')	335798	42·9	279	163	127	64·5	31·2	47·9	0·69	70
Liverpool (Borough)	484337	94·8	352	281	327	63·5	40·8	51·2	0·60	61
Manchester (City) .	358855	80·0	235	203	‡200	66·8	30·2	47·5	0·53	54
Salford (Borough) .	112904	21·8	69	57	53	65·6	31·8	48·9	0·57	58
Sheffield (Borough) .	218257	9·6	151	115	83	61·4	32·4	46·3	0·89	90
Leeds (Borough) .	228187	10·6	173	116	114	65·0	27·5	46·6	0·86	87
Hull (Borough) .	105233	29·5	100	49	54	..	..	..	..	..
Nwcastl-on-Tyne, do.	122277	22·9	79	65	79	60·0	38·0	48·7	0·25	25
Edinburgh (City) .	175128	39·6	122	84	102	61·7	36·0	48·8	0·10	10
Glasgow (City). .	432265	85·4	287	252	224	61·8	35·1	47·8	0·98	99
Dublin (City and some suburbs) .	318437	32·7	110	†156	274	63·8	28·5	51·7	0·24	24
Total of 13 large Towns . . .	6122894	34·4	4018	3014	3180	66·8	28·5	48·7	0·59	60
					Week ending Oct. 13.	Week ending Oct. 13.				
Vienna (City) . .	(1863) 560000	..	..	..	779	..	..	§ 49·1	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·924 in. The barometrical reading decreased from 30·08 in. on Tuesday to 29·73 in. by 3 p.m. on Thursday, and by 9 a.m. on Saturday the former maximum reading of 30·08 was again reached.

The direction of the wind was variable.

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* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 52·4°.

APPOINTMENTS FOR THE WEEK.

October 27. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p.m.

29. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

MEDICAL SOCIETY OF LONDON, 8 p.m. Mr. Henry Lee, "On the Treatment of Aneurism by Acupressure."

30. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

31. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

November 1. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

2. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.

WESTERN MEDICAL AND SURGICAL SOCIETY, 8 p.m. Practical Evening, for the Narration of Cases and Exhibition of Specimens.

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(EXTRACTUM CARNIS "LIEBIG.")

LIEBIG'S FOOD for INFANTS.
GLUTEN BREAD and CHOCOLATE for DIABETES and DEBILITY.
REAL TURTLE and other SOUPS.
ESSENCE of BEEF, MUTTON, and CHICKEN.
THEOBROMA, or CONCENTRATED COCOA.
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WINE SPECIALLY SELECTED for INVALIDS.
VICHY, POTASH, LITHIA, SODA, and all MINERAL WATERS.

VAN ABBOTT, INFANT AND INVALID DIETETIC AND WINE DEPOT,
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Pepsine Globules, each containing 5 grains Pure Pepsine; Pepsine Wine and Pepsine Porci, in bulk and bottles.

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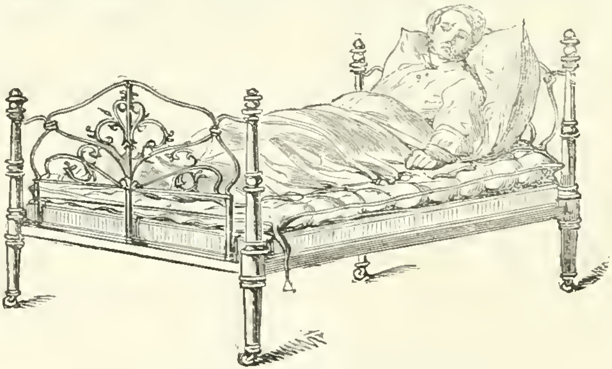

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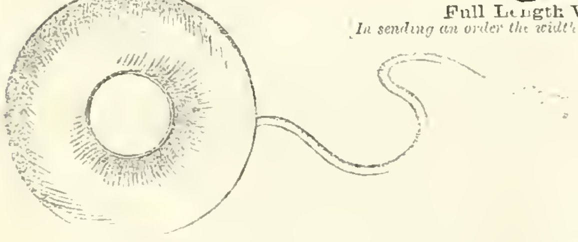

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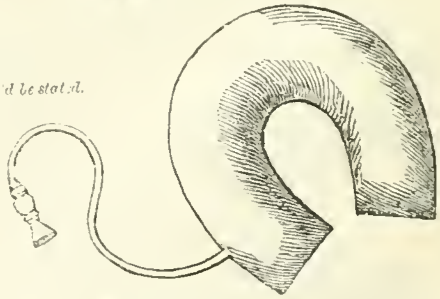

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ELASTIC BAGS, for applying dry cold or dry heat, maintaining their elasticity under all temperatures, from Zero to 212° Fahr.

WATERPROOF SHEETS, INDIA-RUBBER URINALS, ENEMAS, &c.

ORIGINAL LECTURES.

NOTES OF LECTURES ON INSANITY.

DELIVERED AT

St. George's Hospital,

By GEORGE FIELDING BLANDFORD, M.B. Oxon.

Lecture VI.

Dementia—General Paralysis—Definition of Insanity—Conclusion.

Gentlemen,—There remain but two forms of insanity which call for notice. The first of these is *dementia*, by which we understand, not a distorted, but an annihilated intellect; a decay of the faculty of ideation, so that ideas are not retained in the mind, or have no connexion one with another. Of chronic dementia I have no space to speak; it is either the termination of other species of insanity, as mania and melancholia, or it accompanies organic disease of the brain, or depends on the wasting and natural decline of old age. It follows mania less frequently now-a-days than in the times of restraint, low living, lack of fresh air, of light, and amusement. But it is incurable, though much may be done to enliven the days even of the most demented. There are, however, certain patients who at first sight appear sunk in utterly fatuous dementia, who nevertheless, by proper treatment, may almost all be cured. Esquirol called their disorder *acute dementia;* Pinel confounded it with idiocy; Baillarger thought it *mélancolie avec stupeur*, which it is not. These patients are, as a rule, young persons under 25 years, mostly under 20. Constitutionally weak and nervous, they are usually brought to this condition by some sudden shock or fright, some appalling sight or piece of news; they are literally "frightened out of their senses." The change does not come on gradually, as in chronic dementia, but quickly, almost suddenly, they appear quite idiotic and silly. There is not always or often motionless stupor; on the contrary, there is more frequently incessant choreic motion, and this is quite automatic; no effort of will could wag the head or snap the jaws for hours together as these will do. When spoken to, they seem quite unconscious. They have to be fed, dressed, and washed, like children, but they often have sense enough to be quite capable of vigorously resisting when it suits them. Physically, they present characteristic marks. In the hottest day of summer their hands are blue with cold; in winter they can hardly be kept warm in any way, and hands and feet will be covered with chilblains. Their heart's action and circulation is depressed to zero. These cases are to be distinguished from chronic dementia by the history. The latter does not come on suddenly, seldom occurs in the young, and is generally the sequence of mania or melancholia, unless it co-exists with organic disease of the brain; and they will be distinguished from *mélancolie avec stupeur* by an absence of depression, by the history of the very earliest symptoms, by an absence of suicidal attempts and suicidal refusal of food.

The prognosis of this *acute* or *primary dementia* is favourable, though the patients at first sight appear hopelessly fatuous, dirty, and idiotic. Yet if the mental disorder has come on suddenly, especially after a shock or fright, we may hope for a good result. These patients are almost all frail and delicate, with a weak and sensitive nervous organisation; their health and bodily strength is much impaired, and therefore Medical treatment does much for them. The older they are, the less favourable is the prognosis; they are more apt to drift into chronic dementia; also the case will be less hopeful if there be any bodily disease to prevent the restoration of the health.

What is the treatment of such cases, and where is it to be carried out? An asylum is not absolutely necessary for them. The proper treatment can be applied as well in an ordinary house and family, though it can hardly be at home. They are for the most part passive rather than active patients. They require much stimulation and nutrition, which shall raise their prostrate nervous power, and excite it without exhausting it. Plenty of food and stimulants will be requisite; brandy and wine—above all, warmth. Warmth which to others would be excessive and depressing will barely suffice to raise their circulation to an ordinary level; warm rooms, warm baths, and warm clothing will all assist, as well as the warmth brought about by exercise. Cold shower-baths are often of great service, given as stimulants, not as depressants, for thirty or forty seconds, and followed by continued friction till the surface is warm. Tonic medicines, too, are valuable, as quinine and steel, and small stimulating doses of morphia. If the bowels are inactive, the mildest purgatives will suffice, as castor-oil or confection of senna. The catamenia will at first be absent in most cases, but this after a time will right itself, and meddling in this direction will do more harm than good. In the majority of cases such treatment will be successful.

The last remaining variety of insanity of which I have to speak is the so-called "general paralysis of the insane," one little known till within comparatively recent years, and even now seldom described in systematic treatises on Medicine. Yet it is probably the most deadly disorder that attacks man, destroying not only mind but life in a short time. Calmeil gives as its average duration thirteen months; Esquirol says few survive three years. So fatal is it that no one as yet has recorded a case of recovery. The prognosis, therefore, is involved in the diagnosis, and this, as a rule, is easy. This disease is common, and is believed to be upon the increase; yet doubt still hangs about its nature and pathology, though hundreds are dying of it every year in this and other countries.

What are its symptoms? how is it to be distinguished from other forms of insanity? Here we have to consider not only certain mental phenomena, but bodily also. If we take any ten paralytic patients, nine of them will be characterised by exalted notions of their greatness, position, wealth, or strength. Each one is very rich or a very great man; has been created a baronet, duke, or king; or has married the Queen, or half-a-dozen princesses; and has millions of houses, carriages, and horses. He is in exuberant spirits at this great good fortune, and promises gifts and titles to all about him, whether strangers or friends. What he asserts one day he doubles the next, never retaining the same idea long. He remains in great glee and good humour till he is opposed, when he bursts out in blind and ungovernable fury. These exalted ideas, this *délire des grandeurs*, ought always to excite our suspicion when we meet with them in an insane man, and ought to make us watch him closely, and seek for a bodily symptom no less portentous than the mental. This is a slight difficulty in articulation, a stopping or stutter in the enunciation of a word, or the syllables of a word. There is a want of perfect co-ordination of the lip muscles, evidenced sometimes by a tremor, sometimes by an unnatural stiffness or immobility. These patients speak just like men whose utterance is thick from drink, and constantly in the commencement of the attack they are haled to the police-station as drunk and disorderly. This stutter will vary much from day to day, and when a great effort is made it is often overcome. A man will shout out words clearly who in low tones cannot make you understand what it is that he says. If we find the exalted delusions and the inarticulate speech co-existing, we may at once pronounce the case one of paralytic insanity; but they do not always co-exist.

We may find the delusions without the stutter, or the stutter without the peculiar delusions—nay, with quite opposite, with melancholic ideas or fears of conspiracy, poison, and the like. The case may be doubtful and difficult to diagnose, and many points must be taken into consideration. This disease does not occur at all ages; chiefly it attacks those in the prime of life. It never, I believe, occurs under 20 years of age, rarely under 25; rarely after 60, never after 70. It oftenest begins about 35, at the height of bodily vigour, and its victims are men in large proportion. In the county pauper asylums there are always some few female paralytics to be found, perhaps in the proportion of 15 to 50 males, but in asylums for the better classes you may search in vain for a lady affected with general paralysis. I have never seen one—have never seen such a case recorded. The exemption is singular and striking. You will not, then, suspect the disease in quite young persons, nor in the old, nor in ladies. If the stutter is not apparent, nor the peculiar delusions present, what else can we notice? There is often to be detected an incipient imbecility, a mental childishness, which does not characterise ordinary mania. The patient is incapable of applying his mind to anything, is gay and hilarious, even in an asylum; above all, displays lapses of memory. He cannot tell whether he did a thing a week ago or a month. This is a symptom seldom found in non-paralytic insanity, unless there be utter delirium or dementia; but it is indicative of the commencing fatuity which is later to overshadow the mind of the paralytic. The letters and handwriting will often assist the diagnosis. Almost invariably the paralytic patient leaves out words in an otherwise well-expressed letter; or he will repeat the same sentence again and again, forgetting that he has already written it. There is another physical symptom, which must be looked for and observed, which is very frequently present, though not invariably. This is irregularity of the pupil. For a long time this was the only suspicious point in a case under my care, where the peculiar delusions were altogether absent, together with the imperfection of speech. The pupils are sometimes at first greatly contracted, but more often are irregular without previous contraction. The duration of the mental disorder will materially determine whether it is general paralysis or not. If it has lasted five, ten, or fifteen years without any very great change—if at the end of five years of insanity the memory is sound, and there be no imbecility—then it is not general paralysis, however extraordinary the delusions or outrageous the acts. This form very seldom supervenes upon ordinary insanity. The old inhabitants of asylums are not its victims. Those admitted as paralytic are admitted for the first time, and though they be relieved so as to go home, and then perchance be readmitted, yet their malady, though for a time quiescent, dates back to the period of their first admission. This disease appears at its height of activity when the ideas are most extravagant and exalted and the acts most outrageous. From this culminating point there is a decline both of bodily and mental strength till the patient lies, perhaps for months, unconscious and bedridden. But this decline is not gradual and unbroken. In the majority of cases there occur at intervals attacks of an epileptiform nature, which for a time prostrate the sufferer and reduce him, body and mind, to the lowest point, even if life itself be not extinguished. In a few weeks he again recovers in a marvellous manner, but does not quite attain the state he was in previous to the attack. And so his downward progress is marked out in stages by these seizures, and he who has fewest of them lingers the longest. The duration of the disease has been variously stated. I believe it may be estimated in private cases at a much longer period than the thirteen months of M. Calmeil. Everything will depend on the personal care and attention which the patient receives. One gentleman who was the subject of a celebrated commission of lunacy no less than eight years ago is still alive. Another, who was under my care five years ago, walks about alone at the present time, and, though somewhat childish, yet passes for a sane person. This gentleman never, to my knowledge, had any epileptiform attacks.

General paralysis seems to depend upon hereditary taint less than do the other forms of insanity. There is no special cause laid down, but it appears to be due to any prolonged and exhausting mental strain or overwork with insufficient nourishment. And it may also be due to bodily causes; in fact, in very many cases I have ascribed it to sexual excess or to the marriage of men old in years or previously addicted to self-abuse; and among the women of the lower classes who are its victims many have led irregular lives. As sexual excess is not so pernicious to women as to men, this, if it be the great cause of general paralysis, may account for the disparity in the numbers of the two sexes.

The specially fatal nature of this disease invests its pathology with no common interest; it forms the commonest topic amongst the writings of those who specially study insanity. Nevertheless, though post-mortem examinations are made continually in this and other countries, no two observers are agreed as to its morbid anatomy, as to the part wherein it originates, or which is its peculiar seat. The French and the Germans have laboured long in this field of inquiry. To the former is due the credit of having first described it as a special disease; and no one, probably, has thrown more light than has M. Calmeil, not only upon the symptoms, but also upon the pathology thereof. He first pronounced it to be an inflammation of the cortical substance of the cerebral hemispheres, and the latest microscopical researches have confirmed this opinion. When we say that it is an inflammation, we imply, not the rapid suppurative action which goes on to abscess, but a gradual degenerative modification of textural life, similar to that which annihilates the life of the liver or the kidney, evidenced by destruction of the healthy tissues on the one hand, and the presence of the broken-down *débris* and of lower and degraded growths on the other. The symptoms during life point to an active inflammatory process. The disease is not passive or stationary—it is ushered in with violence, with heightened temperature, and intense energy both of mind and body; and the destructive nature of the process is very soon manifest in the signs of commencing imbecility and in the incipient paralysis of speech and limb.

When we examine roughly the head of a paralytic patient, we find certain morbid conditions of the brain and its membranes, but it is doubtful if any one of these is peculiar to this form, or even peculiar to the insane. In cases of some duration the skull is often very thick and eburnated; in others, very thin; in either the diploë is lessened or destroyed. The *dura mater* is usually adherent to the bone. The *arachnoid* is thickened, and in parts opaque, and between this and the dura mater we often meet with red jelly-like layers—the result of old extravasations, sometimes appearing like half-organised structure. The *pia mater* will also be opaque and thickened, and it will adhere in places to the brain below, and bring this away with it when removed, so that the surface will be excoriated and bleeding. The cortical substance is generally thinned and atrophied, its consistence sometimes soft—more often hardened by the shrinking of its tissue, owing to the destruction of the cells and the condensation of the connective tissue.

Great importance has been attached to this connective tissue by Rokitansky, who thinks that an overgrowth of it is the cause of the paralysis by pressing upon and destroying the brain cells. Another pathologist (Wedl) believes it to depend upon disease of the capillaries; while others look upon it as a meningitis.

The most recent researches that I am acquainted with are those of Dr. Franz Meschede, contained in a paper published in Virchow's *Archives*, 1865. Of this paper there is an abstract in the last number (October) of the *Journal of Mental Science*. This gentleman pronounces the disease to be a parenchymatous inflammation of the cortical structure of the hemispheres, commencing in the inner layer, and spreading thence. He gives the results of many microscopical examinations conducted during the last eight years. In acute cases, he says, which have run a rapid course, we find hyperæmia and parenchymatous swelling of the inner layer, a congestive turgescence and succulence. There will be a bright red appearance of the inner layer—not of the surface, though it may penetrate to the latter—chiefly observed in the anterior lobes, on the convexity, and in the temporal lobes; also a highly developed capillary network, with points of extravasation, and tortuous and elongated vessels. In more chronic cases this layer will appear dark, dull, and yellowish; its consistence will be sometimes soft, more frequently harder than the normal from the shrinking of the tissue on the destruction of the cells, and from condensation of the connective tissue and wasting of the vessels. The cells will be found in different stages of degeneration. At first turgid and swollen, they afterwards appear as aggregates of fat globules, with the outline and nucleus of cells; or with half the cell outline, the rest being completed by fat and pigment granules; or with the outline entirely destroyed—mere heaps of granules. This degeneration of the nerve cells explains the mental symptoms, which the other theories do not. It cannot be meningitis, for this occurs continually without producing the symptoms of general paralysis, and if it were a degeneration of the capillaries we should expect it to occur in the old rather than in the young, yet we never find it in old age. It presents frequently the symptoms of ordinary insanity. Many of the delusions we meet with are such as we hear in ordinary mania. Therefore it must be a disease attacking the same part as non-paralytic insanity, with this difference, that it makes a constant progress till it annihilates mind and life. We must therefore look upon it at present as a slow inflammatory degeneration and destruction of the brain cells, the organic seat of mind.

After what I have already said of its fatal nature, it follows that there is little to recommend in the way of treatment. Formerly, when mercury was considered necessary in all inflammations, it was the fashion to administer the bichloride to paralytic patients, but without arresting the disease. We may subdue the tremendous violence of the early stages by means of digitalis or tartar emetic. When this period is past, tonics, cod-liver oil, and sedatives are often of great service. Many patients feel cold to the head very grateful, and will wear an ice-cap of their own accord. Under treatment they often get much better, and are considered by their friends cured. They become well enough to leave the asylum, but if they return to anything like business or head-work it is soon discovered that they are not what they were: the memory and intellect will be weakened, and there will be an unnatural selfishness and irritability; and some day the fire will burst forth again, and death end the scene.

This disease is commonly known and described as general paralysis of the insane. To this it has been objected that we ought not to call a patient paralytic who shows no symptoms of paralysis, but, on the contrary, immense strength and violence; and of late another name has been bestowed upon it, "general paresis," which signifies somewhat less than the old one. No better name has yet been found than that of M. Calmeil—*périencéphalite chronique diffuse;* this implies a theory of the nature of the disease, which has been corroborated by recent researches. Till this be proved incorrect, and another view of the pathology be established, it were well to retain this appellation.

Such, gentlemen, are the chief varieties of insanity which it is expedient—nay, necessary—to bear in mind, either for diagnosis, prognosis, or treatment. Infinite subdivisions may be and have been made, for, in truth, as no two persons are alike in mind, so are no two alike in the method of their madness. And this applies equally to another subject which, for the same reason, is as difficult as the classification—I allude to the definition of insanity. Can we define it—can we do more than describe? Must our definition be of that negative kind which logicians tell us is no definition at all? Looking at these various forms of unsoundness of mind—at idiocy, at insanity with and without delusion, at instinctive and transitory insanity, at primary or secondary dementia—what can we say the disorder is? It is evidenced, as I stated, by what is *said* or *done.* This is the result, but if we keep in view the analysis of mind and mental processes laid down in the first lecture, we may, I think, arrive at a conception of what insanity is. *It is a want of co-ordination, of harmonious action of the two functions of the brain commonly called feeling and intellect, a state either congenital or produced by disease, by which want of harmony true volition is distorted or destroyed.* The intellect may be defective, idiotic, or full of delusions, leading to acts devoid of intelligence or prompted by deluded ideas; or the intellect may remain clear, but blind and uncontrollable feeling may force a person to sudden and unaccountable action. Wherever the defect may be, the true harmony and co-operation of the two functions is suspended or lost. Hence true volition, which results from this perfect harmony, is interrupted, and insanity, an irresponsible and faulty mental condition, is the consequence. It were useless to recite the definitions of various authors or to point out their defects. None can be perfect, for all must partake more or less of a negative character, inasmuch as insanity is the negative of sound mind. With one suggestion I take leave of the subject: avoid attempts at definition when you are in the witness-box.

I now bring these brief "Notes" to a conclusion. There are very many topics which I am compelled to pass over. On one or two I hope some day to say a few words.

SPURIOUS VACCINATION.—What is spurious vaccination? A paper by Dr. Habersham, published in the *Southern Medical and Surgical Journal,*(a) and containing some of the observations made during the late civil war, will tell us. In 1863 the confederate army of Virginia suffered from small-pox, and a general order was issued that every man should be vaccinated. The results were disastrous in the extreme; in many cases phagedænic ulcers were formed of such gravity as to necessitate the amputation of the limb, and in some cases to cause death. On investigation it was found that the patients in such cases had usually been in a greatly debilitated state, and especially that they had symptoms of scurvy, and that the bad symptoms speedily gave way under the influence of cod-liver oil.

EGG OF THE DINORNIS.—The New Zealand correspondent of the *Times* writes: "By this (the last) mail a really interesting contribution to science is forwarded to one of the London societies by Dr. Hector, F.R.S., the Government geologist, in the shape of some elaborate drawings, &c., of a portion of a moa's egg, with the bones of the chick in an advanced stage of incubation. The egg was found at Otago and received here a few weeks ago."

THE Surgeon of the Russian corvette *Gridon,* who died suddenly on board that ship at Portsmouth, was buried in the cemetery at Southsea on Sunday week. The funeral was performed according to the Greek rites, and the garrison joined in bestowing military honours.

(a) Edited by Dr. Jones, Augusta, Georgia, U.S. London: Bailliere.

ORIGINAL COMMUNICATIONS.

ON THE

DISTINCTIVE CHARACTERS OF SOME GROUPS OF EXTERNAL INFLAMMATIONS,

AND THE LEADING PRINCIPLES OF TREATMENT DEDUCED THEREFROM.

By J. H. JAMES, F.R.C.S., etc., etc.

I OFFER these sketches as the result of my own observations during a long and active life. The circumstances under which they are given are very peculiar (I mean from the state of my health). In another communication I shall briefly mention them.

In the year 1821 I published a memoir on inflammation. In that memoir, among other things, I endeavoured to reduce the subject to some system. There appeared to be then, and still is, as far as I can judge, a want of method in treating of the numerous varieties of this most important branch of pathology.

I dealt with it again in a second edition in 1831, and it is still my endeavour to support my former propositions, and at the end of a long Professional career, I have still reason to think that the conclusions stated therein were well founded; moreover, that some additional remarks may well be justified. Without going into details which are unnecessary, I shall offer a brief sketch of the leading points which belong to this subject.

But, in the first place, I may observe that, in most works I have perused, inflammation is treated of as a phenomenon of general application, whereas it may be affirmed that there is a broad distinction between the inflammation and its various processes which is provided for the restoration of injuries in all hot-blooded animals, including the human species, and, on the other hand, the numerous varieties of inflammation which are the result of disease, or the introduction of some kind of morbid poison either in a fluid or aëriform state.

In the work I have alluded to, my chief object was to point out two facts but imperfectly recognised when I first offered my observations in 1821—namely, first, that they might be divided with great advantage into those which were in their nature limited, this being their inherent character; and secondly, into those which were diffused or spreading, with a no less absolute disposition to do so. This, if advanced now as a novel proposition, would seem very strange; but it was not so in 1821.

Again, I proposed the consideration of external inflammations as having a paramount tendency, each in particular, to one or other mode of termination—such as suppuration, sloughing, ulceration, or resolution.

I shall begin by giving a hasty sketch of the limited inflammations, which may be divided into, first, phlegmon; second, carbuncular abscesses; and third, true carbuncle. The important characters, common to all in a greater or less degree, are, that there is an effort to limit their extension, and that the constitution is commonly guaranteed from any taint arising from the contents passing into the blood.

The first of these is true phlegmon, so familiarly known in all its particulars as to require no further statement here than that its tendency is to mere suppuration; that the pus has the property of making its way to the surface; that the skin accepts the process, and readily gives way to evacuate the contents; that being the natural termination of the process. The parts affected then return, with some abatement, to their former condition. Of the treatment of these I shall only say that as they are commonly an effort of nature to relieve (in some unknown way) a constitutional error, it is not wise to interfere with them, nor indeed—the disposition to suppurate is so strong—would it be easy to do it; neither, as far as I have had an opportunity of judging, is it wise to anticipate the opening nature provides, excepting, perhaps, in some glands; but even here, taking the mamma as an example, while true mammary abscess may require it, phlegmonous abscess in the mamma does not.

The second we will consider is the carbuncular abscess; here the disposition is to slough as well as to suppurate, and the pus is of a very putrid and irritating nature, partly from the sloughs which float in it, and partly from the constitutional error which generally precedes this occurrence in persons of gross habit and advanced life. These abscesses force their way into the surrounding parts, not from want of an effort to limit them, but from a circumstance which peculiarly belongs to them—namely, that the superincumbent skin, instead of opening to evacuate the contents, thickens in a most perverse manner over them. Now I think it may be concluded that these abscesses, although thus forcing their way into the surrounding parts, are of the limited character, because whenever a free opening is made, and the contents are set free, the disease is at once brought to a conclusion, and the constitutional symptoms, before most alarming, immediately begin to subside—an event very different from what occurs in diffuse inflammation, where no such terminaton may be relied upon, although openings are made, and where, also, there is strong evidence of the blood being tainted.

These abscesses occur in highly vascular parts, and in situations endangering structures of great importance; thus under the angle of the jaw (the angina externa of Kirkland), they extend into the neighbourhood of the glottis, where they may produce fatal œdema; or when they occur in the neighbourhood of the neck of the bladder or urethra, that passage may give way, and urine be effused into the cavity of the abscess, greatly aggravating the case. A distinction is to be made, however, between those cases in which the urethra gives way without previous inflammation, and where the urine is largely infiltrated into the loose cellular membrane, causing sloughing of the parts, and these abscesses (which are quite of the same character as those in the neck), in which the effusion of urine into the cavity may be a contingency; but in every case, wherever it may occur, the chief pathological character is the thickened and inflamed skin, which refuses exit to the contents, with exceptions to be presently stated. This is a most important fact, because, from a false analogy with true phlegmon, Surgeons are but too apt to look for that pointing which is never likely to occur, and an opening is often delayed until too late to save the patient.

I have said the chief pathological character, but it is necessary to add that in certain cases where the abscess forms beneath deep and strong fasciæ, the communication from the skin is for a time cut off, the irritation which ordinarily produces the pathological characters in the skin before adverted to is intercepted, and while we have these dangerous abscesses deep below the surface, that surface may offer no indication.

I will give some examples. A Medical gentleman residing in Exeter had great pain about the neck of his bladder; he was attended by two friends of his, eminent in their Profession, who, from finding no external indication, judged it to be neuralgic. There was, however, great constitutional disturbance, and on examining per rectum, a considerable swelling was felt, which proved to be an abscess above the deep fascia; an opening was made, recovery soon followed.

A few years ago I was requested by an old friend and patient of mine to go to London to see him, with Sir B. Brodie and the late Dr. Todd. There was an immense swelling of the thigh, with no discoloration of the skin, which was also movable. The swelling was very firm. The exploring needle had been tried, and offered no result, and it was considered to be a tumour. The history of the case possessed me strongly with the idea that it was a deep-seated abscess under the fascia, an opinion which I expressed. Sir B. Brodie, with his usual courtesy, offered me his grooved needle. I passed it deep in two places without any result; and I mention this to show that the grooved needle is not to be depended on for obtaining evidence in all cases.(a) My opinion remained the same, for I had seen it fail before. A few days afterwards another eminent Surgeon saw him, made a free incision, and evacuated an immense quantity of matter, as I was informed.

A few years subsequently I was desired to see a young lady, who resided about ten miles from Exeter. I found her suffering much from what appeared to be a cæcal abscess forming in the front of the abdomen. The skin there offered some distinct indications. Firm pressure behind gave pain, but the skin there was unaltered. It was a case full of doubt and anxiety, and I was assisted by the ordinary Medical attendant, a very intelligent Surgeon, and by one of my colleagues, who had large experience as well as skill, and an old friend of the family, a Physician, residing in an adjoining county; to all of us the risk of making an opening in front appeared very great, and we waited in the hope of finding some indication behind. This, however, never occurred, and one day, when I arrived there, I found the constitutional symptoms so alarming that I determined, at all hazards, to make an opening behind. I passed a small but long trocar, but cautiously, until it entered the cavity of an abscess. A grooved director was now passed, and I was enabled to make a free opening, which gave vent to a quantity of pus so fetid that the smell almost filled the house. The relief was almost immediate, and before I left in the evening her state was quite changed. She recovered. It was found that a small portion of the os ilium was bare. This might have produced the abscess, or the matter might have fouled the bone. It was only now that we learned that she had met with an injury from a fall a considerable time previously. Here, again, the natural condition of the skin posteriorly resulted from the fascia lumborum intervening.

Such cases are rare in comparison with those where the skin offers the indication I have mentioned, in which, beyond all doubt, the duty of the Surgeon is to give prompt relief; and I will here briefly mention the plan I used to adopt. I employed an instrument which might be compared with a miniature catlin, very narrow and very thin. This may be passed deeply without much danger of wounding vessels of size, and by its side I passed a grooved director. When the point of the instrument reached the cavity, the director entering it allowed some pus to escape, and being once lodged and the knife withdrawn, a curved bistoury could be made to effect a sufficient opening.

Although it is not the nature of these inflammations to point, an indication is afforded by the doughy state of the skin (the *empâtement* of the French), but in severe cases it is not safe to wait for this. Yet the choice of a situation to make the opening is not very easy,—if it is directly under the chin, the mesial line will offer a safe point, as the extremities of vessels are small; if in the side of the neck, great caution is required in selecting the place; if at the neck of the bladder, the situation where "Allarton's" medium operation is now performed; or more forward in the perineum, as the case may be. It is not my purpose in this sketch to enter into details of minute pathology, nor of other subordinate modes of treatment, but simply to put forth those leading characters which distinguish the nature of disease and confirm the treatment in the most essential particulars; namely—that, first, these abscesses are of the limited species; that, secondly, the matter is of the most injurious quality; that, thirdly, the skin, instead of facilitating, refuses it an exit; that, fourthly, important parts are placed in jeopardy; that, fifthly, constitutional sympathy exists of a most dangerous kind; and that, sixthly, the remedy is an early and free opening without waiting for the indications of common phlegmon.

The third species of limited inflammation to which I shall allude is true carbuncle. It may appear to be a contradiction in terms to consider that as a limited inflammation which, however, notoriously spreads. But here, again, it spreads merely because a vent to the matters contained beneath the surface is, as in the former case, refused by that surface; for when we remedy this defect in the skin, and make sufficiently free incisions at an early period, we enable the surrounding parts to effect the limitation of the disease—a condition wholly different from what occurs in the diffuse inflammations. The true carbuncle commonly occurs in the dorsal regions of the body, such as the back of the head, the neck, or shoulders, or on the outside of the limbs, but not invariably so, as I shall presently show. From the comparative inferiority of the circulating and nervous powers, the disposition to slough predominates, and, although pus is formed, yet in the early stage it is not in a cavity, as in the last species, but the tissues of the skin and cellular membrane are honeycombed with it more or less; the sloughs and matter, finding no vent, irritate the parts on their circumference, extending the mischief, and this indefinitely, till either the skin gives way or openings are made. But to the characters of this inflammation the same test may be applied as in the last species—namely, that it is only requisite to open the skin sufficiently to terminate the spreading of the disease. But this means sufficiently early and sufficiently widely, for (to use a modern phrase) "we may easily stamp it out in the beginning, when, if allowed to proceed, fatal consequences follow." The openings must be crucial, and must fairly extend a little way into the surrounding sound parts. If this is not done the disease is scotched, not killed, for if these surrounding parts are only attacked by this inflammation they in all probability will perish also. A consciousness is then given (if I may be allowed the expression) both to these parts and to the system that the remedy has been provided which Nature has refused, and which at once abates the morbid actions and quiets the sympathy of the system, and this so immediately in the case of carbuncular abscesses as to warrant the belief that the blood has not become tainted. Carbuncles are the result of a highly diseased state of the constitution, in which the blood is no doubt impure; but this is to be distinguished from that state which is produced by vitiated matters entering the blood, which, I believe, only occurs towards the fatal close of the disease. These openings being made in situations differing widely in importance, and much less vascular than in the carbuncular abscesses, require none of the caution requisite in them, but may be made at once wide and deep. Should carbuncle, however, occur in the anterior aspect of the body, we are not safe as regards hæmorrhage, as the following case will show:—

(a) Perhaps one reason that the grooved needle frequently fails is that it is not often introduced at an angle declining towards the horizon, by which the escape of matter would be facilitated.

A lady about 60 years of age, and a highly bilious constitution, sent for me, and showed a carbuncle of considerable size over the region of the liver. I immediately made free incisions, and at the time there was no very active hæmorrhage; but in the evening I was sent for in great haste, and went out immediately with my eldest son (whose untimely death I have greatly to deplore). We found her in a perilous state from hæmorrhage, and we were not able to leave her for several hours. She recovered and lived for about two years.

The main point in dealing with this, and indeed with all other diseases which do not of themselves subside, is to attack them in time; but it not unfrequently happens that carbuncles excite so little alarm in those they attack, that the disease steals a march upon us. Sometimes they are intensely painful and burning, at others dull. For example, a Medical friend of mine residing at Crediton sent for me to see with him a cattle-dealer having a carbuncle at the back of his neck. Notwithstanding all our persuasions he would not give up a journey to Bristol to attend a fair, for which he paid a heavy price, for when he returned the malady which he thought so little of had extended to the occiput, soon affected the brain, and terminated fatally.

Many years since I was sent for to a Jewess who was suffering great pain in the abdomen, with vomiting. This led me to make an examination, and I found strangulated hernia, which I was fortunate enough to reduce. When I had accomplished this her niece said, "Now you are here, you may as well see my uncle; he has something amiss with his neck." I found him in another room with a large carbuncle, of which he had taken little heed. I lost no time in dealing with it, and he did well. I am tempted to mention a curious circumstance connected with him. He was a man of considerable knowledge and inquiry, and some time previously had been assisting in filling a ballon in the castle yard; he fell in a swoon and was carried home. On seeing him I found his pulse nearly extinguished. He, however, recovered, and lived many years, but his pulse never rose above 50.

I shall now sum up in a few words the principal characters of carbuncle as connected with its treatment by incision. First, that they occur commonly in parts of low organisation, and that they never commence, like the carbuncular abscesses, under fascia; secondly, they spread not from their inherent character, for the constitutional disorders which give rise to them are not of that cast, but simply, as in the former species, from the skin refusing to give an exit; thirdly, that as they extend (if allowed to do so), and destroy as they go, comparatively speaking, they produce but little suppuration, and that in honeycomb cells, so that we do not relieve them (as in the last species, where one opening will empty the cavity of a large quantity of noxious pus), but without any evacuation of consequence we simply do that which enables the parts to free themselves after a time.

These three species constitute a group well marked and distinguished by peculiarities which have been here stated. It is necessary to add that these are the chief, though not the only, limited inflammations. An intermediate variety is that of boils, but they differ much; the milder species much resemble phlegmon; they, however, form sloughs, which phlegmon does not. On the other hand, the graver forms of boils approach the character of true carbuncle, but although they form considerable sloughs, they suppurate much more copiously, and the skin does not so decidedly refuse vent, neither are they so rapid in their progress, and are amenable to treatment which is well understood, instead of absolutely requiring an incision.

But there are other inflammations of a limited character, which, however, depends upon the peculiarity of structures they attack, such as the testes, joints, lymphatic glands, etc., nor do they possess any determinate disposition either to suppurate or slough; such results may occur, but not necessarily so. The strong contrast between the preceding and the spreading inflammations will be shown in a future memoir.

PARAFFIN.

By Mr. LAWSON TAIT.

In December last I brought forward a proposal to substitute paraffin for starch, plaster of Paris, etc., in the construction of a stiff bandage for the treatment of fractures. Then I only spoke of its advantages from short experience, its application having been limited to a single case of my own and some experiments on my own limbs; but since I have had abundant opportunity of seeing its advantages both in my own experience and in the practice of others.

Paraffin is one of the products in the manufacture of the mineral oil known by such names as paraffin oil, belmontine, and many others, to suit the fancies or purposes of the manufacturers. It is met with in commerce in large cakes, in various conditions of purity. In a perfectly pure state it is a white substance, resembling spermaceti, but much less greasy, perfectly inodorous, and tasteless. In this condition its melting point is from 120° to 130° Fahr., and its price now about tenpence per pound. But it may be got in various degrees of impurity; the more impure it is, the lower the melting point. The impurity is the heavy part of the oil—what is sold as lubricating oil. Paraffin melting at 95° to 100° does better than anything I have seen tried for coarse anatomical injections, as it has the advantage of being only about the third of the price of cheap lard, and it takes up and retains in their pristine freshness the beautiful tints of the coal-tar colours. The percentage of oil in it seems to act likewise as an antiseptic. Twenty-five per cent. of the pure paraffin added to the ordinary tallow or lard injection gives it a most desirable firmness, especially in warm weather.

For the application of this substance as a stiff bandage, it must be used in its pure state. It may be used as other substances are for this purpose, either with the bandage alone or to fix the bandage over wooden or pasteboard splints. In simple fractures I prefer to use it with the bandage alone, without any other splint. For this purpose I first enroll the limb with a soft cotton bandage, and over this I apply a series of strips of coarse flannel bandage, dipped in the melted paraffin. The paraffin may be melted in an ordinary little tin saucepan. After the flannel has been applied as far as is wished, it is to be allowed to set, and is then to be coated over with paraffin by means of a bristle brush. This is best accomplished by stirring the melted substance with the brush until it cools sufficiently to be slightly viscid; by this means a thicker and more uniform coat is obtained. When properly put on, the bandage has a peculiarly neat and clean appearance. Its advantages are that it is much lighter than any of the other substances used for the same purpose, that it is cleaner and cheaper, and that a supply of paraffin is almost everlasting; for after a bandage has served its purpose, it only requires to be boiled, and all the paraffin is got back. It takes up no fluid, and for this reason Dr. Heron Watson used it in preference to anything else in a case of fracture of the thigh in a child, where the greatest difficulty was encountered in keeping the little creature dry. In this case the success was perfect. The same gentleman has used it in a simple fracture of the leg successfully, and uses it together with a straight outside splint as a stiff apparatus after operations for clubfoot. The property of not absorbing fluids renders it particularly useful in cases of compound fracture or any such condition where there is much discharge.

The only objection that I could imagine to its use was that it might be softened by summer heat; but this, I am now satisfied, does not occur. In a case of fracture of the humerus in which I applied it recently, the patient mentioned that it was a great relief to have it instead of the wooden splints in which his arm had been enclosed for some days after the injury.

Paraffin may be easily procured from any chandler, as it is now extensively used in its pure state as paraffin candles. By dissolving about a hundred grains of paraffin in an ounce of chloroform, and dropping a little of this on the skin to the extent required, a moderate amount of counter-irritation may be obtained. The mixture is simply allowed to dry on the surface, when the scaly paraffin may either be brushed off or allowed to remain as a protection to the irritated surface.

INFANTILE GANGRENE OF THE SKIN.

By JOHN WARD COUSINS, M.D. Lond., F.R.C.S.
Surgeon to the Royal Portsmouth Hospital.

In the month of November, 1865, a healthy young woman was delivered at the full period of pregnancy of a well-nourished child. On the third day the nurse directed my attention to a mark on the right shoulder, which she called "a bruise in the birth." On examination, the skin over the scapula appeared quite black and wrinkled, and it felt soft and boggy. The next day the patch was covered with a few small vesicles, which contained a dark-coloured fluid, and it emitted a foul gangrenous odour. A slough soon separated, and the disorganisation of the integuments rapidly extended until the scapula and posterior fold of the axilla were completely exposed, and the muscles looked just as if they had been recently dissected. The child rapidly emaciated and sank in a few days. The health of the mother was perfect, and she had never manifested any symptoms of syphilis, but the father had laboured under the disease, and had recently undergone treatment for periosteal pains and a nodosity on the tibia.

Remarks.—This is a rare affection of the skin. Billard, in his treatise on the diseases of infants, states "that it is a variety of gangrenous inflammation analogous to the gangrene of old people, and that it is observed particularly in those infants in whom the respiratory and circulatory functions are imperfectly performed." This theory, however, throws no light upon my case, for the child was born apparently healthy and well nourished, without any lividity or coldness of the extremities indicating a disturbance of the capillary system and a retarded circulation in the subcutaneous tissue. It is very probable that the disease was a manifestation of the syphilitic taint, which it inherited from its father. The virus of syphilis transmitted by the parent has a very variable effect upon the vitality and development of the ovum. Sometimes it is blighted during early uterine life, but more frequently the embryo arrives at maturity and the infant comes into the world either withered or sickly-looking, or else with some local symptoms of the disease. But the disorder is not always to be recognised at birth, for children are even born with every appearance of health and vigour, and yet have within them the germs of syphilis. Some may raise an objection to this explanation on the ground that the gangrene of the skin may have wholly resulted from constitutional debility and deficient vitality, and that without some characteristic manifestation of the disease it could not be fairly attributed to the hereditary taint. Is it then always possible to define the extent and variety of the morbid impression? and may not the venereal poison, which invariably imparts to the constitution a tendency to all kinds of organic and functional disturbances, occasionally manifest its action by an obscure lesion unattended by any of the usual symptoms of congenital syphilis? Besides, the general aspect of the infant was very significant of the disorder. The withered and pallid expression of the features, together with the rapid emaciation and debility, are unmistakable characters peculiar to the syphilitic cachexia, and indicate a severe constitutional taint, deeply affecting the vitality and power of the system; in fact, the physiognomy of the disease was so impressed on the child that the diathesis could be recognised at once without the appearance of any specific symptoms.

Copper in Animal Tissues.—M. W. Blasius has reported to the Society of Sciences at Gottingen, that, in continuation of the researches of M. Wicke relative to the presence of copper in the soil and in plants, he has been induced to search for this metal in the tissues of men and animals. Its presence had been recognised by Sarzeau, Vauquelin, Chevreul, and other chemists, in the blood and muscles, but they obtained negative results from the spleen and liver, probably due to their operating on only very small quantities. M. Blasius has found, by very minute analysis, that copper is met with in every part of the animal organism, and he has refuted the opinion of Wackenroder, that it is to be discovered only in the tissues of animals who have lived in the proximity of man. The proportion of oxide of copper in the human liver, spleen, and heart was 0·0007 per cent. Gorup-Besanez gives the presence of a notable quantity of copper in the blood as a characteristic of the inferior animals. The physiological action of this copper in the organism is quite unknown.—*L'Institut*, No. 1706.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

◆

THE LONDON HOSPITAL.

CASE OF COMA FROM ALCOHOL—RECOVERY.

(Under the care of Dr. DAVIES.)

For the report of the following interesting case we are indebted to Dr. Bathurst Woodman, late the Resident Medical Officer of the Hospital. Cases of this kind come under the care and notice of the Resident Medical Officers to Hospitals more than of the Physicians. It is to be wished that they would take the opportunity of studying cases of acute alcoholism, apoplexy, and poisoning as regards the diagnosis of varieties of coma. We do not deny that there are often *circumstances* by which it is easy to determine whether a patient is poisoned by opium, comatose from uræmia or from cerebral hæmorrhage, or dead drunk, but we hold that it is frequently far from easy to tell from the symptoms themselves to what the coma is really due. There are plenty of records of painful mistakes in the diagnosis of poisoning, apoplexy, and drunkenness, and we think the whole question of the diagnosis of the various causes of coma requires to be restated and to be studied anew. To further this, we cannot do better than draw attention to the opinions of a writer who has most ably worked at the whole subject of alcohol in its manifold bearings. The artificial coma, or a state which approaches it, from chloroform, is very frequently under our observation. Dr. Anstie remarks, in his valuable work On Stimulants and Narcotics, that the symptoms of alcoholic narcosis are very similar to those produced by chloroform and ether, and that their greater permanence is due to the fact that, while the latter substances are very rapidly diminished, apparently entirely without transformation, alcohol, which is far more soluble in the blood, is retained for the greatest part in the organism, and probably undergoes changes there. The symptoms of profound and dangerous drunkenness are very like those of deep chloroform stupor, but can, of course, be distinguished from the latter by their failing to pass off suddenly by simple exposure to air and careful maintenance of the respiration. But there is nothing given in the description of this, or by any other, writer on which it would be possible to found a safe diagnosis between drunkenness and some cases of apoplexy; that is to say, nothing in the outward symptoms. Inequality of the pupils would make us suspect apoplexy. But there are, of course, many cases of that disease which show no such symptom. In alcohol poisoning we may have any degree of symmetrical contraction or dilatation of the pupils, according to the stage of the drunkenness and the strength of the poisonous dose. The experiments of Anstie and of Baudot upon Elimination of Alcohol, suggest, however, a possible mode of determining the diagnosis, without reference to the appearance of the patient. It is very clearly shown by these observers that alcohol, taken in the ordinary quantities used by sober persons, only escapes to a very trifling extent by the various excretory organs, but that intoxicating doses, on the contrary, very rapidly cause the elimination of a considerable proportion of the total ingested alcohol, more particularly by the kidney. In the case of a person found in a state of insensibility, one of the first acts of the Physician would very properly be to draw off any water which the bladder might contain. This can be distilled in a very few minutes in a small apparatus provided with a good condenser, and the product tested by the chromic acid test. Dr. Anstie considers this a practicable and valuable means of diagnosis, and that he would not hesitate to pronounce an opinion in favour of the existence of alcohol poisoning on the discovery of a certain amount of alcohol, as determined by the method of volumes with the chromic acid test. We ought to add that, besides consulting Dr. Anstie's work above named, we have had the advantage of consulting him directly on the subjects of these remarks. Dr. Anstie tells us that the distillation process avoids certain sources of error which affect the application of the chromic acid to urine *in bulk:* viz., the action of urea and some other constituents of urine upon the chromic acid. The distillation, he says, is so quickly done that in Hospitals, etc., where it is possible to keep a portable still at hand, it should always be preferred. But, in the absence of such apparatus, Dr. Anstie considers that it would be safe to predicate the presence of a poisonous dose of alcohol in the system, if *one drop* of the urine itself added to 15 minims of the chromic acid solution turned the latter *immediately* to a bright emerald green.

The chromic acid solution is made by dissolving one part of bichromate of potash in 300 parts (by weight) of strong sulphuric acid.

Joseph A., aged 30, was brought here on New Year's-day by the police in a state of complete insensibility. He was employed in St. Katherine's Docks, and during the confusion of the late fire contrived to drink a very large quantity of brandy and also a little sherry. His pupils were widely dilated, perfectly insensible to light, and quite symmetrical. The corneæ, and, indeed, every part of his body, appeared quite devoid of feeling, nor could he be roused to any movement, either reflex or voluntary. The surface of the body was rapidly becoming cold. His pulse was counted with difficulty, but was about 60 per minute. Respiration interrupted by long pauses, shallow, and not more than 4 or 5 a minute. His breath smelt strongly of spirits. The mouth was very slightly drawn to the left side (from the habit of smoking ?), and there was a slight deviation of the lower border of the forehead on the same side, which was probably congenital. There was slight stertor, but no flapping of the cheeks.

The stomach-pump was introduced, and drew off a large quantity of fluid, very rich in brandy, with a somewhat vinous smell. A drachm of sulphate of zinc in half a pint of water was next introduced by the same means. Cold affusion was employed to his head, and by a catheter about a pint and a-half of colourless urine, also smelling of brandy, was drawn off. These means increased his pulse to 104 and his respirations to 18 or 20, but he still remained absolutely insensible. The next urine drawn off—an hour after—had a specific gravity of 1004 only, was also nearly colourless, and gave a fine green with bichromate of potash and sulphuric acid. Like the former, it had a spirituous smell. A blister was applied to the præcardial region and hot bottles to his feet and abdomen. In two hours more the pupils contracted slightly when a very strong light was flashed upon them ; but for fifteen hours he gave no other signs of sensation. At the end of that time he began to feel a little. He perspired copiously, and was comatose for nine hours more, after which he could be roused pretty easily, and made a rapid recovery, seeming little the worse for his debauch.

Dr. Woodman adds to his report the following interesting statement :—In 1818, in a similar case, the patient (found near the West India Docks, was first bled by a Surgeon, and then brought to this Hospital. Bled again largely, and the bleeding was repeated next day ; this, with purging and low diet, terminated in furious delirium, gradually becoming " slow raving delirium ;" exhaustion and death on the fifth day. (See Cooke, " On Nervous Diseases.") The case reported above, although treated differently, was, as will be seen, for long hours uncertain in its result. The diagnosis, too, was rendered somewhat difficult by the slight facial inequality mentioned above. The character of the urine, and the bichromate of potash test were of great service in forming the diagnosis, for, as I have pointed out before (*Medical Mirror*, July, 1865), the mere smell of the breath is a very rude and uncertain test of alcoholism, in distinguishing it from apoplexy. The main points here of differential diagnosis were—1st, The history of the case ; 2nd, The absolute symmetry of the pupils ; 3rd, The extreme anæsthesia, without special or local paralysis ; 4th, The character of the urine—" clear, colourless, of low specific gravity, abounding in phosphates (in solution), of spirituous, or, at least, sweetish odour, and giving a green colour with the chromate test." In the few cases I have seen of apoplexy of the third and fourth ventricles, the insensibility was less complete at first, and in apoplexy of the pons and in opium poisoning the pupils are usually contracted.

UNIVERSITY COLLEGE HOSPITAL.

CASE OF POISONING BY BELLADONNA AND OPIUM.

The following case is an interesting record of the effects produced by swallowing two poisons which are supposed by some to be antagonistic in their action. The action of belladonna as a poison is, however, not well known. It would seem from Dr. Fuller's researches on the use of belladonna in chorea that it is difficult to produce fatal poisonous action by anything like a reasonable dose. The whole question of the action of belladonna requires to be studied anew. And this study may doubtless be much helped by corresponding observations on the physiological action of calabar bean. This drug produces, as Dr. Thomas Fraser discovered, contraction of the pupil ; belladonna dilates it. Belladonna paralyses the ciliary muscle, and thus causes loss of accommodation, artificial presbyopia ; calabar bean, as Dr. Argyll Robertson first showed, " stimulates " the ciliary muscle and produces an artificial myopia. The action of opium on the pupil is well known, and in this drug also we have another means of comparison and contrast. By noticing the effects of these substances on the pupil and ciliary muscle, and by reasonable trials of them in such diseases as chorea, we may learn much as to their general physiological action with a view to the treatment of various kinds of poisoning and of certain diseased conditions. We have already reported a case of chorea treated with calabar bean by Dr. John W. Ogle.

It is interesting to note the temporary artificial insanity that belladonna gives rise to. Dr. Daniel Tuke has urged the study of the form of artificial insanity which Braidism produces. It would be a fitting complement to Dr. Tuke's important researches if the mental phenomena arising in cases of poisoning by belladonna were studied. There are also facts of much interest in Medical psychology to be gathered in cases of extreme intoxication, apoplexy, and injuries to the head which are brought to Hospitals, and, as we have remarked, these different causes of coma are not easily recognised when patients first come to them. All the more important, then, is it in a practical point of view to obtain marks of various degrees and stages of mental confusion from slight loss of balance to profound coma. We willingly allow that the Residents at our Hospitals are so much occupied in treating the patients that they have little chance of quiet scientific investigation. Nevertheless, we venture to affirm that the observation of the temporary symptoms of mental disturbance in cases of gross injury to the brain ought to be the task of some one. Insanity may here be studied, as it were, in its rudimentary stage.

We are indebted for the following particulars to Mr. Wickham Legg, House-Physician, who had the entire charge of the case.

June 18.—Chas. S., aged 5, about 10 a.m. this morning, when he had just been taken out of bed and dressed, and before he had any food, was left alone in a room where an eggcup partly full of a liniment, composed of equal parts of the lin. opii and lin. belladonnæ of the Hospital Pharmacopœia, was standing on a low chimney-piece. It was at this time, he told his mother, that he took the contents of the eggcup, mistaking it for " mint-sauce." His mother, not knowing then what he had done, gave him a part of an egg and bread-crumb. He seemed drowsy and felt sick before he had finished eating ; wanted to lie down. His mother then smelt his breath of the liniment, and to keep him awake took him for a walk in the streets, but noticed that he got more drowsy until about 1 p.m., when she brought him to the Hospital. He complained of thirst, but not of dryness of throat.

On admission, face suffused ; pupils dilated, but not very widely ; staggering gait ; tongue dry, complaining of thirst ; when questioned answered that throat was dry ; pulse soft, 120 to 140. When taken into ward, great restlessness, clutching at any object or person near ; wandering slightly. Asked for drink, and thirty grains of sulphate of zinc were given. Surface cooler than natural ; face suffused slightly, but not livid ; pupils dilated as before ; great irritation of mucous openings, constantly rubbing eyes and mouth ; wandering ; does not quite recognise mother ; thinks he is driving sheep about ; thinks he sees money on bed, and tries to pick it up, and that he holds it in his hand ; an inclination to be drowsy was observed from the first ; about once in every ten minutes he half went to sleep and awoke with start. Ten minims of sp. ammon. arom. were given every half-hour, and there was great difficulty in making the patient swallow it. At 2 p.m. he vomited about six ounces of a thick gruelly fluid, smelling slightly of camphor ; respiration was harsh all over chest ; after vomiting an ineffectual attempt to give milk and water was made. At 2.45 the tendency to drowsiness had decidedly increased, but delirium was more marked. At 3 p.m. he was walked round the ward between two nurses ; when walking was discontinued the patient shut his eyes and appeared to sleep ; this was marked till about 3.30, when it was less noticed ; pupils all through dilated as before. At 4 p.m. the patient kept his eyes open for a minute or more when he stopped walking, and at 4.15 drank without difficulty a few ounces of strong coffee. At 5 the patient was scarcely drowsy, although he did not quite recognise his mother. At 6 p.m. not at all drowsy; walking discontinued; pupils still dilated; recognised his mother and father. During no time did his eyesight seem defective, and he avoided objects which came in his way. No micturition since taking the poison.

June 19.—The patient micturated freely during the night, and slept well, waking once or twice; pupils moderately dilated. A dose of castor-oil brought away a copious stool. He was discharged on June 20 apparently quite recovered.

The mother afterwards brought to the Hospital the eggcup out of which the poison was taken. When quite full it held about ʒix.; fluid poured into amount of poison indicated by mother measured ʒvj. The eggcup was found empty, and the child told his mother that he had drunk the whole of it. If ʒvj. of the liniment were taken by the child, he must have taken about $5\frac{1}{2}$ grains of the extract of belladonna, and ♏xxxvj. of the tinct. opii.

LEEDS GENERAL INFIRMARY.

CASE OF PARACENTESIS PERICARDII—RECOVERY—CLINICAL REMARKS.

(Under the care of Dr. CLIFFORD ALLBUTT.)

This rare operation was lately performed at the Leeds Infirmary in a case of acute rheumatic pericarditis, and with perfect success.

Dr. Allbutt, in his remarks upon this case, compared the operation as performed with a canula by Mr. Wheelhouse to that with a bistoury as recommended by Trousseau and others. He expressed a very decided opinion in favour of the canula. He also pointed out that in the present case one tapping was found to be sufficient, and that irritant injections were not required. He added that, had it been found necessary to repeat the operation, he should have advised the injection of an iodised solution.

Dr. Allbutt, in concluding his remarks, pointed out how strong an instance was to be seen in this case of the unity of the Medical Art in all its aspects. He said that no case could show more clearly how necessary it is for the Physician to have a useful knowledge of the resources of the Surgeon, and for the Surgeon to be able at once to perceive the wants of the Physician. Nothing, in his opinion, was more to be regretted than the unfortunate division of these two great departments of the healing art, by which a mere arrangement of convenience has been placed on the level of a real distinction, thereby encouraging at the very outset of a student's career a narrowness of thought and an incompleteness of education, which is most mischievous to the best interests of the Profession.

For the notes of the following case we are indebted to Mr. George Thompson, Clinical Clerk:—

C. S., aged 26, gaspipe layer, was admitted into No. 4 ward, under the care of Dr. Allbutt, on September 18, 1866. On admission he was suffering from very acute rheumatism, both muscular and arthritic, and there was considerable dyspnœa and oppression. On examination the pericardium was found to be much distended with fluid, and there was acute pain in the region of the heart. A blister over the heart was ordered, and full alkaline and opiate treatment.

On September 19, about 11.30 p.m., Dr. Allbutt was hastily summoned to see the patient, who was found sitting up in bed, with his elbows on his knees, struggling for breath. He was covered with a cold copious sweat. The area of pericardial dulness was found to be considerably increased, occupying nearly the whole of the left chest in front. There was perfect resonance all over the left lung behind. The patient was clearly at the point of death, and Dr. Allbutt determined at once to ask Mr. Wheelhouse to tap the pericardium. Mr. Wheelhouse was, therefore, called in to see the patient.

The extent of the pericardial dulness was now accurately defined, and the probable position of the apex of the left ventricle and of the auricle was as far as possible ascertained. Mr. Wheelhouse determined to open the sac half an inch from the sternum on the left side and opposite the upper margin of the costal cartilage of the fifth rib. He passed in a fine trocar, inclining it slightly upwards and inwards, so as to enter, if possible, opposite the centre of the left ventricle. He pushed it onwards until he could distinctly feel the movements of the heart with the instrument; and then, sheathing the point, he pushed the canula well up to the heart until he could both feel and see the impulse. The trocar was then wholly withdrawn, and the fluid allowed to escape. This it did in a steady stream at first, which soon subsided into a saltatory flow coincident with the heart's contractions. The fluid consisted of a pale-pink coagulable serum. On the whole, about two and a half or three ounces escaped. During the operation the patient gradually obtained relief, and after the canula was withdrawn, the bed rest was removed, and he was able to lie down. The breathing was now only 36 per minute, and he was able to speak a few words and express that he felt relieved. The pulse had lost its rapid and struggling character, and could easily be counted, its number being about 110. The area of dulness was very decidedly lessened, but it was not thought well to tease the patient again with a minute examination. Mr. Coleman was good enough to sit up all night with the patient, who passed it in tolerable comfort, though there were several threatenings of syncope, which were warded off by large and repeated doses of brandy; all other medicines were omitted.

Next day the cardiac dulness had not increased. On the evening of this day (September 20) the breathing again became more laboured, and considerable delirium came on. Another large blister was placed over the region of the heart, and half a drachm of liquor morphiæ was given; ten drops were ordered to be repeated every six hours. A comfortable night was thus passed.

On the whole, the patient may be said to have steadily improved from this time, and on October 13 he was discharged cured. The pericardial dulness on his discharge was little, if any, beyond the normal extent. There was a loud blowing systolic murmur heard over the apex.

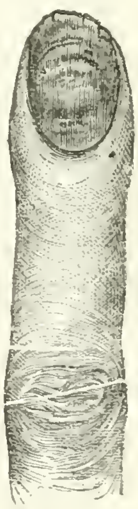
ST. GEORGE'S HOSPITAL.

SUBCUTANEOUS INJECTION REPEATED BETWEEN FORTY AND FIFTY TIMES FOR NEURALGIA OF THE ARM—RECOVERY.

(Under the care of Dr. JOHN W. OGLE.)

The patient was a woman aged 40, who suffered from intense neuralgia in the left arm, forearm, and middle finger, following an abscess, apparently the result of a blow at the middle of the arm. The case up to a certain date was related to the Pathological Society (see vol. xvi., p. 268, of the *Transactions*), chiefly in connexion with the very peculiar alteration in the nail and end of the left middle finger, this nail having become hypertrophied, corrugated on its surface, jagged at its edges, and the whole of the finger-end clubbed and thickened. After the time that the case was brought under the notice of the Society (April 18, 1865), the subcutaneous injection of morphia, which had proved so useful, was continued, and she was in the habit of coming to the Hospital as often as she chose, to have the morphia injected.

a



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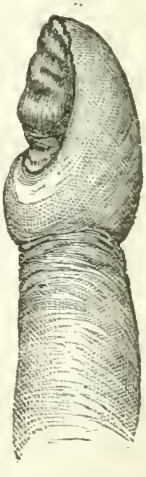

In November last she reported herself as being quite well, stating that she had had the injection performed in all between forty and fifty times. Throughout, although pretty large quantities of the morphia were used, the only unpleasantness which she has found attending its use has been headache. This she gladly underwent in lieu of the intense pain which she suffered in the limb. Dr. Ogle has lately had the accompanying woodcuts made, showing the appearance of the affected nail and finger, *a* being a view of the posterior aspect of the finger, and *b* a profile view of the same.

Since the neuralgia has been subdued, and the general health of the patient improved, the nail has returned to its natural appearance and condition. With respect to the long-continued use of the subcutaneous injection of morphia in the above case, Dr. Ogle stated that he had a Medical friend who, for neuralgia of the feet, had used the subcutaneous injection of morphia daily for several weeks. He inculcated the necessity of injecting the remedy as near to the seat of the pain as possible.

REMARKS ON CHANGES IN NUTRITION DEPENDENT ON ALTERED NERVE-INFLUENCE.

Dr. Ogle drew the attention of the students to a preparation in the Hospital Museum, showing the union of a divided carpal nerve of a horse, three-quarters of an inch of the nerve having been removed. This operation was performed owing to some disease in the foot, which was cured. But, as a result apparently of the division of the nerve, the hoof of the foot in question "*grew to a greater size than usual.*" As being facts of an analogous character, he also alluded to the condition of the skin and nails often observed in paralysed parts, and in limbs the nerves of which have been injured—on the one hand, the roughness and harshness, evidently the result of unusual development and desquamation of epidermis; on the other hand, the unusual smoothness, defective hair-growth, etc.; again, the unusual dryness or moisture of such parts. These various conditions were evidently, Dr. Ogle added, connected with modifications or perversions of nerve-influence, whether such nerve-power is to be considered as acting on the growth and influencing the condition of parts by virtue merely of its influence on the calibre and condition of the minute vessels of the region, or by reason of a direct influence on or control of the nutritive and molecular processes, independent of the capillaries.

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SATURDAY, NOVEMBER 3.

CHOLERA IN ENGLAND.

The Quarterly Return of the Registrar-General for the three months which make up what is called the "summer" quarter has come to hand so near the time of our going to press as to preclude us from giving it as much notice this week as its matter deserves; for, be it observed, hitherto we have known with certainty absolutely nothing beyond the fugitive statements which have from time to time appeared in public journals or private correspondence of the measure which cholera in its present epidemic form has attained in England. The chief cities and towns wherein sanitary organisation has systematised the regular and constant weekly record of disease have yielded nearly all that could guide us in estimating the severity of the epidemic; but for the rest of the country nothing was left but surmise until the Registrar-General had received and published the customary reports of his 2200 recording officers. We were, indeed, quite prepared for delay in the appearance of this return for reasons before adverted to in this Journal, but punctual to the very day of its usual publication it is in our hands.

Up to the 30th of September last the total deaths from cholera registered amounted to 10,365, and of diarrhœa 9570, the two diseases combined accounting for 19,935, or 17 per cent., of the 116,826 deaths from all causes. The following table will show the relative incidence both of cholera and diarrhœa in the several groups of counties into which, for registration purposes, England is divided:—

	Population, 1861.	Deaths.		
		Cholera.	Diarrhœa.	Cholera and diarrhœa.
England	20,066,224	10,365	9,570	19,935
Divisions.				
1. London	2,803,989	4,714	2,298	7,012
2. South-Eastern Counties .	1,847,661	737	530	1,267
3. South Midland Counties .	1,295,515	65	358	423
4. Eastern Counties . . .	1,142,562	454	227	681
5. South-Western Counties .	1,835,714	375	375	750
6. West Midland Counties .	2,436,568	82	837	919
7. North Midland Counties .	1,288,928	44	384	428
8. North-Western Counties .	2,935,540	2,022	2,646	4,668
9. Yorkshire	2,015,541	240	996	1,236
10. Northern Counties . .	1,151,372	118	537	655
11. Monmouthshire and Wales .	1,312,834	1,514	382	1,896

From this table we see that London, whose population is about one-seventh of the aggregate of all England, has had nearly half of the total deaths from cholera, and about one-fourth of the deaths from diarrhœa, within her borders. The north-western counties of Cheshire and Lancashire, with a population equal to that of London, have not had half as much cholera as London, but a greater number of deaths from diarrhœa; and the Welsh division, whose population is less than half, had fewer cholera deaths by two-thirds than occurred in the metropolis. Of the 4714 deaths by cholera in London, 3691 were registered in the seven Eastern districts, the remainder being distributed over the other districts in varying proportions. The counties in which the disease has appeared with the greatest force are these:—

	Population. 1861.	Deaths from	
		Cholera.	Diarrhœa.
Kent (extra metrop.)	545,272	226	153
Hants	456,654	391	181
Essex	379,705	435	117
Devon	589,278	325	183
Chester	470,174	150	180
Lancaster	2,465,366	1872	2466
West Riding	1,530,007	198	841
Durham	542,125	81	300
Monmouth	196,977	70	49
Glamorgan	326,254	1059	162
Carmarthen	96,651	255	95
Pembroke	87,690	83	32

We thus get a clue to more minute subdivision, which brings before us the specific localities where the epidemic has been most severe, and to enable our readers the better to appreciate the significance of the numbers for such districts as we particularise, we shall in each case give the population at the last census, without which indeed very erroneous conclusions might be drawn. The deaths quoted will always refer to cholera, unless otherwise described. Starting, then, from London, first through the South-Eastern counties, we find in Surrey 12 deaths from cholera at Godstone (population 9642), chiefly amongst the inhabitants of huts "built in a very damp situation," in the parish of Oxted, for the use of the labourers at the railway works; at Kingston (population 36,479), 15 cholera deaths. In Kent—Gravesend (18,782) had 14 deaths, 13 of which are returned as "Asiatic" cholera, and mostly cases brought from off the river; Malling (21,447) 14 deaths, 10 of them among hop-pickers, in the parishes of East and West Peckham; Sheppey (18,494) 21 deaths, all in the sub-district of Minster; Thanet (31,862) 53 deaths, of which 41 occurred in Ramsgate parish. In Sussex—Worthing

(18,921) 19 deaths, 14 of them in the parish of Littlehampton, where the disease is reported as having subsided; Westbourne (6957) 15 deaths, 10 of which took place within a radius of 25 yards, and are wholly accounted for by the nuisances existing in the premises. In Hampshire, Portsea Island, including the town of Portsmouth, Portsea, Kingston, and Landport (94,828), 137 deaths, and one of the registrars remarks that the severity of the epidemic has fallen on the poorest localities, where intemperance and filthy habits invite disease. Isle of Wight (55,362) 98 deaths thus distributed—Cowes 16, Newport 69, Ryde 10, Godshill and Calborne 3. Southampton (43,414) 98 deaths. The South-Midland counties have escaped the epidemic almost entirely, and the Eastern counties also, if we except the district of West Ham, which adjoins the metropolis, and out of a population of 59,319 has lost 380 lives by cholera, and the district of Rochford (18,282) where 29 deaths occurred. Of the South-Western counties Devonshire is the only one which has been visited severely, and that chiefly in four districts —St. Thomas (48,405), 55 deaths; Exeter (33,742), 84 deaths; Newton Abbot (59,063), 26 deaths; and Totnes (32,942), 99 deaths. The West-Midland counties have been remarkably healthy, and only one noticeable outbreak is recorded; this was in one part of the district of Stourbridge (68,726), where 12 deaths occurred between September 5th and 21st, 4 of them being certified as Asiatic cholera, and the sanitary condition of the place where the outbreak took place is described as "very bad." In the North-Midland county of Lincoln 23 deaths from cholera out of a population of 25,973 were registered in the district of Gainsborough. The North-Western counties of Chester and Lancaster have been the field of a distinctly marked attack. In Cheshire, Northwich (33,338) had 24 deaths, and the registrar of the sub-district of Over remarks that "the first case of cholera occurred in the June quarter in a small cottage situate close to the river Weaver, and on the back of which there is a very large set of salt works. The next two cases occurred within seven days to two men who worked at the salt works about three hundred yards lower down on the opposite side of the river." Great Boughton (53,501), which includes the city of Chester, had 25 deaths, mainly from an outbreak which had only recently been manifest, and the following description of the water supply of the borough is quite sufficient to account for the prevalence of any amount of epidemic disease:—

> "The whole of the borough is supplied by the Chester Waterworks Company with water taken from the river Dee. That river cannot perhaps be considered particularly pure at the best, inasmuch as it receives the sewage of Llangollen, Wrexham, Farndon, Holt, and a variety of smaller places before it reaches Chester; but unfortunately the part of the river from which the water is taken is further contaminated by being the receptacle of the sewage of the whole of the eastern half of the borough of Chester itself. This part of the river is formed into a sort of lake about one mile in length by some sixty to eighty yards broad, bounded at the lower end by a stone causeway erected for the purpose of holding up the water to supply the mills, and at the upper end by the shallows of Broughton Ford; into this basin the drainage of the town is carried by at least four several sewers at different points, and in its depths lie the accumulated filth of generations, but from it is daily taken the whole supply of water for the city. It is only right to say that the Waterworks Company are now engaged in the construction of works to enable them to take the water from the long reach of the river below Heron's Bridge, where they would certainly escape the contamination of the Chester sewage and be able to deliver the water as pure as the condition of the upper river will allow. In the meantime the citizens are very much dissatisfied with the article supplied, and there are constant complaints and debates, both in the town council and out of it, upon the subject of the supply and the danger to the health of the inhabitants to which we are at present exposed."

Wirrall (18,420) had 50 deaths, and Birkenhead (61,420) 30 deaths from cholera. In Lancashire: Liverpool and West Derby, with a united population of 495,587, lost 1603 lives by cholera since July 2—the date of the first death in Liverpool; Ormskirk (46,252), 42 deaths; Wigan (94,561), 41 deaths; Manchester and Salford (349,323), 55 deaths; in the district of Chorley (where 4 deaths have occurred out of a population of 41,678), the Registrar says "the inhabitants seem in a state of terror, owing to the reports in the newspapers, and every case of diarrhœa inspires alarm." In the great manufacturing towns of Yorkshire cholera does not appear to have manifested itself epidemically, but the Registrar of the subdistrict of Goole reports an outbreak which in the three months yielded 200 cases and 38 deaths, out of a population of 6994. In the Northern county of Durham: Hartlepool (29,153) had 20 deaths, and Sunderland (90,704) 27 deaths. In Monmouthshire cholera broke out in part of the district of Newport (51,412), and proved fatal to 15 persons living in the large scattered village of Abercarne, where coal works and tin works are carried on, but the sanitary condition of the place is well attended to. At Merthyr-Tydfil, Neath, Swansea, Llanelly, Carmarthen, Pembroke, and Haverfordwest, the disease has been very severely felt:—Merthyr lost 153 persons out of 93,008, Neath 373 out of 58,533, Swansea 399 out of 51,260, and Llanelly 149 out of 27,979. The Registrar of Llanelly says that the health of the town previous to the outbreak of cholera was very unsatisfactory, owing, as was universally believed, to inefficient drainage, and to an impure and scanty supply of water during the summer months. He adds that "cholera has been most fatal in those parts of the district in which the drainage is most defective and the water supply most deficient."

And thus we come to the close of our analysis, satisfied more than ever of the supreme necessity of pushing forward the work of sanitary reform, not in great and influential cities only, but equally also in out-of-the-way places, where disease is manufactured from filth just as systematically as articles of common use are fashioned from the raw material according to well-defined laws. The crusade of cleanliness will not bear fruits in pageantry or fame, but the results of weaning men, women, and children from dirty habits, and teaching them to respect the obligations which Nature exacts as a condition of health, will eventually be written in the history of a people invigorated, enjoying the full term of natural existence, and free from the visitations of disease which now periodically sweep away a holocaust of lives.

THE TRIAL OF RISK ALLAH.

The trial of Risk Allah George Bey, or Habeed Aga, or Halil Risk Allah Effendi, for the murder of his ward, Charles Readly, and for forgery, has been noticed at length in so many of the English papers that doubtless most readers are acquainted with the leading points of the story. The matter has especial interest for Medical readers, because the accused, although by birth a native of Syria, had been educated for the Medical Profession in London, is a member of the Royal College of Surgeons, and an Associate of King's College, and for some time held the post of honorary Medical officer to the Turkish Embassy here. He also served with the Turkish Contingent in the Crimean war, and is decorated with our Crimean medal. From the Turkish Government he received the title of Bey, and he was the first Christian subject of the Sultan on whom was conferred the order of the Medjidié. Altogether, considering that he belonged to the Medical Profession, his services appear to have been well requited. In addition, he found a Desdemona, in the shape of an English widow named Lewis, possessed of the comfortable sum of £25,000 and one sole incumbrance, a nephew, or, as some say, an illegitimate son, the Charles Readly into the circumstances of whose tragical death the Belgian legal authorities have now been inquiring. In process of time the wife died, leaving a fortune of £20,000 to her husband, and £5000 to Readly, with a reversion to

Risk Allah in case the young man died before he attained his majority.

But apart from the antecedents of the accused, the Medico-legal points raised in the course of the trial are of sufficient interest to warrant its examination. The question to be decided was of course whether the death had been homicidal or suicidal, and rarely perhaps in criminal trials has evidence up to a certain point appeared more conflicting or more nicely balanced. We are glad, however, to be able to add that the belief in suicide gained ground as the trial advanced, and at length legitimately terminated in a verdict of acquittal.

Readly is alleged, although the evidence on this point is not conclusive, to have been a *mauvais sujet*. He is said to have seduced an English girl, and to have paid her family the sum of £500 to avoid exposure. This sum with other moneys he is said to have borrowed of Risk Allah, and the latter, to insure himself against loss, had effected a policy on Readly's life for £1000. He was, moreover, in bad health, and suffered from epileptic attacks. We quote from the *Pall-Mall Gazette* an account of the circumstances which immediately preceded his death:—

"In the early part of 1865 Readly, while at Spa, in Belgium, made the acquaintance of a young English lady, made her a proposal of marriage, and referred the lady's friends to his guardian, Risk Allah Bey, at that time resident in London. While at Spa, however, Readly was seized with a sudden and severe illness, and on inquiries being made of the Bey in London, the latter admitted that the young man had been subject from his infancy to epileptic fits. Precisely at this time Readly left Spa to meet his guardian, Risk Allah, at Antwerp, and when in that town he received a letter from the mother of the young lady, stating that, in consequence of his ill health, she could not consent to his marriage with her daughter. This was about the middle of March. In replying to this intimation, Readly stated that he would only accept a refusal from the young lady herself. A few days later the daughter wrote to him, saying that the marriage could not take place. Immediately afterwards Readly wrote again to the mother, reproaching her with preventing his marriage with her daughter, and consoling himself with the reflection that there were many opportunities of finding 'a speedy and honourable death.' On the night of March 29, while Readly and Risk Allah were stopping at the Rhine Hotel, at Antwerp, the former was seized with a fit; and it would seem that the Bey remained at the bedside of the young man till an advanced hour of the night."

At 7 o'clock in the morning Readly was proved by a maid-servant, who said she looked through the keyhole, to be sleeping quietly in his bed.

Risk Allah, after remaining with Readly, as has been said, the greater part of the night, was seen by various persons in the hotel at an early hour of the morning. About 9 o'clock he said to the proprietor of the hotel that he feared Readly was very unwell, and several witnesses stated that he appeared very anxious and uneasy. Soon after—in consequence, as he said, of smelling the odour of powder—he gave an alarm. Readly's door was locked; but the accused, with several servants, effected a forcible entrance. They found the room filled with smoke, and Readly lying on his bed quite dead, but warm. He was lying on his back, with his right arm extended by the side of the body, and the left flexed across the chest. The body was naked, but covered by the bedclothes, which did not appear to have been disturbed. Both arms were under the bedclothes. The head was on the pillow, and turned to the right side. On the left side, under the ear, was a wound four centimetres and a half in diameter. The wound was blackened; a small quantity of blood had run along the neck on the blankets and bedding. On the right temple was a counter opening. It appeared that the shot had entered on the left side under the parotid gland, had cut across the left carotid artery, and, taking an ascending course, had gone out at the right temple. Death was believed to have been instantaneous. Near the bed a chair was overturned, and on the floor lay a discharged fowling-piece and its ramrod. On a table near the window lay a scrap of paper, on which were written the words "I have done it." The writing was dry, but near it lay a pen which still contained fluid ink.

The main argument for the theory of the prosecution was founded on the position of the body, the fact that the hands were covered by the bedclothes, and that the fowling-piece lay on the floor at the distance of some feet from the deceased. Besides, there were the facts that Risk Allah had himself taken the fowling-piece into the deceased's apartment some days before, and had access to that apartment from his own room through a door which was not at the time locked. There was, moreover, the pecuniary motive furnished by the reversion and insurance. Their theory seems to have been that the accused had knelt down, and, holding the gun horizontally, had taken deliberate aim at the neck of the deceased as he lay asleep.

On the contrary, the supposition of suicide advanced by the defence was supported by powerful testimony. In the first place an expert proved that the slip of paper found on the dressing-table was in Readly's handwriting, and had been written by the pen which lay near it. Then, also, the defence obtained the evidence of two gunmakers, and of M. Charrins, lieutenant-commander of the Citadel of Antwerp, whose office it had been for some years to investigate all cases of suicide occurring amongst the soldiery. These witnesses clearly established the possibility of the case being one of self-destruction. M. Charrins had made experiments on sheep. The skin of the neck was carefully shaved, with the exception of a ruff "to imitate Readly's beard," and the animal was then fastened on a board with the head inclined to the right side. M. Charrins found that if a gun was discharged close to the neck the wound was large and blackened, as in the case of Readly, but if at a little distance the wound was round and clean. Then twice he demonstrated to the jury the possibility of Readly having fired the piece himself by means of the ramrod. Readly's bed was brought into court, together with the chair which was found overturned by it, and the fowling-piece. M. Charrins then placed the chair by the bedside, rested the butt-end of the gun on it, and lay down in the bed, placing himself in the exact position in which Readly was found. With the barrel of the gun lying on his chest, and the butt-end supported by the chair, he twice, with the ramrod which he held with his right hand, made the tumbler of the gun descend sharply on the nipple, or, if we may be excused a bull, fired it. The fact of the gun being found on the floor, and the chair overturned, he explained by the recoil, which would be quite sufficient to knock down the chair. On the removal of the bedclothes after the experiment, M. Charrins' position was precisely that in which Readly was found. One remarkable point in the story is, that no report of a gun was heard in the hotel, although a maidservant was cleaning down the stairs at the time when the catastrophe must have taken place. On this M. Charrins also offered an explanation. He said:—"A gun fired near the object makes only a dead report, nearly like the noise produced by a bale of goods dropping from a pulley. I had the proof of it at Namur, on the occasion of the death of a corporal who killed himself by firing his gun with the muzzle near his body in a room where his comrades were playing: they heard nothing. In my opinion, an especial circumstance explains, moreover, why nothing was heard at the Hôtel du Rhin. There is in Readly's room a little niche which would absorb the report, the echo of which would go towards the street." M. Charrins concluded his evidence with dramatic effect. He said:—"Before God, who hears me, and in the presence of the jurymen, I, who have studied arms thirty years, declare that I am convinced and certain that there has been a suicide."

Another point which at least told against the theory of the prosecution was the ascending course taken by the shot.

This, it was argued, was not explicable on the supposition that the gun had been fired horizontally.

We are glad to learn by the telegraph that the jury have returned a verdict of "not guilty." We have said that the possibility of the case being one of suicide was clearly proved. Moreover, evidence was adduced to show that Readly had threatened to take his own life, and his disappointment in love may have strengthened his determination. If epileptic, which seems proved, he may have been subject to fits of depression and passion, in one of which he may have committed the fatal act. Witnesses of respectability, amongst them Dr. Ramsbotham, came forward to bear testimony that the Bey had been a kind, benevolent, honest gentleman. Moreover, at Eupatoria, it was proved by the testimonial of the British Commander that Risk Allah had bravely saved from drowning an English sailor. Taking, therefore, together the established possibility of the case being one of suicide, the circumstantial evidence afforded by the paper and handwriting, and the temperament of Readly, the jury have returned a verdict in accordance with the evidence; and in the interests both of the Profession to which Risk Allah belongs and of public justice, we rejoice at the result.

The accusation of forgery, or complicity with forgery, has nothing to do with the murder. Risk Allah seems, after his first acquittal at Antwerp, to have made the acquaintance of one Osman, and to have incautiously admitted him to the greatest intimacy, and to have been so victimised by him as to be suspected of complicity in some forgeries of which Osman is accused. We must await the solution of this part of the romance.

An incident in the trial illustrates the different etiquette prevailing in the Belgian law courts from the cold, stern *régime* in our own:—During the evidence for the defence, at the point when popular feeling began to turn in favour of the accused, the Belgian Solicitor-General, counsel for the prosecution, sent the prisoner his snuff-box by a gendarme, and, with a reassuring smile, motioned him to take snuff with him.

EQUALISATION OF POOR'S RATES.

The project for equalising the poor's rates over the metropolitan area is one for fining all the inhabitants of districts where the houses are good, let on leases, and inhabited by clean, decent people, and for giving a bonus to the owners of all the squalid, tumble-down hovels inhabited by wretched tenants whose rents are extorted week by week. It is perfectly well known that the worst property, of the "weekly" kind, yields the largest profit. The *Evening Standard* of October 29 describes the owners of such property and their proceedings.

> "In most cases the landlord pays the rates himself, and his power to reimburse himself is determined solely by the briskness of the demand for the accommodation he provides. At the present moment his power is paramount. The destruction of small house property for railways and other improvements has caused the eviction of many thousands, and conferred upon the landlord a power which he has rarely possessed before. Not only is he able to screw every farthing of the rates from his unhappy tenants, but should any improvement be ordered by the Sanitary Board he immediately raises the rent, because he knows full well that for every vacancy he makes there are twenty fresh tenants ready to step in."

Let us ask, then, ought not the landlord of such property to pay the poor's rate? He creates the necessity for the rate by the unwholesome nature of the tenements; he refuses repair and sanitary decencies, except under compulsion, and he is to be rewarded. *Quære:* Supposing the burden of the poor's rate transferred from the worst districts to the best, does any one suppose for a moment that the landlords in the latter would let the poor working man have his room at one farthing less? The writer in the *Standard*, if he reversed his statements, would make them more exact. In the best districts where houses are let on leases an increase of poor's rates due to equalisation would be a most iniquitous tax on the occupants. In the worst districts it would be a gift to persons who already derive an exorbitant revenue from property for which they give and do nothing in return.

HANGING CONSIDERED FROM A MECHANICAL AND PHYSIOLOGICAL POINT OF VIEW.(a)

As it seems that capital punishment cannot be done without, and that occasionally killing is (legally) no murder, although it seems a curious subject for us to discuss, whose lives are devoted to the preservation of life, and still more for one who, like the Rev. Dr. Haughton, has to announce *ex cathedrâ* that He who gave the life "wishes not the death of the sinner," still we must bow to the usages of society, and if death must be demanded as the price of crimes, then it is necessary to decide upon the most humane method of exacting that fearful fine.

It happens not unfrequently that an execution by hanging is mismanaged—the rope is rotten and breaks; it is too long and does not do its work; when more than one are hung they are hung too close together, as happened in one of our colonies, when one man put his legs on the shoulders of the other and lay in comparative comfort. Still, we should have thought that by this time hanging had become an exact science. The gallows (Galga) was an old-established institution of the Teutonic races in Northern Europe, and has had plenty of time to come to perfection. La mère Guillotine reached maturity very rapidly, but it seems hangmen have been bunglers ever since Telemachus, Eumæus, and Philætus strung up the faithless maids of Penelope (Odyssey, xxii. 465—475), with slip-knots (*βρόχοι*) round their necks, suspending them all to one main rope in the kitchen side by side, *ὡς αἴη ἑξείης κεφαλὰς ἔχον*, which reminds the reverend author of Bluebeard's wives—"tit-tat-toe, all in a row." Homer prefers comparing these flighty damsels to a string of snared fieldfares. This execution, the first by hanging on record (for the Jewish, Egyptian, Persian, and other ancient suspensions were undoubtedly *post-mortem* until the Romans crucified men alive), has given Mr. Haughton an opportunity for that peculiarly versatile criticism he is so remarkable for. He shows us by mathematics that the united strength of Telemachus, Eumæus, Philætus, and the willing Euryclea, even had they gone to the foot of the kitchen stairs and called to "the man who bent the bow" to come and lend a hand, could not have, sailor-fashion, stretched the main rope which they had carried round the vaulted roof of the kitchen (*περίβαλλε θόλοιο*) and raised the damsels to such a height as to form a funicular polygon sufficiently elevated for their purpose. More probably they got it all ready, the nooses prepared, and then inserted the heads of these luckless maids.

Capital punishments have varied much with country and race. The Jews, although, as an additional ignominy, they exposed the body, stoned their criminals to death; but that was in the boyhood of the world, and the boy's first weapon is a stone. The Egyptians cut a man's head off, and then nailed him to a tree for birds to peck at, as within the memory of our fathers murderers were hung in chains, or defaulters are now "posted" in the clubs. The Persians did likewise. As there are original roots for every word we speak, so these punishments for crime seem to come from one idea.

It is not at all certain when our present law of hanging a man till he be dead came to be employed. Still, it soon became fearfully active. Not very many years ago a man tired of his life might get rid of it very easily. One snatched at a lady's earrings as she was leaving Drury-lane Theatre; he detached one, but it stuck in her hair. He was sentenced to death. Any miserable varlet who took a few pence from a till had only to wait until opposite his name in the calendar some judge would scribble *sus. per coll.* (suspendatur per collum), and next morning he might be dangling with half-a-dozen others from Tyburn's leafless tree.

(a) By the Rev. Samuel Haughton, M.D., F.R.S., F.T.C.D. From *Phil. Magazine*, July, 1866. Pamphlet.

The Reverend Dr. Haughton mentions several cases where hanging has been bungled. In one instance the criminal had undergone tracheotomy some years previous to his execution; he had too short a drop, and breathed with ease through the hole in the trachea until relieved by the humanity of the Surgeon, who stopped the aperture through which he breathed with his finger. The Surgeon was not ordered by the judge to kill the man; had the sheriff done it, well and good. The Surgeon, therefore, committed murder; and, with all respect to Dr. Haughton, we think that but few Surgeons could do it.

Death is produced by hanging in one or other of three ways—1. Apoplexy; 2. Asphyxia; 3. Shock of the medulla oblongata, caused by fracture of the vertebral column. In the first two cases death is preceded by convulsions, lasting from five to forty-five minutes. In the third case death is instantaneous and painless, and this ought to be the aim of the hangman and the perfection of his art.

In considering any question, we must take the historical as well as the dogmatic view thereof. There was a hanging to kill and another to stupefy. The latter was used as an anæsthetic, preparatory to the disembowelling (or drawing) that always preceded the quartering of the criminal. This anæsthesia could be obtained by the use of the short (three to four feet) drop. The long drop, on the other hand, produces instantaneous death. Calcraft's method belongs to the former, and, in the reverend author's opinion, is "unworthy of the present state of science" (page 8); so, in order to insure speedy death, he recommends the following rule: "Divide the weight of the patient in pounds into 2240, and the quotient will give the length of the long drop in feet." For example, a criminal weighing 160 lbs. should be allowed 14 feet drop; or a shot strapped to his feet, so as to secure him a shock of 2240 foot-pounds to the medulla." We know that some years ago the well-known John Arthur, of the Edinburgh dissecting rooms (we had it from himself) had to go to the gaol where a criminal who was to be hung and then dissected was to be *sus. per coll.*, and make him eat a quantity of porridge and milk, so that when cut open a few hours afterwards his lacteals would be full and worth looking at; but the scales of justice being put to such a use as proposed by the Reverend Dr. Haughton may seem grotesque, but is really humane. In his own practice a case occurred where the criminal weighed 160 lbs., and was allowed to fall through 14 feet 6 inches, which, allowing for some elasticity in the rope, would correspond with 224 foot-pounds of shock. The said culprit must have had a good stretch, as before death he was 5 feet $9\frac{1}{2}$ inches, and after 5 feet 11 inches, having been elongated by $1\frac{1}{2}$ inch by the "long drop of $14\frac{1}{2}$ feet."

The American mode of hanging is by hoisting the man suddenly by a weight attached to the other end of the rope and let fall. A case reported in the *Times* of the 31st shows that without due precaution this is only equivalent to the short drop, and that it causes death by asphyxia very slowly. In order to insure a good initial shock to the vertebral column, the reverend author says that the weight should be let fall through twice the height of the "long drop," and that then a weight equal to that of the criminal will be sufficient to cause immediate death. In practice, the Reverend Dr. Haughton thinks twice the height of the "long drop" would always be found convenient, and "confidently recommends" that "twice the height of the Irish long drop ($14\frac{1}{2}$ feet) should be used, with a weight equal to that of the criminal in the American method." Does the author know that not long ago the head came flying off an American criminal?—not that it mattered much to him, but it was contrary to etiquette.

We have only seen one hanging, and there the "*chuck*" Dr. Haughton alludes to was very effectual. As education advances, and needy persons can be more easily sent to unpeopled districts to lead better and happier lives, hanging will become a thing of the past, like crucifixion, standing in the pillory, hanging in chains, and riding the wooden horse. As we have seen, hanging itself was founded upon humane principles; the drawing was very likely a vestige of the exploration of intestines for omens; the quartering, of the offerings to the winds; and although the most humane of the Furies has lingered in our land, and seems still of use, we would gladly see "Galga" restored to her Teuton home.

THE WEEK.

THE LONDON MEDICAL SCHOOLS.

The annual return of the number of students pursuing their Professional studies at the London Hospitals and Schools since the 15th ult., when the registration for the present session closed, has just been compiled for the Government Inspector of Metropolitan Anatomical Schools, and it is satisfactory to state that the document shows an increase over the past year of 41, the new entries alone amounting to 362; the total number is represented by 1027. The following return will no doubt be interesting to metropolitan teachers:—

1850	at 12 schools there were	1001	students, including	384	new entries.
1851	,,	1087	,,	408	,,
1852	,,	1093	,,	382	,,
1853	,,	1077	,,	376	,,
1854	,,	1072	,,	369	,,
1855	,,	1093	,,	392	,,
1856	,,	1067	,,	344	,,
1857	,,	1038	,,	353	,,
1858	,,	1021	,,	373	,,
1859	,,	954	,,	327	,,
1860	,,	1228	,,	483	,,
1861	,,	1116	,,	344	,,
1862	,,	1045	,,	302	,,
1863(a)	,,	1020	,,	354	,,
1864	,,	995	,,	309	,,
1865	,,	1013	,,	321	,,
1866	,,	1027	,,	362	,,

From the above table it will be seen that the year 1860 was the *annus mirabilis* for Medical teachers, when the great rush of students took place to escape the effects of the new regulations about to come into operation.

The return from the provincial schools has not yet been compiled, but in Ireland the entries are stated to be satisfactory.

"WHY NOT?"

We find amongst late American books one entitled, "Why Not? a Book for every Woman: being the Prize Essay for which the American Medical Association awarded their Gold Medal in 1865. By Horatio Robinson Storer, M.D., Professor of Obstetrics and Diseases of Women in the Berkshire Medical College. Issued for general Circulation, by Order of the American Medical Association. Boston: Lee and Shepard. 1866. 16mo. Pp. 91." We are not at all disposed to consider ourselves better than our neighbours; still we may be thankful to find that some sins have not yet found their way into English society. It seems marvellous that amongst persons of English descent, of comfortable circumstances and good education, it should be considered necessary for any Medical Society to issue such a work as that which is entitled "Why Not?" It is not addressed to poor girls who have been seduced, and who might be excused if they desired to hide their shame by the destruction of an illegitimate embryo, but it is addressed to married women, in order to show them why they ought not to destroy unborn children, in order to save themselves the trouble and expense of rearing them. The *New York Medical Journal*, which contains a paper by Dr. Storer, On Criminal Abortion, states that, curiously enough, *moral* considerations have no weight whatever with those determined to prevent the further increase of their families, and that it is only by appeals to the common sense of women, and by showing them the long train of diseases that are sure to follow this unnatural crime, that any good results can be hoped for. Dr. Storer accordingly takes the trouble to attempt to alarm his countrywomen and to do by fear what cannot be hoped for from natural affection. He asserts that although more mothers and children are saved in childbirth than formerly, yet that amongst the better class of inhabitants fewer infants are born—"that is to say, that the average number of births to each Protestant family is less than it was half a century ago." He asserts further that married life leads to fewer instances of impregnation, that fewer pregnancies reach completion, that a large proportion of these incomplete pregnancies and apparent instances of sterility are intentional. He then goes on to state that these interferences with the laws of Nature are productive of the worst effects to the health of both husband and wife. It is matter of surprise to Dr. Storer that scarce an obstetrical author has dared to approach the subject of forced abortion and of the prevention of pregnancy. Not a word is said upon it by Whitehead of Manchester, or by Gardner of New York, nor yet by Marion Sims. We thankfully accept the compliment. Marion Sims wrote on the mode of curing sterility, not producing it—may the day never come when English men and women shall forget that the prime purpose and duty of matrimony is to rear healthy and virtuous children. Long may we take pride in those *familles Anglaises* which are such a puzzle to some of our neighbours!

(a) In this year one school ceased to exist.

THE RICHARDSON FUND.

We are glad to find that the list of subscribers to this fund is filling rapidly, and is graced by the names of Sir Thomas Watson, Bart., Drs. Burrows, Walshe, Sharpey, and Jenner, Sir W. Fergusson, Prescott Hewitt, and Sir J. R. Martin. The scientific dentists and the makers of Surgical apparatus are likewise not behindhand in recognising Dr. Richardson's claims.

FROM ABROAD.—CONDITION OF NURSE-CHILDREN IN FRANCE.

The discussion at the Academy of Medicine on the condition of nurse-children has brought M Husson, the able Director of Public Assistance, into the field. He observes that the present agitation upon the subject is no novelty, for, as far back as 1829, and on several occasions since, the attention of the authorities has been called to the mischief which has resulted from the multiplication of private *bureaux* for nurses, unprovided with any means for securing their surveillance. The remedy for the evil is, however, by no means easy of discovery, and the first step is to ascertain its extent. As a means of comparison, it may be stated that about one-sixth of the infants born in France during the years 1858-60 died before they had attained their first year, the proportion being 18·32 per cent. in urban districts (excluding, however, the Department of the Seine) and 17·96 per cent. in rural districts. In Paris itself, the mortality is only 16·30 per cent., this arising from so many of the infants of the capital being sent to die in the country. The mean annual number of births in that city amounts to 53·335, and not less than 18,000 infants are handed over to paid nurses. The Direction of Nurses undertakes the surveillance of about 4000 nurses in five Departments, and of these there died in the period 1858-65 only 17·04 per cent., but then only half of these children consisted of infants below one year old, the proportion rising in these last to 29·71 per cent. for the years 1839-58, and 33·93 for the years 1859-64. Three-fourths of these infants were legitimate, but with regard to the foundlings of the Department of the Seine the mortality, notwithstanding every care and surveillance, reached 55·88 per cent. in 1839-58, and 39·26 in 1864. But these figures are very low as compared with those derived from other Departments, in which the mortality varied in 1860 from 90·50 in the Loire Inférieure to 58·66 in the Manche. The mortality is found to be especially great in Normandy, and this is chiefly attributable to the substitution of the pap-pot for the breast. The considerable diminution of the population which is there taking place is in great part due to the erroneous mode in which young infants are brought up.

From the beginning of the fourteenth century there have existed in Paris women who followed the occupation of engaging and recommending nurses to parents, the carriers and coachmen of the period becoming the instruments for conveying the payments and bringing news of the children. In the course of time, these "recommendresses," as they were termed, became restricted in numbers and endowed with privileges, regular *bureaux* for hiring nurses being officially opened by them. Inspection also began to be organised, especially after the Revolution, leading at length to the formation of the "Direction of Nurses" Numberless, and in many respects most excellent, were the regulations laid down in the interest of the nurselings. Formerly the "Direction" sent infants to nurse into twenty-one Departments, but since the limitation of its operations in consequence of the competition of private *bureaux*, it now only sends them into five. Each of these Departments has its inspector and Medical men attached, under whose auspices the nurses are engaged and paid, and the health of the children confided to them looked after. The number of Medical men employed is fifty, who receive a franc per month for every infant under their surveillance. Not only have they to supply the infants with medicines in case of illness, but the selection and approval of nurses devolve upon them. They must also visit each child under their charge at least twelve times in the year. For children placed out to nurse through the private *bureaux*, no administrative or Medical surveillance whatever is exercised. The Government Direction and the private *bureaux* leave the families and nurses to regulate the terms of payment, which are usually 20 francs per month; but while in the case of the private *bureaux* the nurse must run the risk of the payments being punctual, the Direction pays her 12 francs per month in case the parents neglect to pay, which is not unfrequently the case. The Direction feeds and lodges the nurses while waiting in Paris to be hired, and makes no charge for commission, which in the private *bureaux* amounts to 15 or 40 francs, according as the nurse is to return to the country or remain in Paris. No charge is made for superintendence or Medical treatment. And yet, with all these advantages and guarantees, the "clientèle" of the Direction is fast diminishing; for while, when Paris had only a population of 700,000 or 800,000 souls, the Direction placed out 10,000 infants, at the present time it scarcely sends 2000 per annum, and a fourth of these are by charity. The main cause of this falling off, M. Husson says, is due to the practice of the private *bureaux* offering money premiums, "which are accepted not only by *sages-femmes*, but also, I regret having to state it, by some Physician-Accoucheurs. A miserable gratification of 6 francs for country nurses and of 10 or 12 francs for town nurses suffices to secure the prosperity of these private *bureaux*, and divert from the Direction 'placings' where a certain number of children would at least receive excellent care, and probably life itself."

M Husson finds it much easier to depict existing evils than to devise a remedy, certain as he feels that the Legislature would never sanction so despotic an interference with family life as to render the placing nursing infants under the Direction compulsory.

"And, moreover, the time for making such an attempt would be ill-chosen; for at the very period when our neighbours across the Channel, disgusted with the abuses and sterility of their Local Self-Government Acts, are tending towards an imitation of our institutions in the matters of Public Assistance and Popular Education, we ourselves are trying to initiate our departments, communes, and individuals themselves into the practices of local, and, in some measure, personal life. We are seeking to scatter over every point of our territory the vital movement which has been too long concentrated in a single one. We are saying to the departments and communes, Take up your own affairs, and to the citizens, Help yourselves; and in the present state of opinion how can we expect that the Legislature will take upon itself the mission of establishing regulations completely at variance with the principles which now prevail?"

M. Husson believes that the first step towards any amelioration should be the exposure of the facts in their naked reality, for at present the extent and causes of the great infantile mortality in France are very imperfectly known. Certain it is, what with this great loss of children and the decreasing fecundity of marriages, the population of France is declining, or, at most, resting stationary. With respect to this latter point, it may be observed that formerly there averaged five children per marriage, and at the beginning of the present century 4·20; while at the present day each marriage produces but three children for entire France, and but 2·29 for Paris alone. This, of course, is beyond all control, but as regards the mortality of children, much of it not only takes place from the neglect and carelessness already adverted to, but from the gross prejudices which prevail concerning the physical education of young infants. To remedy this, M. Husson can only look to the spread of knowledge, the exertions of the enlightened benevolence of individuals, and the co-operation of the authorities.

M. Robinet agreed with M. Husson that legislative interference is out of the question, and that it is to private exertions and benevolence that the appeal should be made. But while the exertions of such societies as the new one for the Protection of Infants may do much good in Paris and other towns where surveillance is comparatively easy, great difficulties exist in extending their operations to the provincial districts.

REVIEWS.

Diarrhœa and Cholera; their Nature, Origin, and Treatment through the Agency of the Nervous System. By JOHN CHAPMAN, M.D. London: Trübner. 1866.

THIS is a remarkable book, and worthy the serious attention of every one of our readers who has the leisure and inclination to think out his own opinions upon an interesting and difficult subject. We do not say that the theory of cholera which the author proposes is correct, or that the treatment based upon it is sound. Such an admission is not necessary to justify our recommendation. Even a false theory when rightly constructed has its uses, and, instead of hindering, hastens the advance of knowledge. Every one possessing the slightest acquaintance with the history of astronomy knows that the doctrines of cycles, epicycles, and ellipses were begotten naturally and necessarily out of each other, and that if Kepler had not so often propounded speculative errors, Newton would not so often have hit upon speculative truth. When men of science disclaim hypotheses, they are either unfit for their vocation, or, like Newton, they are better than their creed. Hypotheses are at once the effects and causes of progress; and one might as well attempt to preserve and employ an army without organisation, as to preserve and employ phenomena without a theory to weld them into one. But the theory must be provisionally, if not positively, true; it must be intelligible and consistent; it must explain a greater number of facts and reconcile a greater variety of apparent contradictions than any which has preceded it, and it must have become developed, not by the addition merely, but the addition and solution of subsidiary explanations.

Now the book before us contains a speculation which, whether true or false, exhibits in its outlines, if not in its details, the essential features of a well-constructed theory. It is in harmony with the results of the most recent physiological investigations; it is ingenious, clearly put, happily illustrated, logically argued, and meant to be a more comprehensive and simple explanation than has yet been given of the phenomena of choleraic disease. For these reasons we have considered it our duty to place at once before our readers a sketch of Dr. Chapman's work, and to give judgment on its general character.

The introduction to Dr. Chapman's book is occupied by a sketch of his views of neuro-physiology, and as they properly constitute the root of his pathology, it is necessary to consider them. He sets out with two postulates—first, that the sympathetic is the excito-motor nerve presiding over the vascular system; and secondly, that the functional activity of every gland is excited or maintained by a stimulus sent from the cerebro-spinal axis. The former doctrine, which derives its claims to assent from the experiments of Brown-Séquard and Claude Bernard, is now, with certain qualifications and restrictions, accepted as true by nearly all physiologists. The latter, based upon the recent discoveries of Bernard, Ludwig, Pflüger, and others, has, as Dr. Chapman thinks, been raised to the rank of a general law by his own observations.

Bernard has proved that the parotid and submaxillary glands receive their nervous supplies, on the one hand, from the cerebro-spinal system, and on the other from the sympathetic; and he has demonstrated by experiments on various animals that when the former are in action the maximum of blood is supplied to the glands and the maximum of saliva secreted, and that when the latter are in action it is shown in modifying the volume of the arteries and so regulating the supply of blood. Dr. Chapman has extended this discovery to all the other glands of the body; but in virtue of some experiments about to be mentioned, he puts an interpretation quite different from that of Bernard upon the purpose of the cerebro-spinal gland nerves. The latter conceives that they act by producing a kind of paralysis of the sympathetic; the former that they act by stimulating the gland-cells to the active selection from the blood of the materials essential to the elaboration of their secretions.

According to Dr. Chapman's statements, he has discovered that the application of heat along the spine stimulates the glands of the whole cutaneous and mucous surfaces, and that conversely the application of ice restrains or depresses them; that in the former case the secretion is increased, in the latter diminished or suppressed. Seeing, then, that secretions are arrested when the surfaces are full of blood, and abundant often when the surfaces are anæmic, he proceeds to reconcile and explain these apparent paradoxes by propounding the hypothesis that the mucous and cutaneous glands act under the control of a special set of nerves distinct from the sympathetic, and derived from the cerebro-spinal system. He conceives that while the sympathetic regulates the amount of blood entering the gland, the cerebro spinal nerves, by their action on the gland-cells, determine the intensity of the force by which it is attracted to them; and in this way he shows that glandular activity and glandular inaction are due, in the former case, to a preponderance of cerebro-spinal, and in the latter to a preponderance of sympathetic, nerve force. The cerebro spinal he calls the positive motor, and the sympathetic the negative motor, nerves of a gland; and it is by assuming an excessive stimulation of the former, causing the gland-cells to draw copious currents of blood through the obstruction of spasmodically constricted arteries, that he ingeniously explains the seemingly paradoxical but common phenomenon of an anæmic skin pouring forth a greasy sweat.

Dr. Chapman next passes in review the anatomical nerve relations of the various glands, and concludes that the disposition of the nervous system is such as to enable every one of them to receive a positive motor nerve from some part of the cerebro-spinal system, and holds "that in every case in which glands are not yet proved by anatomical evidence to possess positive motor nerves from the cerebro-spinal system, physiological, pathological, and even therapeutical facts prove that they must be so innervated, while anatomy offers no evidence whatever to the contrary."

Having laid down these physiological foundations, Dr. Chapman proceeds to build thereon his remarkably ingenious theory of cholera. To this he might happily have prefixed for motto the axiom of Newton—"Causas rerum naturalium non plures admitti debere, quam quæ et veræ sint et earum phænomenis explicandis sufficiant;" or, still more happily, the assertion of Bernard, who, when speaking of the nervous system, says with a sublime audacity that "while it is the origin of all the normal phenomena of life, it is also the origin of all pathological action." This theory will be most clearly expressed in the form of the following propositions:—

1. All the phenomena of cholera are due to simultaneous hyperæmia of the spinal cord and of the sympathetic nervous system.

2. All the phenomena of cholera are naturally divisible into two classes, according as they have their origin in the sympathetic ganglia or in the spinal cord.

3. All active or positive phenomena are due to hyperæmia of the spinal cord.

4. All passive or negative phenomena are due to hyperæmia of the sympathetic.

As illustrations of what Dr. Chapman means by positive phenomena, we may mention early diuresis, excessive activity of the intestinal folicles, sweating, cramps, and internal elevation of temperature. As illustrations of negative phenomena may be specified arrest of secretion, aphonia, depression of external temperature, cold breath, loss of cutaneous sensibility, and serous exudation.

The author neither directly affirms nor denies any primary affection of the blood in cholera. By implication, however, it is denied; and the only logical conclusion to be drawn from his facts, arguments, and illustrations is that the exciting causes of this disease, whatever they may be, exert their primary action immediately upon the nervous system.

It is only by a close examination of the detailed application of the hypothesis as a means of rendering intelligible the proximate cause of every special symptom that a comprehensive conception of the hypothesis becomes possible. We must content ourselves with the following examples:—

A copious secretion of pale urine is mentioned by Parkes and others as one of the early symptoms of cholera. Dr. Chapman attempts to prove that this is due to hyperæmia or exalted functional activity of the spinal cord, and maintains that in the onset of cholera the cord is in this condition, stimulating the kidneys to excessive action. But the activity of the organic processes being less energetic than normal, owing to hyperæmia of the sympathetic, which has contracted the arteries, the metamorphosis of tissue is correspondingly lessened, and consequently the amount of the products of organic disintegration usually excreted by the kidneys is less than in health. It is thus, according to our author, inevitable that the conjoint hyperæmia of the sympathetic ganglia and spinal cord results in the discharge of urine paler and more abundant than normal. But as the disease progresses, the negative motor nerve of the kidneys—that is, the branches of the sympathetic distributed to the renal arteries—acts so energetically upon the blood-vessels as almost wholly to cut off the supply of blood to the kidneys. The inevitable result of this is cessation of their functions, or, in other words, the suppression of urine. When patients begin to recover, hyperæmia of the sympathetic ganglia subsides, and in consequence the spasmodic contraction of the renal arteries is relaxed, blood gains free access to the gland-cells, and the secretion of urine returns. If the sympathetic ganglia become very anæmic or much exhausted, or if the positive motor nerve of the kidney be much stimulated, the kidneys become excessively congested, and albumen passes into the urine. In this way Dr. Chapman ingeniously accounts for the increase, decrease, and final suppression of urine in cholera; for the return of this secretion with reaction; and for the condition of the kidneys observable in cases of death during collapse.

Dr. Chapman's mode of accounting for the rice-water evacuations of choleraics is as follows:—He affirms that, owing to excessive hyperæmia of the spinal cord, the mucous glands of the stomach and bowels are intensely stimulated; that the energy of the positive motor nerves by which they are so stimulated predominates greatly over that of the negative motor nerves of these glands; that consequently copious currents of blood are drawn to them, notwithstanding the constringing force exerted upon their arteries by the sympathetic; that mucus is secreted in enormous quantities; and that the cells of the secreting structures are generated, developed, and shed abortively in extreme abundance. He cites evidence to prove that the flocculent portions of the discharge consist of mucous flakes entangling a countless number of imperfectly formed and prematurely shed cells. With respect to the watery part of the evacuations, he says it is not secreted but exuded from the congested venous radicles of the whole alimentary canal. He adds that, inasmuch as its glands are exceedingly active, they, by the force exerted on the blood in their capillaries, press it forward continually into the intestinal veins, which speedily become extremely distended, and that as the blood is hindered from passing freely through the liver, now in a condition like that of the kidneys, the venous radicles become so distended that their delicate coats can no longer resist the pressure of their contents, the watery part of which escapes into the alimentary canal.

We are unable to give any further illustrations of Dr. Chapman's method of accounting for the production of the symptoms of cholera. Each receives a consistent and intelligible explanation, but we would direct the reader's attention more particularly to his exposition of the immediate causes of the increase or persistence of heat in the body after death; of the rise of temperature in certain parts before dissolution; of post-mortem muscular contractions; and of the differences in the relative activity of the positive and negative motor nerves in different cases.

We must pass over the chapter on the causes of cholera, which displays great originality and ingenuity in reconciling and explaining the various modes of action of causative agencies, and a singularly happy power of using his knowledge for the setting forth of new analogies, and the bringing together apparently the most contradictory phenomena for the support of a general law. How we wish that diseases could be cured by logic!

The chapter on treatment consists of two parts. In the first Dr. Chapman discusses the remedial value of cold and heat; in the second, the value of various drugs.

If Dr. Chapman's theory of cholera should turn out to be correct, it would seem obvious that the only rational treatment consists in the adoption of such means as will most rapidly and completely subdue the hyperæmia of the spinal cord and sympathetic ganglia and re-establish the healthy equilibrium of the circulation. Dr. Chapman thinks that the time may come when this will be effected by the proper application of galvanism; but he maintains that in the present state of knowledge there is "no available power of subduing hyperæmia of the automatic nervous centres comparable to that of ice applied along the spine." In proof of this, he appeals to the testimony recorded by himself and others that "the leading symptoms of cholera—vomiting, purging, coldness, and cramps—when met with separately as manifestations of other diseases, are capable of being subdued in the majority of cases by the application of ice along the whole or a part of the spine."

Dr Chapman's treatment of cholera consists essentially in the application of ice to the spine and of heat to the general surface; and he is emphatic in insisting that the one should not be used without the other. As importance is attached to the exact manner in which this method of treatment is tried, it is but fair that those intending to test the value of Dr. Chapman's therapeutical proposal should make themselves familiar with what he says before beginning their experiments.

The work concludes with a record of cases and an analysis of results.

Whatever may be the final judgment pronounced upon Dr. Chapman's theory of cholera, it must be admitted that he has said nearly all that could be said in its favour. Its strength lies in its comprehensive and simple explanation of seemingly contradictory phenomena by the application of a recognised general truth; its main, and in our eyes great, weakness lies in the denial of any primitive affection of the blood. But even if wholly false, the theory will play an important part in the discovery of that which is true. The work is well written, methodically arranged, connected in all its parts by a pervading unity of design, and will take a permanent place in the history of the disease of which it treats.

On Epilepsy, Hysteria, and Ataxy. Three Lectures by Julius Althaus, M.D., etc. London: John Churchill and Sons. 1866. Pp. 126.

Epilepsy, says Dr. Althaus, is a curable disease. He discountenances the division into centric and eccentric, affirming that the only true epilepsy is centric. He proceeds "to argue whether epilepsy is generally a curable or incurable disease, by applying the first principles of pathology and therapeutics to the question." Those principles teach that organic maladies are incurable, whilst the functional may be cured. But epilepsy is a functional disease. Organic changes found in the brains of epileptics are accidental. The treatment has three objects: 1, to suppress the attacks; 2, to improve the nutrition of the brain; 3, to improve the general health and condition. The results of his treatment are described by Dr. Althaus as highly satisfactory; but what that treatment is he does not say. The lecture on hysteria gives a good common-sense *résumé* of the symptoms and nature of that malady, and its general treatment. For certain local symptoms galvanism in various forms appears successful. There is a common-sense remark on marriage, which is so often thoughtlessly recommended as a cure for hysteria. "Marriage acts beneficially chiefly in cases where the circumstances of the patient at home are highly unfavourable, and where, in consequence of marriage, she is rid of all anxiety, embarrassment, and painful emotions." The lecture on *progressive muscular ataxy* is an elaborate and careful account of that disease, and would be very useful to Practitioners who are yet unacquainted with it. He does justice to Todd, as well as to French observers.

An Index of Diseases and their Treatment. By Thomas Hawkes Tanner, M.D., F.L.S., M.R.C.P. Renshaw. 1866. Pp. 424.

If there is nothing very original in Dr. Tanner's books, they are distinguished by popularity, and we have no doubt that the new "Index of Diseases" will not be less popular than his "Practice of Medicine." He has somehow the faculty of discovering pretty much what students and busy general Practitioners want, and gives it them in a condensed form such as suits men who have little time to spare for Professional reading. We do not intend to subject this new book to any extended criticism. It makes not a single pretension to be philosophical, and gives neither the theory of any disease nor the reason for any remedial measure suggested. The author is not to be blamed for this, for he has a right to define his own objects, and all we are concerned about is whether he carries out his object in a satisfactory manner. He puts his book forward merely as capable of giving useful suggestions when a Practitioner finds himself in a difficulty. We would only ask whether more advantage would not generally accrue under such difficulties if the Medical man were carefully to review his diagnosis, and, endeavouring to trace out step by step the links connecting the several morbid phenomena in the instance before him, to modify his treatment by what he discovers from such a search, than by turning to the pages of a book which gives merely a list of remedies from which a man may be induced to select one after another until he falls haphazard upon the correct one, or until his patient gets well in spite of the whole battery, or succumbs to the fire concentrated on him? In many cases Dr. Tanner does divide his lists of remedies in accordance with the object specially designed to be obtained by each, but this is not always the case. Perhaps this is because such a proceeding would have demanded an amount of space which would not have accorded with the proposed bulk of his book. Still, on the whole, we believe Dr. Tanner knows what he is about, and has again supplied a want that is felt.

Medical Diagnosis; with special Reference to Practical Medicine: a Guide to the Knowledge and Discrimination of Disease. By J. M. Da Costa, M.D. Second edition, revised. Philadelphia: Lippincott and Co. 1866. Pp. 784.

The fact that a very large edition of this work was sold off in eighteen months is sufficient proof of the need which was felt for some such book, and that the high opinion which we expressed of the mode in which Dr. Da Costa had carried out his project was not unjustified. If we are not very much mistaken, this second edition will run off as fast as the preceding.

A Manual of Practical Hygiene. Prepared especially for Use in the Medical Service of the Army. By Edmund A. Parkes, M.D., F.R.S., Professor of Military Hygiene in the Army Medical School, etc. London: Churchill and Sons. 1866. Pp. 624. Second edition.

This book, the second edition of which is now before us, is unsurpassed in our language as a text-book, not only of military, but of general hygiene. Its sale, which has been very rapid, has not been confined to military officers. We see it in private libraries wherever the subjects on which it treats are regarded as important. It is a summary of all that is known for certain upon these matters, and no one could prepare such a summary better than the accomplished author of this volume. Not only does Dr. Parkes read extensively, as proved by his book, but he digests what he reads, as shown by the admirable manner in which he has sifted for his brethren the useful and important from what is mere chaff. The book has attained a reputation which no words of ours can enhance.

GENERAL CORRESPONDENCE.

NEW TREATMENT OF CANCER BY INJECTIONS INTO THE TISSUE.

[To the Editor of the Medical Times and Gazette.]

Sir,—In your notice of Dr. Broadbent's ingenious proposition to remove cancerous tumours with little pain or constitutional disturbance by the injection of medicinal substances into their structure, you seem to think that the practice suggested is entirely new.

In the *Edinburgh Medical Journal* for 1856-57, page 749, Sir James Y. Simpson suggested the same practice, and it is described as follows:—

"*New Method of Removing Tumours.*—Professor Simpson has lately removed some tumours—fatty, cancerous, etc.—by a novel operation in Surgery. It consists in introducing into the morbid mass a slender hollow acupuncture needle, and injecting through it a few drops of solution of sulphate or chloride of zinc, iron, creasote, etc. The fluid thus introduced into, around, or beneath the morbid tumour destroys its vitality, and the tumour itself is subsequently thrown off by the process of spontaneous enucleation. The needle is thus substituted for the knife, and the operation is quite bloodless. Some ingredients, when thus applied directly to the internal structure of tumours, may destroy their specific without destroying their general vitality; and others lead more directly to absorption, by being brought in contact with the deposits that require to be absorbed."

You will observe that the proposition is a double one, either to inject substances which, as caustics, will destroy the vitality of the tumour by gangrene, or to inject ingredients which, when applied directly to the internal structure of tumours, may destroy their specific, without destroying their general vitality.

I have repeatedly heard Sir James Simpson speak of the possibility of producing, in this last way, the mummification of the tumour without causing its general death.

I am, &c.

Edinburgh, October 30. Medicus.

THE VARIATIONS OF TEMPERATURE IN HEALTH.

Letter from Mr. J. Harward Hooper.

[To the Editor of the Medical Times and Gazette.]

Sir,—In Dr. Warter's paper on the daily variations of temperature in health, published in your number for Oct. 20, there is no mention made of the means adopted to ascertain the temperatures recorded. I presume from this that he has adopted the method recommended by Dr. Aitken, of placing a thermometer in the axilla for five minutes.

Now, I have found by repeated experiments that definite results are not obtainable by this means in health. After even twenty minutes' application I have found the thermometer still rising, though slowly, a difference of more than two degrees existing between the result thus obtained and that after it had only been applied for five minutes. It is obvious that an error of this amount would be fatal to experiments on healthy temperature.

The following method will be found, I think, much more rapid and easy, and to give a constant result when tested either by repetition or prolongation of the experiment:—Introduce the thermometer, previously heated to 95° F. (which may conveniently be done by placing it in the mouth above the tongue), between the lower jaw and side of tongue as far back as possible. Half a minute in this site is sufficient if the instrument be warmed as described, but if introduced cold it causes a depression of temperature in the part, which affects the result even after five minutes' application. I have tabulated below the results of 137 experiments made on 13 consecutive days, and it will be seen that the results thus obtained totally differ from Dr. Warter's, and I believe that the average very accurately represents the daily variation in myself, but I am far from saying or thinking that a similar line of variation would be found in others.

Time.	No. of Expts.	Maximum.	Minimum.	Average.	Remarks.
A.M.					
7	4	98·3	97·6	98·0	In bed.
8	12	97·5	97·1	97·3	Before breakfast.
9	11	98·8	97·4	98·2	After ,,
10	11	98·6	97·6	98·1	
11	7	98·6	97·7	98·1	
12	6	98·4	97·4	98·2	
P.M.					
1	6	98·6	97·4	97·9	
2	12	98·4	97·0	98·0	Before dinner.
3	8	98·9	98·0	98·4	After ,,
4	8	98·4	98·0	98·3	
5	8	98·4	97·7	98·2	
6	4	99·0	98·0	98·5	
7	10	99·0	98·1	98·6	
8	12	98·8	97·5	98·2	
9	8	98·2	97·3	97·9	Before supper.
10	11	98·0	97·3	97·5	After ,,
11	9	97·8	96·8	97·4	

I am, &c.

J. Harward Hooper, C.M.Lond., F.R.C.S.

Tenby, October 30.

FRACTURE OF THE PATELLA.

Letter from Mr. William Cooke.

[To the Editor of the Medical Times and Gazette.]

Sir,—The misadventure in the following case confirms the importance Mr. Erichsen attaches to the wearing a stiff apparatus for a considerable time after the absolute rest and apparent union.

Many years ago, when residing at Plaistow, a gentleman had a fracture of the kneepan. He underwent the usual treatment of rest and posture, and made a very fair recovery. The interval in the fractured bone was very slight. I obtained for him a very light iron protector, having a clip to pass above and below the patella, covered and padded, and a stiff supporter behind. It gave no pain, but in the event of a slip would prevent a strain on the recently united bone. After having worn it a short time he had occasion to go to London, and some friends advised his showing himself to Sir William Blizard. When the good old Surgeon had heard the particulars, he proceeded to examine the knee, and asked rather abruptly, "What is that you have got on? Take it off, and don't put it on again, but walk carefully." Cheapside fell in my friend's way, and there he had a slip, and the parts were disjoined further than at first. He went into lodgings, and remained in town under treatment some weeks. When he returned home I found the separation much greater than after the first accident. He was somewhat lame during several years. I am, &c.

39, Trinity-square, E.C., October 23. Wm. Cooke.

DR. SHERATON'S PATENT ROTATORY FILLET AND FORCEPS.

Letter from Mr. A. B. Steele.

[To the Editor of the Medical Times and Gazette.]

Sir,—My attention has just been drawn to the announcement in your pages of July 21 of the steel fillet of Dr. Sheraton, which is intended to supersede the forceps, etc., and is said to possess certain advantages over other instruments. I have been credibly informed that the inventor has patented the instrument, which, if true, is in my opinion much to be regretted, appreciating, as I always have done, the aphorism of Sir Benjamin Brodie that "ours is a noble profession, but a miserable trade." My object, however, in trespassing upon your space is to express my very grave doubts as to the alleged superiority or even as to the practical utility of the instrument in question. The inventor is altogether silent as to the result of its actual employment in practice, and another writer who, in your impression of the 13th inst., describes an instrument almost identical, has nothing to tell us as to its utility, although it has been in his possession for many years.

Whatever may be the merits of the "steel fillet" as a specimen of mechanical ingenuity, to expect it to supersede the forceps, or to be applicable at all to certain cases in which they are used successfully, would be to ignore the plainest principles of the mechanism of parturition. For example, it is well understood that frequently the fœtal head is arrested in the cavity of the pelvis in either of four positions in such a way as that while laterally—that is, in the oblique pelvic diameter opposite to that occupied by the long diameter of the head—there is plenty of space to pass each blade of the forceps, at the same time, at other points of the circumference, the head is in such close contact with the walls of the pelvis, that it would be impracticable to pass even the thin narrow blade of the fillet between the head and the walls of the pelvis at those points. Again, in cases of moderate contraction of the conjugate diameter of the brim—one of the most common conditions requiring the use of the forceps in the early part of the second stage—before the head has been driven down too low, and so moulded by long-continued pressure as to completely fill the cavity, there is generally ample space in the oblique diameter to pass the blades of the forceps on each side, yet the biparietal diameter of the child's head is so closely wedged between the promontory of the sacrum and the symphysis pubis, that a similar obstacle would exist to the passing round of the rotatory blade of the fillet.

The alleged advantages of the thinness and flexibility of the blades of the fillet are, in my judgment, extremely problematical. I should expect that a thin flexible blade of steel would be more liable to injure the soft parts in its rotatory course, especially with a tight pelvis or a large head, than the blade of a well-finished and properly constructed forceps carefully introduced in that position where there is almost invariably sufficient room between the head and the pelvis to admit of its passage with facility.

The advantage to be derived from being able to apply the instrument without the knowledge of the mother is not at all apparent to my comprehension; if it is, as I much doubt, under any circumstances desirable to employ instruments clandestinely as regards the mother, the use of chloroform puts every kind of instrument on the same footing in that respect. For my own part, a careful study of the mechanism of parturition, in these days so philosophically elucidated by Simpson, Tyler Smith, Leishman, and others, confirmed by a somewhat extended opportunity of practical observation, has satisfied me that for all cases in which the forceps is indicated, instruments constructed on the principle of those of Simpson, Roberton, or Ramsbotham's long forceps, leave nothing to be desired so far as mechanical adaptation and efficiency are concerned. Certainly I think that the true progress of the obstetric art will be hindered rather than advanced by adding to the embarrassing and confusing multiplicity of obstetric instruments any further novelty which neither has the sanction of careful experimental trial nor will stand the test of theoretical criticism. I am, &c.

A. B. Steele, Lecturer on Midwifery, Royal Infirmary School of Medicine; Surgeon-Accoucheur to the Ladies' Charity, &c., Liverpool.

October.

Letter from Dr. Sheraton.

[To the Editor of the Medical Times and Gazette.]

Sir,—In the *Medical Times and Gazette* of this morning Dr. Dyce claims on behalf of his father, the late Dr. William Dyce, the application of the rotatory principle, which I have so successfully applied to the obstetric forceps and fillet.

Dr. Dyce writes "though in some minor particulars differing from Dr. Sheraton's steel fillet;" and again, "the similarity of which to that of Dr. Sheraton is very striking." Now it seems to me very evident that Dr. Dyce has not seen either the fillet or forceps to which I adapted the rotatory principle, or he could not have failed to perceive the greatest difference that could possibly exist—viz., that the instrument which he now describes is seemingly defective in mechanical arrangement, which would render its application a matter of the greatest difficulty, and in a large proportion of cases impossible. If applied, it would not exert the least compressing force upon the head, nor even embrace the head with sufficient firmness to be of use as a tractor. It is therefore worthless as an instrument for obstetrical purposes.

Of the rotatory fillet described in the *Medical Times and Gazette* (July 21) it is needless to say anything; but the rotatory forceps which I designed at the same time is not so generally known. Its principle and mode of application are the same as that of the fillet, and when applied any degree of compressing force may be exerted upon it. I say any amount, because the amount of compression can be regulated to the utmost nicety. It differs, therefore, from any other instrument in use at the present time. The requisite degree of compression is to be made upon the head, and a suitable mechanical arrangement will retain the blades in that position, and then tractile force is to be applied; or, if needed, the head may be crushed as surely and more readily than it can be by that formidable instrument the cephalotribe; or it may be used as a craniotomy forceps, the head having been previously perforated, the only material difference being the amount of compression that each instrument is capable of exerting upon the fœtal head. It may be used to produce a moderate amount of compression, but limited to that degree that will not injure the child's head, as in the ordinary forceps; or a greater degree of compressing force, sufficient to compress the head into a smaller space after the head has been opened and a portion of brain escaped, as by the craniotomy forceps; or a very great amount of force, sufficient to crush the head, fracture the skull, and elongate it, and as an extractor, as by the cephalotribe.

The requisite degree of power to obtain the combined action and use of these instruments will be found in the rotatory forceps, and I question if any other instrument in use in midwifery practice is capable of being applied in such variety of cases, as it may be used as a vectis forceps, craniotomy forceps, and cephalotribe, if thought necessary.

This instrument, like the fillet, is of much easier application than the forceps in ordinary use, as it is introduced as one blade. It can be used without the knowledge of the mother, and is sufficiently portable to be carried in the breeches pocket.

Now, I ask Dr. Dyce if his instrument is capable of doing this, or if it is capable of effecting any one of these conditions in a satisfactory manner. If I am correct in what I stated in the former part of my letter, I think that Dr. Dyce will find but few points of similarity betwixt the two instruments. I might have said much more on this subject, but it is scarcely worth while. I am, &c.

October 13. G. R. Sheraton.

DOINGS IN THE NAVY.

[To the Editor of the Medical Times and Gazette.

Sir,—As I know that you take an interest in everything connected with the welfare of the Profession, I hereby bring under your observation a few facts of some interest. Perhaps what I am about to relate will, in a measure, explain the extreme and deserved unpopularity of the Naval Medical service.

You are well aware that Assistant-Surgeons for the Navy are scarce, and a like dearth of Surgeons is now felt. All newly promoted Surgeons are now sent to do Assistant-Surgeons' duty;—a pleasant prospect.

I will give you a sketch of a young Surgeon's duty. All day long "*sub umbra*" in a stuffy cockpit, by candlelight, he remains at his post. From morn until night he is employed administering and compounding medicines, labelling bottles, superintending the cooking—pronouncing opinions on soup, beef-steaks, potatoes, etc., as to their fitness for the digestive powers of the sick. This is overdone, that underdone, etc. After the morning visit, is it not a fine thing for the young Surgeon to enter the ward-room smelling of rhubarb and essence of peppermint? A gentleman is never vulgar, even in his jokes, but bastard aristocracy and penniless pride will leak out on such occasions.

If such is now the duty of a young Surgeon, do you expect that an Assistant's is an improvement? No.

The Assistant-Surgeon is not an Assistant-Surgeon, but a dispenser, and one who is compelled to make himself useful in a general way. He must be a proficient in applying poultices and hot fomentations, and in dressing blisters. As for making pills and mixtures, writing binnacle lists, keeping all kinds of books, rigid exactitude is required; and he may neglect the smallest of these at his peril. Spreading plasters is considered a delicate operation, and not to be acquired without considerable experience. Occasionally an Assistant-Surgeon has the honour to extract a blue-jacket's tooth, or to apply a poultice to the captain's finger. The Assistant-Surgeon has to do the duty of nurse in every sense of the word. When cases are numerous, he has to see each patient drink his wine and medicine, not an hour of the day passing without his being engaged in this menial duty. The sick-berth stewards and attendants are little inferior to the pauper nurse of a workhouse.

As to the truth of my statements I can appeal to many in the service at present. When properly paid stewards are furnished, the Assistant-Surgeon's more onerous duties will be removed.

In general a captain in the Navy has a better knowledge of Medicine than an Assistant-Surgeon, and he can give the Surgeon many a useful hint as to his Medical duties. In the survey of invalids his opinion frequently decides the case; the diagnostic glance of a post captain is proverbial. In every survey for invaliding there are three captains and three Surgeons, all of whom have an equal share in the decision of the cases.

What I am now about to relate was told me by a Naval officer.

H.M.S ——, 22 guns, 250 men, was sent from —— with invalids for conveyance to England. On the coast of —— she remained for five months. The invalids might have been sent per mail steamer in a very short time; however, economy was considered, and this was how it was effected. As is well known, the coast of —— is one of the most pestilential in the world. There was only one Medical officer in the ship, Dr. ——, his assistant having been left behind in charge of the Hospital at ——. There were no supernumerary Medical officers on the station, the flag-ship in former times having five or six for disposal in case of emergency. The chief occupation of the ship on the coast of —— was the collection of freight. The captain and no one else has a share or percentage on all he ships. Fever on board at all times since she came on the coast was prevalent, but on her passage down it became excessive.

After remaining at —— for an unreasonably long time (a place notorious for the violence and prevalence of remittent fever), many cases were put on the sick report, 150 to 170 being added. The Surgeon suggested to the captain the propriety of steaming direct to ——, in order to preserve the life and health of the ship's company. This request was not complied with. After leaving —— he called at many ports, for no other purpose than the procuring of freight, to the imminent danger of the lives of all. At last, from paucity of hands, steam had to be used. The Surgeon, alone, unassisted, and without sympathy, manfully did his duty. One can imagine his position, but can hardly realise it, when hints were thrown out, and industriously circulated, that many of those on the sick report were malingering. The captain was king on board in every sense of the word. The Doctor fell ill of fever, and he will be lucky indeed should his life be spared after all the hard work and excessive vexation he has gone through. This case is not unique, and many such revelations could be made did Medical officers only speak out.

This is a lesson to those who intend joining the navy, and what one may expect if he dare to perform his duty. The days of "Roderick Random" are not past, and naval officers will not be contented until that type is restored. Such a system may allow of exercise at the pumps for dropsy, or a run aloft to cure the chills of fever. I am, &c.

Nauticus.

TRAVELLING NOTES.

Letter from Dr. John Macpherson.

[To the Editor of the Medical Times and Gazette.]

Sir,—I have recently been to two Continental baths which are not visited much by English; indeed, the one of which I shall speak first, has only been known of late years even in Germany.

The brine springs of Reichenhall rise in a beautiful valley surrounded by the Bavarian Alps, at the north-west corner of the Saltzkammergut, one of the most interesting districts in the world, about seventeen miles from Saltzburg, certainly the most picturesque inland city in Europe, fifty miles from the fashionable watering-place of Ischl, and a few miles further from Munich. The Government Medical Officer at Reichenhall is Dr. G. von Liebig, son of the famous chemist. He had the advantage of serving for some years in India, and he has published a little work on the place, to which I am mainly indebted for the substance of this account of the place. It offers, according to him, various remedial agents for those who may choose to avail themselves of them, which may be classified under three heads:—1. Those which operate through the nervous system—the climate and the baths. 2. Those which favour the renewal of tissue, and supplement advantageously the constitution of the blood—the drinking source, the whey cure, and a certain Taraxacum mixture for which the place is famous. 3. Those which act locally on the respiratory organs —the salt air of the graduating-houses, the inhalation of the steam of salt water, and of that of pine leaves, as well as a very complete pneumatic arrangement of several chambers, in which a patient is made to inhale an atmosphere of increased pressure—a remedy which, I shall remark in passing, as I shall not allude to it again, has been found useful in various cases of chronic bronchitis and asthma.

1. Although it is 100 feet lower than the not distant capital of Bavaria, yet Reichenhall is 1500 feet above the sea, and may be considered to have the air of a sub-alpine climate. Such air feels far more elastic and invigorating than that of the plains, and as the valley of Reichenhall is not a narrow one shut in by hills, there is ample perflation and renewal of air. The climate of Reichenhall differs most widely from the unfriendly climate of the nearest capital—Munich. If we take it the whole year round and select some well-known places for comparison, it most closely resembles that of Ischl in its own neighbourhood, still more closely that of Lausanne on the lake of Geneva, or, going to the plains of Germany, that of Frankfort-on-the-Maine, which is counted a very favourable one. Reichenhall is colder in winter, and is not so warm in summer as Frankfort. As respects humidity, the air in Reichenhall is never very dry, at the same time that it is never so saturated with moisture that it can be considered damp.

The climate of Reichenhall is in the summer months particularly equable and uniform for a mountain one; on the whole, without reproducing in detail tables of temperature, it may be pronounced that its fresh invigorating air makes it a good supplement to Nice and Mentone, which are suited for a winter residence, but must be quitted before summer, at which period the equable air of Reichenhall affords an appropriate change.

A great deal need not be said of the salt baths, as they are practically the same as the better-known ones of Ischl, Kreuznach, and Nauheim. In all these places the brine is too concentrated for direct use, and the water of the baths is artificially prepared, the amount of brine or of the mother water (which here, as at Kreuznach, contains some bromine) added to an ordinary hot bath being made to vary according to the directions of the Physician. These, like other baths, probably owe most of their efficacy to the temperature of the water, and their effects depend more on that and on the length of the period of immersion than on their mineral constituents. However, although it is pretty well ascertained that in bathing no salt is absorbed through the skin, these baths must, when the temperature is not too high, have much the same effect as sea-bathing.

2. The drinking source has only been in use since 1862. In mineral constituents it closely resembles the Racogzy at Kissingen, or the spring most used at Nauheim. It has hitherto been employed chiefly in cases of weak digestion and of abdominal obstruction.

One method of cure which has of late years attained much popularity may be well pursued at Reichenhall, where an ample supply of the best goat's milk whey is procurable. Endeavouring to explain its curative effects, Dr. von Liebig says, concerning the whey, that in the quantity daily drunk of 18 ounces, are contained 6 drachms of milk-sugar and 51 grains of the ash of salts. These last he considers to be the active agents in whey; they are, in fact, the salts of the blood in somewhat altered relations. Iron is indeed present in them only in very minute quantity, while there is more phosphoric acid and potass than in the ash of blood. It is in the abundance of these two constituents that the ash of whey approximates to that of blood-cells, which contains almost all the potass of the blood combined with hydrochloric and phosphoric acids. The serum, according to C. Schmidt, contains most of the soda, while the blood-cells contain most of the potass of the blood. Many chemists are inclined to regard potass as quite as essential an element of the blood-cells as iron. The beneficial effects of the use of whey would, on this theory, be accounted for by that fluid presenting to the stomach in solution salts which may directly influence the constitution of the blood and of the fluids. As to the milk-sugar, it can only be considered as material for respiration. Whatever we may think of this theory of the operation of whey, there seems to be no question that the whey cure is often useful in convalescence from acute attacks, in cachectic habits, in anæmia, and in chronic bronchial catarrhs, and also where an entire change of diet and of mode of life is desired.

The next of the alterative remedies for which Reichenhall is famous is a certain concoction of the juices of Taraxacum, Veronica Beccabunga, Trifolium Fibrinum, and Sisymbrium Nasturtium. This is prepared fresh, and is, it appears, now despatched to all parts of Germany. I have no doubt that it is an efficacious preparation of Taraxacum and bitters, and useful in all cases in which Taraxacum is indicated; good for dyspepsia and liver affections. My friend was quite enthusiastic in its praise, and seemed a little hurt at my not pronouncing it particularly palatable, though I dare say one might come to like it, and, in fact, patients carry away large supplies of it with them. I confess that I found it nearly as disagreeable as a certain Alpenkräuter Magen Bisser which I was once weak enough to taste in another Alpine district. There is a considerable quantity of potass found in the ash of the taraxacum bitter, to which a portion of its alterative qualities is ascribed.

3. First in the third class of remedies must be mentioned the graduating houses. They form a very unsightly object, running in a straight line across the valley, but they afford a shady and cool walk, with resting-places along it; and in certain cases the damp air round them, possibly slightly impregnated with salt particles, has been considered advantageous.

For those who have not seen them at Kreuznach, Ischl, or elsewhere, it may be explained that these graduating houses resemble huge hedges about 40 feet high, and consist of a wooden framework filled up with twigs or fascines. The salt water from the less powerful springs is conveyed along the top and made to filter through these twigs, and as there is a large surface exposed to evaporation, a good deal of water is lost, and the brine trickles through to the bottom in a more concentrated form. The evaporation, of course, produces a considerable amount of cold.

Then there are the inhaling chambers, in close connexion with the pneumatic apparatus and baths. In some of these salt water is diffused in the form of fine spray; in others vapour is made to pass through the leaves of the *Pinus pumilio*, which carries with it a good deal of the aroma of its essential oil, which, by the way, is also prepared separately and added to baths. These vapours are thus brought within the reach of those consumptive patients who are not able to walk in the neighbouring pine forests.

For the inhalation of warm dry air, impregnated with salt, the inner rooms of the boil-house, where the salt is dried, have been made available, but the experiment is considered rather a dangerous one, from patients being very apt to catch cold.

Having now gone over all the remedies presented by Reichenhall, we are prepared to see for what cases of disease they are applicable. Reichenhall is not a place to go to to take a course of baths of a fortnight or of three weeks, but to spend a summer in. It seems particularly adapted for patients of lymphatic temperament, for scrofula, tuberculosis, and chronic bronchitis. The hot salt baths have been found particularly efficacious in chronic rheumatism, and both the saline source and the Taraxacum mixture are well adapted for cases of dyspepsia and abdominal and hepatic obstructions.

As compared with baths of the same character, such as Kreuznach and Ischl, Reichenhall is far superior to the first in natural beauty, and its quiet is in striking contrast to the fashionable crowd of Ischl. Reichenhall is deficient in balls and amusements of all kinds which are found in older watering-places, but to those who are really in search of health this is rather an advantage, or, if it be a disadvantage, it is more than made up for by the exquisite beauty of the surrounding scenery, which tempts those who are strong enough to endless excursions. The Konigsee and Berchtesgaden, the salt mines, the dolomite mountains, and some of the Klamms are among the objects of interest.

Reichenhall is far cheaper than its rival Ischl, and although distant from England, it is now quite easy of access by railway from Munich.

Plombières, to which I shall next allude, differs very widely indeed from Reichenhall. It has been known from the time of the Romans, and has been again brought into fashion by the present Emperor. Reichenhall is only struggling into notice. The scenery about Plombières is very pretty; about Reichenhall it is magnificent. The waters of Plombières, like those of Wildbad and Gastein, contain a very small quantity of salts in solution, while those of Reichenhall are strong salines. Finally, one is warned against sending consumptive patients to Plombières, owing to its somewhat uncertain climate, while Reichenhall is reputed to be a suitable summer residence for them.

Plombières is situated in a narrow gorge in the wooded Vosges mountains. This gorge abounds in hot springs, of which the temperature is so high that their water has to be cooled down before it can be used for baths.

The waters contain a small quantity of silicate of soda and a few bubbles of carbonic acid, but their efficacy depends mainly, no doubt, on their heat, and of late, their influence on the nervous system, like that of the still less mineralised waters of Hof Gastein, has been assigned to a supposed electro-thermal agency. Be this how it may, it is a great mistake to despise thermal waters for their scanty supply of mineral constituents; and it is unfortunate that the climate, and, indeed, the social arrangements in India, make it almost impossible to utilise its thermal springs, for Europeans at least, deficient although they generally are in mineral constituents.

The waters of Plombières are used both for bathing and for drinking. I apprehend that in the former shape they are most efficacious. I can testify from personal experience to the baths being exceedingly refreshing, and slightly stimulating when not protracted beyond three-quarters of an hour. Their use does not appear to produce any crisis like most other mineral waters.

There are abundance of baths in all forms—baths in private and baths in common; hot and vapour baths; every variety of douches, of which the *écossaise* of hot and cold streams alternately is counted particularly efficacious. Only two of the hot springs are used for drinking, but there is an excellent cold chalybeate spring.

The diseases in which the baths of Plombières are most efficacious are chronic rheumatism and neuralgia, affections of the nervous system, functional derangements of the uterus. They are further said to be useful in dyspepsia and obstructions of the liver, but they are contraindicated in tuberculosis.

Plombières undoubtedly deserves to be more visited by English, and offers many attractions to those who do not care to be always surrounded by a crowd of their countrymen, or of their Transatlantic brethren this year so numerous on the Continent. There are innumerable walks in the neighbourhood of the town; there are a great many excursions to be made in the picturesque district of the Vosges, which offers wooded hills, and smiling valleys, and deep forests—nay, at some little distance, beautiful lakes, and some scenery rising almost to Alpine grandeur. For the rest, Plombières is easily reached by Paris and Nancy; living is cheap; and there are reading-rooms, balls, theatres, and concerts for those who require such amusements.

Before concluding this already too lengthy letter, I may add that in most large cities, except in Switzerland, I was on the track of cholera, but nowhere was such intense dread of the disease manifested as in Northern Italy. Coming from Milan, where there was no cholera, to Brescia, we were not allowed to leave the railway-station without being detained for several minutes in a chamber filled with most powerful vapours of chlorine. Passing through Trieste to Adelsberg, we found all the accommodation there taken up by fugitives from the cholera, who seemed to entertain each other with ghastly stories of sudden death, interlarded with a strange jocularity. Cholera had scarcely commenced in Venice when I was there; but when one considers the extreme poverty of the people, the vast number of beggars, many of whom looked really starving, the generally decayed and half-ruinous state of the houses, their defective cleanliness, the absence of pure drinking water, the excessive fear of the disease, it seems to me marvellous that it should never have prevailed with any violence. There, if anywhere, its ravages should have been extensive. It would be curious to know whether this result could be in any degree attributed to sanitary measures, the most palpable of which appears to have been the use of immense quantities of chloride of lime. I am, &c.

John Macpherson, M.D.

35, Curzon-street, W., October 24.

We have been given to understand that Her Majesty has been pleased, on the recommendation of Lord Derby, to grant to Dr. Arthur Hill Hassall a pension from the Civil List, in recognition of his public services.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, October 3, 1866.

Dr. Barnes, President.

Mr. James Keith Grosjean was admitted a Fellow, and Professor Rizzoli, of Bologna, an Honorary Fellow, of the Society.

Mr. Newton exhibited three preserved specimens, which he presented to the Society.

Dr. Braxton Hicks showed a Cephalotribe of his own design. It was lighter in construction than any yet made, and possessed power equal to those of larger size now in use on the Continent.

The Report on Dr. Wynn Williams's case of "Cyst removed from the Abdomen," and exhibited at the Society in June last, was read.

Dr. Brunton showed a Placenta which he had removed a few days before from a healthy primiparous young woman. It contained in its centre a round tumour about the size of a small egg. The specimen was referred to two Fellows for examination, and a report upon the tumour.

Dr. Smuts gave the history of a curious case of Prolapsed Placenta, in which, after the greater part of the placenta remaining outside the vulva for more than forty-eight hours, it retracted within the uterus beyond the reach of the finger, and was expelled immediately after the birth of a healthy living child.

Mr. Mitchell read a paper on

A CASE OF EARLY AND ENTIRELY DETACHED PLACENTA IN LABOUR, PRODUCING INTERNAL AND CONCEALED HÆMORRHAGE, OF WHICH THE PATIENT DIED SOON AFTER DELIVERY.

The patient, who was in the ninth month of gestation, was early one morning awoke by a most unusually violent and protracted spasm in the abdomen, so severe that she became alarmed. This pain was followed by a discharge of blood from the vagina, which, although not very great, continued more or less up to the time of the birth of a still-born child. She never rallied, and died shortly after delivery. A large, firm clot, the size of a child's head, had passed from the uterus just before death. Mr. Mitchell considered it as one of those very rare cases where the placenta was suddenly, and no doubt entirely, cast from the uterus by the violent spasm of that organ.

Mr. Robert Dunn gave the particulars of a

FATAL CASE OF CONCEALED ACCIDENTAL HÆMORRHAGE, OCCURRING AT THE EIGHTH MONTH.

Mrs. C., suffering from a severe cold, experienced while in bed, after a violent fit of coughing, strange and unusual sensations about her womb, and became faint. From this she recovered, and remained well for three or four days, when Mr. Mitchell was sent for. On his seeing her, she was cold, exhausted, and faint, with a weak and feeble pulse. From this state she rallied, but was seized with labour a few hours later. The liquor amnii escaped early, and with it a large clot of blood. She became faint, and complained of the want of breath. The os uteri being dilated to only the size of a half-crown, and the pains inefficient, stimulants, beef-tea, and ergot were administered, and Dr. Robert Lee's opinion was sought for. The patient, however, rapidly got weaker, and expired before the consultation had concluded. The post-mortem inspection revealed a child of eight months lying in the normal position in the womb. The placenta was found to be completely detached and quite loose, resting upon a large mass of coagulated blood, not less than a quart, in the fundus of the uterus.

Dr. Greenhalgh agreed with Messrs. Dunn and Mitchell that fatal accidental hæmorrhage was of rare occurrence; never having met with a case until within the last few weeks, when he was applied to by a teacher of midwifery to see Mrs. ——, between thirty and forty years of age, the mother of many children, who had reached the end of the eighth month of her pregnancy. Dr. Greenhalgh found the patient blanched, cold, and almost pulseless, without the slightest evidence of uterine action. Stimulants and nourishment were given freely, but without signs of rallying. Eight ounces of blood were transfused, after which she expired. Although no time was lost in performing the Cæsarean section, a dead child was extracted. The circumference of the placenta was adherent, except about two inches of its upper part, through which a portion of clot was protruding. Nearly the whole of the centre of the placenta was detached, and between it and the uterus was a large coagulum, weighing from one and a half to two pounds. The uterus was remarkably blanched and flaccid.

Dr. **Brunton** stated that he had met with a similar case about the full period of gestation. His patient was collapsed and nearly pulseless, and in a state of intense suffering. There were no labour pains, but one continuous pain of an intense stretching character. He found the os uteri dilated to the size of a florin, and the membranes tensely stretched, as during a labour pain; but there was no relaxation of them, as in the interval between true labour pains. There was no discharge of blood at all until the membranes were ruptured, and then an immense gush of bloody fluid came away, rapidly followed by the head and body of the child, and then came three large clots of blood, each as large as a child's head. The placenta was healthy and cup-shaped on the uterine surface, caused, doubtless, by pressure of retained blood. The patient recovered. Dr. Brunton maintained that the chief diagnostic symptoms of accidental concealed hæmorrhage were—1st, the sudden collapse and fainting, with continuance of this state; and 2ndly, the intense continuous stretching pain, and the tense state of the membranes, also continuous.

Dr. **Graily Hewitt** attached much importance to the presence of a painful feeling of stretching or dilatation in the abdomen as a sign of hæmorrhage within the uterus, but from facts which had fallen under his own notice, and which he mentioned, it was not a symptom which was invariably observed, and consequently could not be considered as reliable. It might be absent, and yet with the uterus possibly containing a large quantity of blood. Together with other signs, great prostration and palidity of surface, the sensation alluded to had, however, much positive diagnostic value.

A paper, by Dr. C. H. F. Routh, was read

ON A NEW MODE OF TREATING EPITHELIAL CANCER OF THE CERVIX UTERI AND ITS CAVITY.

The author, after referring to the able papers of Mr. Moore on Cancer, said that the use of bromine as a local agent was first suggested to him by his colleague, Dr. Wynn Williams. Dr. Routh then related two cases admitted under his care at the Samaritan Hospital. In the first, the patient was thin, pale, and haggard, losing blood continually. There was a mass of fungoid epithelial growths, taking their origin from the os uteri, and about the size of an egg. The actual cautery was used to check the bleeding, and after the slough had come away a solution of bromine—five minims, to fifty of spirits of wine—was used. A piece of lint, the anterior surface of which was well saturated with the solution, was applied to the uterine diseased surface, and kept *in situ* by pledgets of lint. After forty-eight hours it was removed, and the part dressed at night with a poultice of lint dipped in warm water, and during the day warm douches were applied. In about a week a slough came away, and left a large healthy granulating surface. Tannin with glycerine was applied, and used daily. The patient also took internally the iodide of arsenic with extract of conium. After a period of ten weeks she was fat, hearty, and well-coloured; but as she occasionally lost a drop of blood, Dr. Routh carefully examined the internal surface of the uterus, and found about a quarter of its lining membrane affected with epithelioma. She left the hospital for some weeks, and on being readmitted a piece of wood about the size of the uterine cavity was prepared, and covered with cotton; the upper part was dipped in a saturated solution of carbonate of soda, the lower in the bromine solution, and it was passed up and left within the uterus. Two or three further applications of bromine with glycerine were necessary, and the patient left the hospital with a movable healthy uterus.

In the second case there was a large carcinomatous mass, about the size of an orange, attached to the os, which appeared to be large cauliflower excrescences, breaking down readily and bleeding at the slightest touch. On January 20 the mass was removed by the wire écraseur, and a few days afterwards the spirituous solution of bromine was applied. She took internally the iodide of arsenic and conium, and was treated in the same manner as the first case. She left the Hospital on April 2, with a movable uterus covered with healthy mucous membrane, and looking herself fat and hearty.

The author remarked that he was quite aware that two cases afford an insufficient criterion as to the value of any remedy, and that time had not been allowed to prove that the cures were lasting. Notwithstanding these objections, he thought, at the same time, there were some considerations which made an early publication of these cases desirable. The author concluded by drawing attention to the care necessary in mixing the bromine with the spirits, which should be done very gradually, to avoid an explosion. He hoped others would try the agent he now brought forward, and give the results of their experience. He believed it to be a potent and useful remedy, and likely to prove of service, if not in the cure absolutely, at least in the arrest of the progress of cancer.

Dr. **Wynn Williams** said that he had applied solutions of bromine, in varying degrees of strength, in cancerous growths where there has been any breach of surface, for some nine or ten years; and for the last two or three years to this disease when attacking the uterus, with the effect of destroying the cancerous mass, and causing its removal by sloughing. The first patient on whom he used it was a man suffering from epithelial cancer which had commenced in the lower lip, the soft parts having been almost entirely removed; and wherever he was able to apply the solution of bromine the wound healed, until the whole external surface of it, extending, he might say, almost from ear to ear, had skinned over. The patient, however, ultimately died from extension of the disease to the neighbouring glands. Dr. Williams considered the beneficial effects of bromine were not confined to its corrosive or escharotic action only, but it acted also as a most powerful disinfectant, its good effects in this way being of very great service. He had seen patients with that peculiar cachectic, emaciated aspect so common in those suffering from open cancer rapidly improve in appearance soon after using bromine applications. He had found that in almost every case in which he had been able to apply bromine directly to the cancerous growth it had been followed by most beneficial results. He had frequently prescribed bromide of iron internally whilst applying the bromine externally, but thought its effect very problematical.

Dr. **Rogers** said he believed some of the previous speakers were labouring under an erroneous impression that the paper by Dr. Routh and the remarks of Dr. W. Williams tended to establish a new "specific for cancer." All that was desired to be made known was the fact that in some cases of epithelial cancer of the cervix uteri the bromine had proved a most energetic and valuable escharotic, destroying vascular growths, arresting hæmorrhage and the prostration resulting from it, and checking all fetid and foul discharges. Healthy granulations followed its application, and the parts appeared free from disease. How long such improved state would continue could not at present be predicted. This was certain, that a most marked improvement took place locally and constitutionally. The patients would soon have died had not the disease been arrested; now they appeared restored to health and strength again. Of course, where the bromine could not be applied to the whole of the diseased parts, the mischief could not be arrested, and the disease proceeded on its fatal course. Bromine, like other powerful caustics, required great care and all the precautions mentioned by the author in its use. From its not being properly guarded, he (Dr. Rogers) had known mischief to arise which ought to have been prevented. He had used it himself, and had assisted the author with all his cases; and great credit was due to Dr. Routh for the skill, care, and perseverance exhibited by him.

Dr. **Routh**, in reply, said he had frequently seen cases of extirpation of cancerous growths by the knife or écraseur, but they almost invariably recurred. The plan proposed did more, or supplemented what knives and écraseurs could not do; and he must say he never saw change so rapid from one of marked cachexia to robust health as under the bromine treatment. It was because he had thought this so remarkable that he wished others to try it also for themselves. If the agent was what he believed, the Profession would soon acknowledge it. Herein he only followed the general rule of Medical men, which differed so much from that of quacks, to make known at once any remedy for the good of all, and not to keep it secret. Great harm, he believed, had been done to the treatment of this affection in our schools and elsewhere by invariably speaking of cancer as incurable. Now he believed opinion was changing, and some began to believe a cure might be found. He did not say that bromine was certainly such a remedy, but at any rate it was the most powerful palliative he had met with. To see a woman dying by inches before you, and carrying about her an odour completing her misery, was a severe trial. If bromine could stop this only for six months, it was surely to be received with thankfulness. Future experience, however, might prove its powers to be even greater than this.

A paper was read by Dr. W. S. Playfair

ON THE MECHANISM AND MANAGEMENT OF DELIVERY IN CASES OF DOUBLE MONSTROSITY.

The author pointed out that, although numerous instances of double monstrosity were recorded in various publications, and specimens were met with in all our museums, little reference was made to the mechanism of delivery in any of our standard works on obstetrics. As the cases were likely to give rise to very formidable difficulties in practice, the object of the paper was to arrive at a clear understanding as to the means by which Nature attempted delivery, with the view of arriving at some definite conclusions as to the proper management of cases of the kind. Details were collected from various sources of thirty-one cases, in which the labour was more or less accurately described. These histories were analysed under their respective classes, and practical deductions were arrived at as to the proper course to be pursued with the view of rendering the most efficient assistance.

BOOKS RECEIVED.

Cholera: its Seat, Nature, and Treatment. By C. Shrimpton, M.D., Chevalier de la Légion d'Honneur. London: John Churchill and Sons. 1866. Pp. 109.

, Dr. Shrimpton, who dedicates his work to Mr. Sambrooke, one of the leading Governors of King's College Hospital, presents us with a handsome volume, which might be styled sketches of cholera, rather than a formal treatise. He denies that cholera is a contagious disease, and gives many instances of persons who had been exposed to the alleged contagion without suffering therefrom. Dr. Shrimpton's work is valuable, as the production of a man who received a medal for his services during the epidemic in Paris of 1832, and who has watched four subsequent visitations of the disease. He has further enriched his book by a copious abstract from those papers of Dr. L. Beale which have been published in the *Medical Times and Gazette.* He fully believes in measures of cleanliness and disinfection as preventives, and gives rational rules for treatment.

On the Atmospheric Conditions influencing the Prevalence of Typhus Fever. By Thomas W. Grimshaw, A.B., M.B., C.M., Physician to Cork-street Fever Hospital, etc. Reprinted from Dublin Journal of Medical Science, May, 1866. Dublin: Falconer. 1866. Pp. 8.

, The author having noticed the sudden rises and falls in the rate of admissions to the Hospital of which he is Physician, and both he and Dr. Kennedy having remarked that an increase of moisture in the atmosphere was always followed by a sudden pressure on the Hospital accommodation, Dr. Grimshaw selected seven months, from May to the end of December, and an average of six days as the probable period of the patient's illness, before admission. During that period he constructed diagrams to show the rise and fall of typhus, and for comparison he drew others to show the rise and fall of the moisture of the air and the temperature. These diagrams are given, and the conclusions drawn from them are—1. That with moisture typhus increases, and *vice versâ.* 2. With increase of temperature typhus increases, and *vice versâ.* 3. Two previous conditions combined most favourable to an increase of typhus, and *vice versâ.* 5 (*sic*). Cold tends to diminish typhus, when combined with moisture.

On the Rational Employment of Mercury in the Treatment of Syphilis. By Dr. Colomiati Meredyth. London: Hardwicke. 1866. Pp. 41. 1s.

, Dr. Meredyth is far from being an uncompromising mercurialist; on the contrary, he is well aware that in mild cases it may be safely dispensed with, and he only has recourse to it where its employment is imperatively called for. But experience has taught him that in severe cases it has proved an indisputably reliable agent. There is an interesting account of the therapeutic history of mercury, as regards syphilis, its competition with guaiacum and sarsaparilla, when it was termed "omnium curationum acerbissima." But though not a professed mercurialist, he considers that in many cases of syphilis it is a necessity. Those interested in the subject should read his pamphlet—many are.

The Causes and Treatment of Imperfect Digestion. By Arthur Leared, M D. Dub. and Ox., M.R.I.A., M.R.C.S., Senior Physician to Great Northern and Physician to the Royal Infirmary for Diseases of the Chest, etc Fourth edition. Pp. 243. London: John Churchill and Sons. 1866.

, Contains nine chapters on the causes, varieties, and treatment of dyspepsia; a brief statement of the physiology of digestion, and two appendices—one on heartburn and another on flatulence and its successful treatment by a novel use of charcoal (in capsules), which is not only useful for mankind but also for animals. We can recommend this little book.

Orthopædics: a Systematic Treatise on the Prevention and Correction of Deformities. By D Prince, M.D. Philadelphia: Lindsay and Blakiston. London: Trübner and Co. 1866. Pp. 240.

, The author is a disciple of Mr. Barwell, and prefers mechanical measures, electricity, and exercise, to the universal and indiscriminate employment of tenotomy. The author claims Mr. Barwell's method of treatment as an American plan. Anyhow, the book is interesting, as a sign of the reaction against indiscriminate tenotomy. Even for strabismus, there is a tendency to attempt a cure by exercise, assisted by optical contrivances, instead of dividing the muscles.

St. Bartholomew's Hospital Reports, 1866. London: Longmans and Co. Pp. 264.

, The second volume under this appellation. Differs from the others in having a considerable number of contributors not on the Hospital staff. Smaller in size, but not less valuable.

Winter Cough. By Dr. H. Dobell. London: John Churchill and Sons. Pp. 182.

, Treats of that disorder so troublesome to old people, enumerates its causes, and lays down rules of treatment, illustrated by a great variety of cases, and with an appendix on the subject of diet in disease.

On Tuberculosis. By Dr. Dobell. London: John Churchill and Sons. Pp. 84.

, Tuberculosis depends on non-assimilation of fat. Fat is not absorbed for want of sufficient pancreatic juice; therefore the true remedy for tuberculosis is pancreatic emulsion. Such is the sum and substance of this book.

A Dialogue on Marriage. London: F. Pitman.

, The author modestly conceals his name, but he has discovered that the deterioration of the race and the rate of feminine mortality are greatly favoured by married men too frequently taking advantage of their position. Does the author ever think that there are two sides to this question? Has he ever read Prior's "Paulo Purganti"?

Chromo-Lithographs of Diseases of the Skin. By Dr. B. Squire. London: John Churchill and Sons.

, A complete series of illustrations of skin diseases, all, as a matter of course, not of the same merit, but all good. Very nicely got up, and in a very convenient form for reference.

Nouveau Dictionnaire de Médecine et de Chirurgie Pratique. Tome V. Bil—Bus. Paris: Baillière et Fils. Pp. 810.

, Another instalment of this valuable work, containing, among others, articles on bile, gonorrhœa, wounds, synovial bursæ, the arms, and the bronchi in all their relations.

Osteology for Students. By A. T. Norton. London: R. Hardwicke. Pp. 128.

, An elegant volume, nicely got up, and accompanied by an atlas of valuable plates. Will without doubt be a great favourite among students.

Emotional Diseases. By Dr. W. Murray, Newcastle. London: John Churchill and Sons. 1866. Pp. 118.

, A scientific treatise on that branch of Professional study and practice, which, bordering, as it sometimes does, on the region of metaphysics, is only too often given up to the merest pretender. All the more welcome as coming from a provincial teacher whose name is associated with at least one great achievement in therapeutics.

Contributions to Medicine and Midwifery. By T. E Beatty, M.D., etc. Dublin: Fannin and Co. 1866. Pp. 651.

, This is a volume containing a reprint of Dr. Beatty's contributions to Medical journals, with some few original essays and introductory lectures. It deals with some of the most important questions which concern the Physician and Accoucheur, such as the forceps, ergot, chloroform, retroflexion of the womb, dysmenorrhœa, and some medico-legal questions, such as doubtful sex.

Practical Treatise on the Physical Exploration of the Chest and the Diagnosis of Diseases affecting the Respiratory Organs. By Austin Flint, M.D., Professor of the Principles and Practice of Medicine in the Bellevue Hospital, Philadelphia. Second edition. Philadelphia: Henry C. Lea. London: Trübner and Co. 1866. Pp. 600.

, A full and complete treatise on that branch of Clinical Medicine.

Surgical Diseases of Women. By I. Baker Brown, F.R.C.S.E. London: R. Hardwicke. Pp. 366.

, A new edition of Mr. Brown's well-known work, *minus* the chapter on Ovarian Dropsy and *plus* certain remarks on Flexions of the Uterus, etc. Readers will also find an account of Mr. Brown's peculiar operation, illustrated by a number of cases.

London Hospital Clinical Lectures and Reports, 1866. London: John Churchill and Sons. Pp. 500.

, This is the third volume which has appeared under the above or a similar title. There is less, though still a considerable, tendency to speciality on the part of its authors.

MEDICAL NEWS.

Apothecaries' Hall.—On Thursday, October 25, the following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise:—

Martin Luther Heelas, The Holt, Wokingham, Berks; Rowland Hill Coombs, Bedford; John Henry Wynn Hall, Barking-road, E.; Alfred George Wilkinson, Aston road, Birmingham; Osborne Delano Marriott, Sevenoaks, Kent; John Grime, Blackburn, Lancashire; David Bowen, Newport, Pembrokeshire; George Levick, West Ham, Essex; Frederic George Denton, Craycross; John Cremonini, Tettenhall, Staffordshire.

APPOINTMENTS.

***,* The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.**

Arnott, H., M.R.C.S E., has been appointed Surgical Registrar to the Middlesex Hospital.

Bruce, A., M.B., F.R.C.S, has been appointed Surgeon to the Islington Dispensary.

Cayley, W., M.D., has been appointed Medical Registrar to the Middlesex Hospital.

Chater, S, M.R C.S E., has been elected Surgeon to the Metropolitan Free Hospital, Devonshire-square.

Coulson, W. J., F.R C.S.E., has been appointed one of the Surgeons to St. Peter's Hospital for Stône.

Hamilton, A., L R.C.P. Edin., has been appointed House-Surgeon to the District Infirmary, Ashton-under-Lyne.

Jardine, J. L., M.R.C.S.E., has been appointed Surgeon to the Village Hospital, Capel, Surrey.

Nunn, T. W., F.R C.S.E., has been appointed one of the Surgeons to St. Peter's Hospital for Stone.

Sankey, G., M.R.C.S.E., has been appointed Surgeon to the West Kent General Hospital.

Taylor, J., M.D., has been appointed House-Surgeon to the North Staffordshire Infirmary, Etruria, Staffordshire.

Teevan, W. F., F.R.C.S.E., has been appointed one of the Surgeons to St. Peter's Hospital for Stone.

BIRTHS.

Fox.—On October 28, at 12, Pavilion-parade, Brighton, the wife of O. A. Fox, L.D.S., of a daughter.

Homfray.—On October 26, at Tredegar, Monmouthshire, the wife of C. A. Homfray, M.R C.S.E., of a son.

Ledward.—On October 20, at York-street, Cheetham, Manchester, the wife of R. W. Ledward, M D., of a daughter.

Ridings.—On October 21, at Walmer, the wife of G. W. Ridings, Surgeon R.N., of a daughter.

Sealy.—On October 8, at Spring-hill, Barbadoes, the wife of J. Sealy, M.D., of a son.

Seydewitz.—On October 22, at 21, Shadwell-road, Upper Holloway, the wife of Dr. Paul von Seydewitz, of a son.

Ward.—On October 23, at Woolwich, the wife of W. P. Ward, Surgeon, Royal Artillery, prematurely of a son.

MARRIAGES.

Combe—Ainsworth.—On October 24, at the private chapel of P. Ainsworth, Esq., Smithill's Park, Lancashire, M. Combe, M D., Surgeon-Major Royal Horse Artillery, to Louisa Sarah, third daughter of the late T. H. Ainsworth, Esq., of Moss Bank.

Dawson—Chapman.—On October 27, at St. Margaret's Church, Lee, Smith Houston Dawson, M.D., of No. 9, Carlton-terrace, Kilburn-park, to Rosie Annie, second daughter of Henry Chapman, Esq., of Lee, Kent.

Hall—Noakes.—On October 24, at Christchurch, Folkestone, H. J. Hall, L.R.C.P.L., to Eliza, second surviving daughter of Mr. John Noakes, late of Gillhope, Mayfield, Sussex.

Wilson—Huntley.—On October 29, at Percy Main, near Newcastle, Thomas Wilson, Esq., M.R.C.S.Eng., of Wallsend, to Sarah Hassall, third daughter of the late Dr. Huntley, of Howdon.

DEATHS.

Burnett, C. M., M.D., at Westbrooke House, Alton, Hants, on October 25, in the 60th year of his age.

Carter, J. C., M.D., Inspector-General of Hospitals, at Wellington-road, Dublin, on October 20.

Conquest, J. T., M.D., F.L.S., at the Oaks, Plumstead-common (late of Finsbury-square), on October 24, aged 77.

Crocker, Henry, M R.C.S.E., of Berbice (formerly Assistant-Surgeon R.N.), in London, on October 16, aged 42.

Dyer, J. F., M.R C.S.E., at Stevenage, Herts, on October 23, in the 43rd year of his age.

McCarthy, Timotheus, M.D.Edin., J.P., at Kenmare, county Kerry, on October 18.

Quinlan, Thomas, M.D., Assistant-Surgeon 1st Dragoon Guards, at the Royal Military Hospital, Phœnix Park, Dublin, on October 19, aged 32.

POOR-LAW MEDICAL SERVICE.

\ₓ The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Burton-upon-Trent Union.—Dr. Spencer Thomson has resigned the Lullington District; area 2907; population 625; salary £10 per annum.

Droxford Union.—Mr. George J. Perry has resigned the parishes of Droxford and Loberton; area 13,154; population 3330; salary £55 per annum. Also the Workhouse; salary £45 per annum

Kirkby Moorside Union.—Dr. Chapman has resigned the Union; area 58,631; population 5739; salary £46 per annum. Also the Workhouse; salary £11 per annum.

Reigate Union.—The Northern District is vacant; area 13,880; population 9817; salary £100 per annum. Also the Workhouse; salary £50 per annum.

West Ham Union.—The Woodford District is vacant; area 2148; population 3458; salary £50 per annum.

APPOINTMENTS.

Lanchester Union.—Henry W. Watson, M.R.C.S.E., L.S.A., to the Tanfield District.

Langport Union.—Walter A. Harvey, M.B. Lond., L.R.C.P., M.R.C.S.E., to the Third C. District.

Wells Union.—James A. Bright, M.R.C.S.E., L S.A., to the Third District.

Woodbridge Union.—Charles G. Marshall, M.R.C.S.E., L.S.A., to the Third District.

We regret to see reported the death of Dr. Sparrow, of Southsea, from dissecting wound.

Sir Thomas Watson, Dr. Acland, Dr. Sibson, Captain Galton (R.E.), Mr. Charles Hawkins, Mr. T. Holmes, Dr. Randall, together with Mr. Corbett, Dr. Markham, and Dr. Smith, have been appointed by the President of the Poor-law Board as a committee to consider the subject of cubic space and Hospital accommodation in the metropolitan Workhouses.

Dr. Conquest, late of Finsbury-square, and formerly lecturer on Midwifery at St. Bartholomew's Hospital, has lately died at his residence, Shooter's-hill.

About £4000 were collected last Sunday in Birmingham for the Queen's Hospital.

The *Times* records the arrival of Miss Shaw Stewart, and eight other lady nurses, at Woolwich, from Netley, and says that the inmates of the military Hospitals prefer the attendance of the male nurses of the Army Hospital Corps. Of the 300 patients now in the Herbert Hospital, nineteen out of twenty have expressed their dislike at having the attendance of these lady nurses thrust upon them contrary to their desire.

Coronership of the City of London.—There is a probability of a vacancy taking place in this office, as Mr. Serjeant Payne, who has held the appointment thirty-seven years, has applied for the retiring pension which the Act of Parliament allows. We understand that a candidate will probably appear in the person of a graduate in Medicine of the University of London of some standing in the Profession, and who is the author of a work on the Hospitals, etc., of Paris.

Dr. Daniel Brainard, Professor of Surgery at the Medical College of Chicago (Illinois), has just been carried off by the cholera on returning from a voyage to France. He is well known by various memoirs on Surgical subjects, among others the injection of spina bifida with iodine, and the treatment of ununited fracture by suture of the bones.

By permission of the Provost of Trinity College a meeting of the fellows, professors, students, and graduates, has been held in the Examination Hall, for the purpose of organising a subscription in aid of the cholera wards of Sir Patrick Dun's Hospital, and to express the thanks of the meeting to the Medical scholars for the services rendered by them during the past summer. The Rev. Dr. Lloyd, Vice-Provost of Trinity College, presided. The meeting was addressed by the Rev. Dr. Carson, the Rev. Professor Haughton, the Rev. Dr. Salmon, Dr. Moore, and others.

Dr. Mary Walker visited Middlesex Hospital yesterday, and was conducted through the establishment. The students were somewhat surprised at her appearance, for it seems that she has not only donned the M.D. but the breeches as well. She wears a low-crowned plain felt hat, a dark plush coat not quite reaching to the knees, and black cloth trousers.—*Sunday Gazette, October* 28. *ₓ* We wish that some of the fashionable street-sweepers would adopt a costume as sensible.

Early Work of Art.—The statement is now put forth on the authority of Professor Spencer F. Baird, of the Smithsonian Institution at Washington, that there has been received at that institution a piece of matting wrought of the bark of a cane (*Arundinaria macrospermum*) by a human hand, which was certainly found in that island two feet below a stratum in which the fossil remains of an elephant of the remotest period were embedded.—*Pall-mall Gazette.*

The Llewellyn Memorial.—On Saturday last a meeting was held at Charing-cross Hospital of the subscribers of the memorial to Llewellyn, the gallant Surgeon of the *Alabama*, whose noble act of preferring to sink with the shot-torn wreck, rather than desert the wounded, was the theme of every tongue. On the motion of Dr. Travers it was resolved that the Hospital authorities should be asked to permit a marble slab to be placed in the Hospital, in commemoration of the noble man and the noble deed, and that steps should be taken to conjoin all the money collected, with a view of founding a "Llewellyn Scholarship," in connexion with the Hospital. A committee was formed to confer with a committee who hold another portion of the funds, the committee being Dr. Travers, Dr. Chown, Dr. Salter, and Mr. Berry. Acknowledgment was made of the services of Dr. Travers and Mr. Berry as hon. sec. and treasurer, and the meeting separated with a vote of thanks to Mr. Hancock, the chairman.

Metropolitan Poor-law Medical Officers' Association.—A quarterly meeting of this Association will be held at the Ship Hotel, Charing-cross, on Tuesday, November 6, at 8 p.m. precisely, at which honorary members and union and district Medical officers who have not as yet joined the Association, are invited to attend. We understand that the following gentlemen have already become honorary members of this useful Association—viz., Sir James Clark, Dr. Barclay, Dr. R. Barnes, Mr. Bowman, Dr. Bristowe, Mr. Bryant, Dr. Burrows, Dr. T. K. Chambers, Mr. C. De Morgan, Dr. Fuller, Dr.

Goodfellow, Dr. Harley, Dr. T. Hawkins, Mr. Cæsar Hawkins, Mr. Barnard Holt, Dr. Jenner, Dr. Handfield Jones, Mr. S. Lane, Mr. Henry Lee, Dr. Letheby, Sir Ranald Martin, Dr. Murchison, Dr. J. W. Ogle, Professors Parkes and Partridge, Mr. Paget, Dr. Peacock, Dr. Pitman, Mr. G. D. Pollock, Mr. Quain, Dr. B. W. Richardson, Dr. B. Sanderson, Mr. Shaw, Dr. Sieveking, Dr. Stallard, Dr. A. S. Taylor, Mr. Henry Thompson, and Mr. Spencer Wells.

Royal College of Surgeons.—The examinations of students for the present session will commence at the above institution to-morrow (Saturday), when nearly 30 candidates will offer themselves for the primary examination in anatomy and physiology; and on the following Saturday nearly 60 gentlemen will present themselves for the examination in pathology and surgery, or final examination for the diploma of membership. It is stated that the Council of Medical Education has deputed Dr. William Sharpey, of the University of London, and Dr. Edmund Alexander Parkes, of the Royal Victoria Hospital, Netley (members of the Council nominated by Her Majesty with the advice of her Privy Council), and Mr. George Cooper, the Master of the Apothecaries' Society, to supervise the examinations at the College of Surgeons. Dr. Storrar and Mr. Cæsar Hawkins will visit the College of Physicians. Drs. Parkes, Quain, and Alderson will do the same at the Society of Apothecaries. Drs Paget and Quain will supervise the examinations at the University of Oxford; Drs. Acland and Embleton those of the University of Cambridge; Dr. Burrows, the President, and Dr. Alderson will do the same at the University of London; and Drs. Storrar and Sharpey will visit the University of Durham.

Justice's Justice in France.—At a recent meeting of the Medical Association of the Moselle, an extraordinary pretension on the part of a patient, which was supported by a *juge de paix*, was detailed. The client, summoned to discharge his Doctor's bill, resisted on the following frivolous grounds:—"I sent," said he, "for the Doctor but once, and therefore owe him but for a single visit. If he came several times, that was at his own desire. It is true he has cured me of a very serious disease, which prevailed epidemically in the village, and in order to arrest its progress he cauterised my throat several times. That is true enough, but I never requested him, and am only willing to pay for his first visit." The *juge de paix*, falling in with this view of the transaction, decided against the Doctor, who therefore had the costs to pay. On another occasion this *juge de paix* insisted that the Doctor should prove by witnesses that he had been sent for several times by his patient, and on his refusing to do this gave the decision against him.

Early Man.—At the meeting of the French Academy of Sciences, on October 22, M. d'Archiac presented a note from M. Faudel, relative to the discovery of some fossil human bones in the Alpine clay (*lehm*) of the valley of the Rhine at Eginsheim, near Colmar. The physical character of this loam in no way differs from ordinary clay: it is a marly sandy deposit of a yellowish-grey colour, friable when dry, staining the fingers, and being an intimate mixture of clay, fine sand, and carbonate of lime. It contains small pebbles of quartzite, but is otherwise perfectly homogeneous. The human bones discovered were a frontal bone and a right parietal, both nearly entire, capable of fitting into each other, and belonging to the same skull. They were found together, with the loam adhering to their surface. Their development and form, and the pronounced ossification and their sutures, proved them to have belonged to an adult subject of the middle size. The general form of the skull, as far as could be judged from such incomplete remains, appeared to be elongated from front to back, a little depressed laterally, and to be related to the dolichocephalic type. These human remains were found mingled with those of other animals of the quaternary period, such as the Elephas primigenius, the Bos priscus, etc. They all had undergone the same alterations in texture and composition, and were found in conditions absolutely identical. If these statements are correct, M. Faudel considers that man lived in Alsace, or in the upper valley of the Rhine, at the epoch when the loam was deposited; that he was a contemporary of the fossil elk, bison, mammoth, and other animals of the quaternary period; and that his appearance was antecedent to the movements of the soil, which occurred after the deposit of the diluvium, which has given to the country its present contour. An isolated fact, however, possesses only a relative value in so difficult a question as that of the antiquity of man.—*Comptes Rendus*, vol. lxiii., No. 17.

Milk of the Cat.—At the same meeting, M. Commaille reported the analysis of cats' milk twenty-four hours' old, a litre of which contained—Butter 33·33, caseine 31·17, lactalbumine 59·64, lactoproteine 4·67, lactose and organic acids 49·11, and ashes 5·85 grammes; total 183·77 grammes. This milk affords very substantial nourishment, rich in albuminoid matters; even suppressing the lactalbumine (a characteristic of this milk when twenty-four hours old), the amount of butter, caseine, and sugar would constitute a milk of very good quality, far superior to that of the dog, which contains only traces of lactose.—*Comptes Rendus*, vol. lxiii., No. 17.

A Private Execution.—On the morning of October 12 Gonzales and Pellicier met their doom, in Brooklyn Gaol, for the murder of a Cuban, named Otero, in the City-park, on the night of November 23 last. The *New York Times* gives the following account of the execution:—"Every person admitted to the yard was provided by Sheriff McNamee with a card appointing him a special deputy-sheriff for the occasion. There were about 400 of these persons assembled within the yard, and considerable pushing was displayed in securing places from which to obtain a sight of the gallows. The back windows, and even the roof of the gaol building overlooking the yard, afforded eligible places for many more spectators. The scaffold consisted simply of two uprights and a cross-piece, fastened together in a most substantial manner. Over pulleys set in the cross-piece were run the fatal ropes, connecting behind a temporary board screen with heavy weights. These weights were suspended a short distance from the ground, and so arranged that by simply cutting a small string they would fall to the ground, and, dragging up the rope, carry the doomed men off their feet. These weights were equal to 600lb. Beneath the gallows a few rough boards had been laid as a flooring. Quite a large space around the gallows was kept clear by the police to afford room for the Sheriff, his assistants, and Surgeons, when the procession should arrive. The representatives of the press of New York and Brooklyn were provided with seats on the railing nearest the gallows. At 10.20 o'clock the spectators were requested to lower their umbrellas, and immediately after the sheriff's procession descended the steps leading from the gaol to the yard. The prisoners walked together in conversation with Fathers Duranquet and Deluyones, and were surrounded by the sheriff's officers. The men were both looking well, rather pale, and were somewhat nervous, but both stepped boldly to their positions. Around their necks were adjusted the cords which were so soon to terminate their lives, the ends of the ropes being concealed in the breasts of their coats. The arms of each were tightly pinioned at the elbows, the cords passing behind their backs, but each held in his hand a small black crucifix. Both kneeling, and the spectators removing their hats, the attendant clergyman recited in Spanish the last offices for the dead. At the conclusion of the religious services the men devoutly kissed the crucifix, and then rose to their feet without assistance. They then shook hands with and kisse the two clergymen, Sheriff Kelly, and two Spanish gentlemen who were present. Afterwards Mr. Isaacs stepped forward and adjusted the noose about the neck of each, attaching them to the cords above. No sign of weakness was visible in either, but they stood firmly on their feet, murmuring their prayers. The signal being given, the weight fell suddenly to the earth, raising the two men three feet from the ground. In seven minutes pulsation had ceased."

Suicide by a Lunatic Patient.—On Tuesday an inquiry was held at the London Hospital, by Mr. Humphreys, coroner, relative to the death of Major Thomas Clark, of the 24th Regiment of Foot. The deceased officer had been 22 years in tropical climates. He was 43 years of age. About three weeks ago he heard of two incidents, which made a deep impression on his mind. A major of his own regiment had died suddenly, and a captain had returned to England insane. He became much depressed, and often expressed his apprehensions that his return to India would prove fatal to him. His mind appeared to give way, and he told his brother, Mr. John Clark, that he felt he was not responsible for his acts. Mr. Clark then took him to Mr. Allingham, of 36, Finsbury-square, and it was while in that gentleman's drawing-room that he committed the act which led to his death. Mr. W. Allingham deposed that when he saw the deceased he at once knew that he was not in a fit state to be left alone. He asked Mr. Clark to take him up to the drawing-room while he sent a message for a man to come and stay with him. Mr. Clark did so, but came down shortly afterwards to say that the major was very anxious that he should go and stop some relatives who were coming up by the train. The witness then went to the drawing-room to sit with the deceased, and tried to get him into conversation. He would not sit down, but kept walking to and fro. He suddenly rushed to the window and leaped out. Before he leaped, however, witness ran and caught hold of his legs, and would have been able to retain his hold, only that the deceased kicked violently. Fearing that if the deceased slipped while his legs were being held he would fall upon his head on the flags, witness let them go and seized the tails of his coat, hoping that if he were then to break loose he would fall on his feet. Unfortunately the coat gave way, and he fell on to the pavement, fracturing his arm, and receiving a dreadful concussion. Mr. Allingham said that he was confident he could have saved the deceased, only that he kept on kicking while he was being held. This witness also stated that a tropical climate was very likely to affect the mind of a person of nervous temperament. Mr. B. Llewellyn, House-Surgeon at the London Hospital, said that the deceased was brought into that institution insensible, and with his arm fractured. He rallied a little at first, but was very excitable, and often said he wished he was dead. On the 28th inst. he died, and the post-mortem examination of the body showed that death arose from bronchitis, accelerated by the shock to the system from the fall. The jury returned a verdict "That the deceased's death was caused by the mortal effect of bronchitis, accelerated by a fall consequent on his throwing himself out of a certain window while in a state of unsound mind."

THE INTRODUCTORY LECTURE AT ST. GEORGE'S.—We regret exceedingly that the report of Dr. John Ogle's admirable introductory lecture delivered this session at St. George's reached us too late for insertion in our account of the opening of the London Medical Schools. The lecture we hope to see published in a separate form. Meanwhile we extract from our report the following—a passage which seems to us to embody a thoroughly sound philosophy in the happiest diction:—

"Happily we have not, in these our studies, either as physical or metaphysical inquirers, to agitate ourselves on such matters, diving, as it were, into the arcana of eternity; but there is an allied question which still vexes not only philosophical thinkers and historians of opinion, but also observers of the present moment, to which, though it will probably be never settled to the satisfaction of all, I will briefly allude. It is one which has lately, and will also for the future, occupy the attention of Medical men and of physical inquirers; as its interest is much enhanced by the advance which has lately been made in our knowledge of the various so-called physical forces, and especially of their conservancy and correlation. The inquiry is, whether there be such a thing as vital force, or vital energy, and whether we may rightly speak of vital processes? These are terms which, until lately, were constantly on our lips as physicians and physiologists; the present tendency is no doubt to discard them from our vocabulary. Observation and direct experiment have shown that many actions and functions which could not formerly be understood as depending upon physical phenomena—that is, on phenomena witnessed in matter or substance unconnected with what is termed organic life, and which were therefore ascribed to some peculiar power or force superadded to physical actions—really depend upon such actions, and on such alone. Whilst recognising that many of these actions—such, for example, as digestion, respiration, the power of forming and maintaining the temperature of the body, formerly termed 'innate heat'—are physical actions, it is very clear, nevertheless, that, at any rate, a large number of the processes of what we term life cannot yet be explained on merely physical principles, such as we know them.

"For my own part, irrespective of the moral or theological tendencies of objections, even if all the processes which we term functions of organs or parts were positively found to be referable to, and could be ranged under, physical actions, I should still detect something additional and wholly different from and sovereign to them. . . . Even though it be granted that all movements of every object whatever, animal or vegetable, upon our earth, result from heat, of which the sun is the sole fount, yet this alone will not explain why structures so different in form and function as animal or vegetable tissues originate from bodies apparently identical, which we call cells, nor will it make clear to us why that microscopical body which we call a germinal vesicle, yet being imperfect, but crescing in its faculty, will in one case, through secret fashioning, prove eventually to be an organism, low in the scale of animal life; whilst another such body, apparently bearing the same stamp, identical in form and chemical character, will be developed (as the complicated planetary system was from a primæval state of matter) into a human creature, supreme over the entire range of organised beings, with physical attributes so perfect, capable of intellectual and moral truth, and endowed not only with consciousness, but with conscience and free will; nor why, in one case, genius and high mental endowments, and in another quite the opposite characteristics, are wedded to the same nervous cells and fibres as their media of action. Nor will it explain why one individual is born and remains sickly and liable to disease or peculiarity of features bodily or mental, and dies early and suddenly, imparting to its posterity similar proclivities, whilst another of the same stock retains vigorous health until death occurs at a good old age. Nor why again the average duration of life varies in different species of animals, nor why the various developmental periods of age, each with their physiological peculiarities and aptitude for paleological derivatives, follow one another in due order and regular succession.

"As it appears to me, all these, and numbers of other facts connected with both healthy and diseased actions, are mysteries totally unsolved by any supposition that they are effected by what we call physical agencies apart from any other influence, or by any force correlative with known physical forces. We must recognise in every organ and tissue of every individual throughout life the general action of those sublime physical laws which govern the movements of every organism in every system of the entire universe, imposed by a grand first cause or Creator. But I cannot shut my eyes to the existence of their regulation and their adaptation for countless minute and individual purposes (of the kind which we call vital), by means of some independent and higher energy which may be termed a vital principle. I can no more doubt this than, whilst considering the various processes of some industrial manufactory, I can doubt that, although the power which originated the thousand movements which I witness arises from the different tendencies and endowments of applied steam, the direction and application of this mighty force is for many and diverse purposes insured by the unerring hands and nimble fingers which I see presiding at work around me in every corner of the building."

THE following are the last week's Cattle Plague Returns.

—	1. Attacked.			Back cases reported in the week ended Oct. 20, 1866.	2. Result of reported Cases from the Commencement of the disease.				
	Week ended Oct. 6.	Week ended Oct. 13.	Week ended Oct. 20.		Attacked.	Killed.	Died.	Recovered.	Unaccounted for.
Great Britain .	32	11	6	0	253708	84998	124303	33413	10994

The Return shows that 6 attacks were reported to have occurred during the week ended October 20, being a decrease of 5 on the previous return.

Fresh outbreaks took place in 3 farms or places where cattle are kept; the number of such outbreaks in the previous week being also 3. The number of healthy cattle slaughtered, to prevent the disease extending to them, was 4 during the week.

Since the commencement of the disease 51 in every 1000 of the estimated ordinary stock of cattle in Great Britain are returned as having been attacked.

The total number of sheep reported to have been attacked up to the date of this return is 6826. No cases among sheep have been reported during the week.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

J. T.—We do not find the subject mentioned amongst Professor Simpson's lectures published in this journal since 1861.

Dr. Alcock.—At the office for the sale of Blue Books, Great Turnstile, Holborn.

A. Belcher is referred to Dr. Leared's work on "Imperfect Digestion." There he will see experiments proving butyric acid to be the cause of heartburn, and showing the value of charcoal in the treatment of flatulence.

Associate King's College, Stockwell.—Halib Aga Risk Allah Effendi was admitted a Member of the College of Surgeons April 12, 1850, and then gave Syria as his address.

C. M. B.—To purify a house from infection—1. The earth around must be freed from decaying substances, of animal or vegetable nature; drains must be cleansed, etc. 2. The walls, inside and out, and the floors and ceilings must be cleansed by lime whiting, or by hot soap and water, scrubbing brushes, paint, and whatever other means may be appropriate to each material. 3. Carpets, curtains, bedding, and other fixed articles of clothing, should be scoured, cleansed, washed, beated, aired, etc, etc., according to the nature of each. 4. Wearing apparel should be similarly treated. 5. The inmates should be purified by baths, perspiration, etc. Generally speaking, all mouldy, damp, decaying articles in and about a house should be got rid of.

The current number of the *Westminster Review* contains the following remarks on Homoeopathy, being a notice by it of a pamphlet entitled "The True and the False Sciences," recently published by Messrs. J. Churchill and Sons:—

> "So long as there may be any one willing to be at the useless pains of writing a refutation of the so-called principles of homoeopathy, it is to be wished that he may write as philosophically as the author of 'The True and the False Sciences.' He has certainly succeeded in pointing out in a clear and vigorous manner the true position of Medicine as a science and art, and has laid bare the hollow pretensions and shallow sophistry of homoeopathy. Were the question one in which evidence had any weight or argument availed aught, there could be no further ground of dispute; but credulity has never yet shown itself affected by argument, and a system which rests on no principle but the principle that there are many people always ready to be deceived by a boldly-sustained imposture, and which has no rule of practice really adhered to by its disciples, is not likely to suffer much from the most logical demonstration of its falseness. Medicine is concerned with matters which are so uncertain and of which the general public are so utterly ignorant, that it is hopeless, we fear, to expect to get rid of unfounded pretension on the one side, and credulity on the other, until science and scientific education have made much greater progress."

The following reviews are in the printer's hands:—"On Inhalation as a means of Local Treatment of the Organs of Respiration." By Hermann Beigel, M.D., etc. "Du Diagnostic des Maladies du Système Nerveux par l'Ophthalmoscopie." Par E. Bouchut. "Du Rhumatisme Viscéral." Par Benjamin Ball. "Croup." By Dr. F. Pauli. Contributions to Practical Surgery. By W. H. Van Buren, M.D., etc. Die Sinnesdelirien. Von Dr. von Krafft-Ebing.

An Old Member, Liverpool.—There is another specimen in the Hunterian Museum similar to that which occurred in the practice of the late Mr. Highmore, of Sherborne. In his case the fœtus was found in the abdomen of a young man between 15 and 16 years of age; in the second case one was found in a young child. The particulars are given in the Catalogue of Monstrosities.

G. P. R.—Holding the diplomas mentioned, you will be admitted to the Professional part of the examination at once without undergoing the preliminary examination for the Fellowship of the College; and, by a recent regulation, you can extend the time. Thus in the ensuing November you could offer yourself for the Anatomical and Physiological Examination, and in May next for the Pathological and Surgical or final examination. Write to Mr. Trimmer.

COMMUNICATIONS have been received from—

X. Y. Z; Mr. T. M. Evans; J. T.; Mr. A. B. Steele; Dr. Dickson; Dr. Beaney; Mr. James Crouch; Dr. Croucher; Dr. Cooke; Dr. Duckworth; Weeden Cooke, Esq.; A Constant Reader; Dr. P. W. Latham; C. U. B.; Mr. J. H. James; Dr. Arding; Mr. A. C. Tull; Dr. Dyce; Dr. A. L. Adams; Dr. Morell Mackenzie; Mr. J. H. Hooper; Dr. Macpherson; Mr. John Wood; Dr. Soelberg Wells; Dr. Hughlings Jackson; Mr. J. Chatto; Dr. Blandford.

BOOKS RECEIVED—

Watson on Abscess and Tumours of the Orbit—Maclaren on Training—Bentley on the Study of Botany in connexion with Pharmacy—Flint on the Respiratory Organs—Prince on Orthopædics—Hamilton on Fractures and Dislocations, third edition—The Queen *v.* Beaney, with Notes by Dr. Reeves—Calendar of the Pharmaceutical Society of Great Britain.

NEWSPAPER RECEIVED—

The Scotsman.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 27, 1866.

BIRTHS.

Births of Boys, 1099; Girls, 1049; Total, 2148.
Average of 10 corresponding weeks, 1856-65, 1879·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	697	697	1394
Average of the ten years 1856-65	592 6	563·1	1155·7
Average corrected to increased population..	..	..	1271
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	—	4	6	..	5	4	3	8
North ..	618,210	10	3	6	..	9	10	8	14
Central	378,058	1	3	7	2	3	3	4	14
East ..	571,158	3	11	9	1	14	8	7	26
South ..	773,175	2	11	18	4	11	11	10	50
Total ..	2,808,989	16	32	46	7	42	36	32	112

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·791 in.
Mean temperature	49·1
Highest point of thermometer	65·1
Lowest point of thermometer	31·0
Mean dew-point temperature	46·2
General direction of wind	Variable.
Whole amount of rain in the week	1·13

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 27, 1866, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending Oct. 27.	Deaths. Corrected Average Weekly Number.*	Deaths. Registered during the week ending Oct. 27.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3067536	39·3	2148	1400	1394	65 1	31 0	49·1	1·13	114
Bristol (City) . .	163680	34·9	80	73	‡162	63·8	39 2	50·3	1·39	140
Birmingham (Boro')	335798	42·9	214	163	141	64·0	40·5	50·1	1·05	106
Liverpool (Borough)	484337	94·8	358	281	299	62·0	42·8	51·2	0·55	56
Manchester (City) .	358855	80·0	209	203	‡208	65·3	35·0	49·1	1·25	126
Salford (Borough) .	112904	21 8	90	57	54	64 6	38 0	49·3	1·30	131
Sheffield (Borough) .	218257	9·3	183	115	95	59·8	41·1	48·3	1 42	143
Leeds (Borough) .	228187	10·6	151	116	113	62·5	35 7	49 5	1·20	121
Hull (Borough) .	105233	29·5	78	49	47	..	..	..	..	..
Nwcastl-on-Tyne,do.	122277	22·9	81	65	90	57·0	42·0	48 2	0·72	73
Edinburgh (City) .	175128	39·6	108	84	98	59·7	33 0	48·5	0 50	51
Glasgow (City). .	432265	85·4	362	252	227	59·8	25·0	47·2	1·12	113
Dublin (City and some suburbs) .	318437	32·7	188	†156	252	65·9	29 5	47·4	0·50	51
Total of 13 large Towns . . .	6122894	34 4	4250	3014	3080	65 9	26·0	49·0	1·01	102
					Week ending Oct. 20.	Week ending Oct. 20.				
Vienna (City) . .	(1863) 560000	..	..	..	640	..	..	§ 45·5	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29 791 in. The barometrical pressure increased from 29·99 in. on Sunday to 30 2 in. on Tuesday, and decreased to 29·52 in. on Thursday.

The direction of the wind was variable.

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* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 49 6°.

APPOINTMENTS FOR THE WEEK.

November 3. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p m.

5. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p m.

Royal Institution, 2 p.m. General Monthly Meeting.

6. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

Anthropological Society of London, 8 p.m. Meeting.

Ethnological Society of London, 8 p.m. Professor Huxley, "On the Skull of a Patagonian." J. Crawfurd, Esq., "On the History and Migration of Cultivated Fruits in reference to Ethnology."

Pathological Society, 8 p.m. Meeting.

7. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

Obstetrical Society of London, 8 p.m. Dr. Braxton Hicks, "On the Pathology of Puerperal Eclampsia." Dr. Madge, "On the Relations of the Mother and Fœtus." Dr. Shortt, "On Criminal Abortion." And other Papers.

8. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

9. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.

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ORIGINAL LECTURES.

LECTURES ON CATARACT,

AND THE

MODERN OPERATIONS FOR ITS TREATMENT.

DELIVERED AT
King's College, London,
During the Summer Session, 1866,

By J. SOELBERG WELLS,
Professor of Ophthalmology in King's College, and Ophthalmic Surgeon to King's College Hospital.

Lecture II.

Gentlemen,—In the majority of cases, one of the first symptoms noticed by a person affected with incipient cataract is, that distant objects appear somewhat indistinct and hazy, or as if surrounded by a halo. After a time near objects also become indistinct, and in reading the print has to be approximated closer to the eye or observed through a strong convex lens, in order that a larger retinal image may be gained. If the opacity is chiefly or entirely confined to the centre of the lens, the margin being clear, the patient will see best when his back is turned to the light, or when he shades his eyes with his hand, so that the pupil becomes somewhat enlarged. Dilatation of the pupil by a very weak solution of atropine will have the same effect. If the cloudiness be confined to the margin of the lens, the reverse will obtain ; the sight will be best when the pupil is small.

It was formerly thought that senile cataract almost always commenced at the centre of the lens, and extended thence towards the margin. This opinion led to great mistakes, and caused incipient cataract to be often entirely overlooked. When elderly persons complain of dimness of sight, the condition of the lens should, therefore, always be examined both with the oblique illumination and the ophthalmoscope, before the patient is pronounced to be free from cataract. I am in the habit of doing this in all cases, even although any existing presbyopia may be entirely corrected by glasses and the patient enabled to read the smallest type.

On examining a mature senile cataract with the oblique illumination, we at once notice the presence of a yellow nucleus. Its size may be estimated from the extent of the yellow reflex, its hardness from the depth of the colour. The darker the yellow tint, the harder and more compact will the nucleus be. The cortical substance is of a grey or bluish-white colour, and traversed by numerous centripetal opalescent stripes, and studded perhaps with small white dots or patches.

The rate of progress of senile cataract is very difficult to determine with accuracy. It is far more rapid in the cortex than in the nucleus. Sometimes, years may elapse before it arrives at maturity. It may remain at an incipient stage for a very long time without apparently making any progress, and then suddenly advance very rapidly, arriving at maturity within a few months or even weeks. You must, therefore, always be upon your guard against giving a decided opinion as to when any given case of incipient cataract will be fully formed, and fit for operation. Patients are sure to ask this question, and you may fall into great mistakes if you give a decided answer. This can only be predicted with anything like certainty, when the progress of the case has been constantly watched. As a general rule, I may state that if the cortical substance presents broad white opalescent stripes and large flakes or spots, the progress is more rapid than if the stripes or spots are small and narrow, and the intermediate lens-substance clear.

Senile cataract occurs most frequently after the age of 50 or 55, and sooner or later generally affects both eyes.

When a mature senile cataract has existed for some length of time, it may also undergo some retrogressive changes ; but these are far less than in the cortical cataract, for they only affect the cortical substance and not the nucleus, which becomes harder and firmer. The fluid constituents may be partially absorbed, and some of the elements may undergo a fatty or chalky degeneration, so that the cataract diminishes in thickness and becomes flatter, but is very coherent. The molecules are aggregated together into small masses, which become adherent to the inner surface of the capsule, or are often collected at the margin of the lens. They may prove in so far dangerous, that they are very apt to remain behind in the capsule when the cataract is extracted, and give rise to secondary cataract. In very rare instances, a great portion of the cataract may be absorbed and the sight of the patient materially improved. In the majority of cases, the yellow nucleus may still be seen shining through the cortical substance, no longer, however, in the centre, but sunk down to the bottom of the capsule (Morgagnian cataract). If the cortical substance is grey, very opaque, and pretty uniformly studded with fine dots or patches, it may be considered as soft, not, however, pulpy or diffluent, but friable, so that small coherent portions are apt to remain behind, and adhere to the pupil or the corneal section after the chief portion of the cataract is removed.

Traumatic Cataract.—When the capsule is perforated or torn by a sharp instrument, the aqueous humour is admitted to the lens substance, which may become rapidly opaque. If the perforation is extremely small and superficial, such as might be produced by a very fine needle, the danger may be but slight. The lips of the wound in the capsule may unite, and no permanent, or only a very limited, opacity may remain ; but if the wound is larger, much aqueous humour is admitted, the lens will swell up very rapidly, and will press upon the iris and ciliary body. Flakes of softened lens matter, or broken portions of lens, fall into the anterior chamber, and, coming in contact with the anterior surface of the iris, will produce great irritation. The inflammation, which may involve the iris, ciliary body, and choroid, may assume either a purulent or serous character. In the latter case there will be more or less increase in the intra-ocular pressure, with the attendant train of glaucomatous symptoms. In children the danger of secondary inflammation is less than in adults, as the lens is softer, the iris less impatient of pressure, and absorption more rapid ; in fact, the lens may be almost entirely absorbed, so that finally there only remains a small, hard, white disc. The danger is very great when a foreign body—*e.g.*, a piece of gun cap or a chip of steel—is lodged in the lens, or, having passed through it, is fixed in the deeper tissues of the eye, as it is frequently followed by a most destructive inflammation. After any injury to the lens, the history of the accident should be inquired into, and if it was caused by a chip of steel, a shot, etc., the condition of the eye must be carefully examined, in order that we may, if possible, ascertain whether the foreign body be still in the eye, and whereabouts it is situated. After an injury to the lens, the condition of the eye must be anxiously watched. The tension of the eyeball, the state of the sight, and of the field of vision must be frequently examined, so that the earliest symptoms of any glaucomatous complication may be detected, and, if possible, cut short. The danger of sympathetic ophthalmia must also be kept in mind. A traumatic cataract may also be produced through a simple contusion of the eye.

Capsular Cataract presents a white, chalky appearance, and is situated in the area of the pupil. Strictly speaking, this term is inaccurate, for the capsule itself never appears to become opaque, for although it may become wrinkled and changed in thickness, it retains its transparency. According to Heinrich Müller,(a) these opacities are not owing to any changes in the structure of the capsule itself, but are situated at its inner side, and are due to the deposition of new layers of a substance which is often much akin in its nature to that of the capsule, but in other cases is of a fibrous character. Schweigger(b) insists strongly upon the fact that capsular cataract only occurs as a complication of a previous cataractous opacity of the lens. Thus, when the fluid constituents become absorbed in a retrograding cataract, the harder portions may become adherent to the inner portion of the capsule, and thus produce an opacity of the latter. The intra-capsular cells are either not at all, or but slightly involved in an uncomplicated cataract; but if it is complicated with irido-choroiditis, great proliferation of these cells takes place, and they have a considerable share in the formation of the capsular cataract. The capsule, although transparent, is often somewhat wrinkled. As capsular cataract occurs most frequently in the later stages of irido-choroiditis, the history of the case and the general condition of the eye must be carefully examined before any operation is undertaken.

Anterior central capsular cataract may be congenital, but is more frequently formed in early childhood in consequence of a perforating ulcer of the cornea. It occurs in this way : if an ulcer, which is situated at or near the centre of the cornea, perforates the latter, the aqueous humour escapes, the iris and lens fall forward, and come in contact with the cornea. Plastic lymph is effused into the ulcer, and a little nodule of this is deposited upon the centre of the capsule. As the pupil contracts on the escape of the aqueous humour, only the central portion of the capsule remains uncovered by the iris, and this is, therefore, the place where the cataract is formed. As the nutrition of the lens is impaired near the deposit of lymph, the superficial layers of cortical substance in its vicinity become somewhat opaque. The ulcer of the cornea heals, the iris and lens recede to their former position, but the opacity on the anterior capsule remains. If the cornea subsequently becomes transparent, the origin of the capsular cataract may remain unsuspected. When this central capsular cataract is very prominent, and elevated above the surface of the capsule, it has been termed "pyramidal cataract;" but even in such cases, Müller has found that it is covered by transparent capsule.

(a) Archiv f. Ophthal. iii. i. 56.
(b) *Ibid.* viii. i. 227.

I will now pass on to the different operations suitable to various forms of cataract, commencing with the flap extraction; but before so doing, I must briefly touch upon certain important preliminary considerations.

Ripeness or Maturity of Cataract.—It is important that a cataract, especially the senile form, should be mature before it is submitted to an operation; otherwise, untoward consequences may arise. In mature cataract the opacity involves the whole lens, and the iris throws little or no shadow upon it. The sight is so much impaired that the patient is unable to distinguish the largest print, or to count fingers. If the cataract is immature, it will not come out *en masse*, but the transparent portions of lens substance are stripped off, and remain adherent to the capsule or the edge of the pupil. They swell up very considerably, and may produce great inflammation or a dense secondary cataract. These observations do not of course apply to zonular cataract, which may never become mature. The question now arises, what should be done if the cataract remains immature for a long time, yet is so advanced as greatly to impair vision? Can we hasten its progress? Undoubtedly, but we run some risk in so doing—a risk which should not, I think, be incurred except under peculiar circumstances. If, for instance, a person who is entirely dependent upon his sight for his means of subsistence is affected with double cataract, whose progress is extremely slow, and which, though very immature, is sufficiently dense to prevent his following his customary occupation, it may be advisable to hasten the progress of the cataract. This is to be done by gently pricking the lens with a fine needle, so as to slightly divide the capsule and the lens substance, and admit a little aqueous humour. This may be repeated several times, care being taken not to divide the lens too freely at one sitting, lest a severe iritis or irido-choroiditis be set up. The pupil is to be kept widely dilated with atropine, and the state of the eye narrowly watched, for fear of any severe inflammatory symptoms ensuing. It is safer still, as recommended by Von Graefe, to make preliminary iridectomy, so as to afford more room for the swelling up of the lens; moreover, the existence of an iridectomy would prove of advantage when the final operation of removal of the lens is performed. But not many patients will submit to such repeated operations. Instead of hastening the progress of the cataract, the lens may be removed in its capsule, which obviates the danger of unripe portions being left behind. This operation, which has been strongly advocated by Pagenstecher and Wecker, I shall have occasion to speak of again. Whilst, on the one hand, it is dangerous to operate too early, it may also be wrong to wait too long after the cataract is fully formed. In children especially, we should operate early, for otherwise the sight and the sensibility of the retina may permanently suffer, and oscillation of the eyeball (nystagmus) may also be produced. Later in life, a mature cataract may exist for very many years without the sensibility of the retina being affected by this passive exclusion from the act of vision. But in children it is different; in them the passive suppression of the retinal image produced by the cataract, appears to exert a similar influence upon the sensibility of the retina, as the active suppression which occurs in cases of squint, and which often rapidly leads to great amblyopia. Again, we have seen that when a mature cataract has existed for some time, it may undergo certain retrogressive changes, its fluid constituents may become absorbed, fatty or calcareous masses may be collected at its margin or adhere to the capsule, and remain behind when the lens is removed, giving rise to inflammatory complications and secondary cataract. It is wiser, then, to operate before such secondary changes have set in.

Should we operate upon the one eye if the other is quite free from cataract? I think it is advisable, where the operation is almost certain of succeeding, as, for instance, in the discission or linear extraction of cataract of young individuals. The operated eye, although differing greatly in its state of refraction from the other, will still assist somewhat in the act of vision. The visual field will be extended, and the fear of amblyopia will be removed, as the eye may be separately practised with suitable convex glasses. Moreover, the personal appearance will be improved.

Should both eyes be operated upon at the same time in cases of double cataract? It is doubtless safer to operate only on one eye at a time. Unsuspected peculiarities in the constitution or the temperament may show themselves in the course of the treatment, a prior knowldge of which may prove of great value in the treatment of the other eye, and lead us, perhaps, to select a different mode of operation. On the other hand, it has been urged that it is very rare to see a bad result (*e.g.*, suppuration of the cornea) in both eyes, if they have been operated upon at one sitting. In this point we must be much guided by personal circumstances. It may be very inconvenient for the patient to have the operations divided, and the treatment thus extended over a long period; or, if he be in a weak and nervous condition, it may be unwise to submit him to the anxiety of two operations. If one cataract is mature and the other only partially formed, but yet sufficiently opaque to prevent the patient from following his customary employment, it may be necessary to operate upon the former, so as to enable him speedily to resume his avocations whilst the other is advancing to maturity. If no such necessity exists, we generally wait till both cataracts are mature.

It is of little consequence at what time of the year extraction is performed. Formerly it was thought advisable to operate chiefly in the spring and early summer, but we now operate all the year round, except during intensely hot or very cold weather, for extremes of temperature are not favourable for the progress of the case. If the weather is hot and oppressive, the patients become very restless, irritable, and exhausted. The time of day is also of little or no moment, although I myself prefer the morning, for we can then judge by the evening whether or not any primary inflammatory reaction is likely to set in, and if so, we can without loss of time endeavour to check it.

Before an operation is decided upon, the general health must be examined, and if this be at all impaired we must endeavour to improve it as much as possible prior to operating. It is of the greatest advantage for the result of the operation to have the patient in perfect health. The chief fear is that in a weak and decrepid person the vitality of the cornea may be so low, that its healing power is greatly impaired, or that it may even slough after the operation. A symptom of some importance, as being indicative of this low vitality, is the loss of elasticity of the skin, so that if we pinch up a fold of skin on the back of the hand it does not fall back at once, but remains wrinkled. Severe cough or chronic bronchitis contra-indicate extraction. If double cataract occurs in youth, or early middle age (before the age of 45), and if its formation is rapid, we must examine whether the patient is suffering from diabetes, for this is a not unfrequent cause of cataract. The lens becomes affected chiefly in the later stages of the disease, when the health is much broken. The cataract is generally softish, and its formation rapid. In old persons a more or less large and hard nucleus will be present. Diabetic cataract does not show any special characteristics. If diabetes is found to exist, especial care must be taken to examine the sight and the field of vision, as affections of the retina and optic nerve not unfrequently occur in the course of the disease, and may therefore co-exist with the cataract and render the prognosis of the result of an operation unfavourable.

Middlesex Hospital Medical Society.—The first general meeting of this rising Society for the Session 1866-67 was held at the Middlesex Hospital on Thursday, November 1, Dr. J. Burdon Sanderson, President, in the chair. Dr. Robert Liveing read before a numerous audience a most able paper "On the Pathological Relations of certain Forms of Acute Diseases commonly known as Fevers." A lively discussion ensued, in which many of the members took part. A unanimous vote of thanks was then accorded to Dr. Liveing, on which the meeting adjourned till the 15th inst.

ORIGINAL COMMUNICATIONS.

CASE OF A

CHERRY-STONE REMAINING IN THE EAR PASSAGE FOR UPWARDS OF SIXTY YEARS REMOVED BY SYRINGING.

By L. WINTERBOTHAM.

This case, though presenting few points of interest either in a scientific or practical point of view, may perhaps be worth putting on record as a curiosity.

Mrs. B., 70 years of age, sought relief from complete deafness, caused by a large and recent accumulation of soft wax in the meatus auditorius on both sides. The right ear having been syringed out with immediate good effect, the patient declared it was of no use proceeding further, as she had been deaf in the left ear all her life from the presence in the passage of a cherry-stone, which she had put in when a child, and which had never since been removed. This story being considered somewhat apocryphal, the stream of water was applied, when in a short time, an enormous quantity of cerumen and epithelial *débris* having come away, a hard substance was washed out, which proved to be indeed a cherry-stone. Mrs. B., it appears, put the stone in her ear when she was about 7 years old. Attempts at extraction by Medical men and others were made at that time, and were renewed when, on growing to womanhood, she became the wife of an ingenious blacksmith, who tried its removal with various wire implements of his own invention. All endeavours to dislodge the intruder proving unavailing, it was left from that time in undisturbed possession, and has never given rise to any other inconvenience than a certain dulness of hearing, hardly noticeable until, on the occurrence of a catarrh some few weeks since, the inordinate secretion of wax took place, during the removal of which the cherry-stone was at length brought to light after a sojourn of more than sixty years in its strange resting-place.

Amberley House, Cheltenham.

ANEURISM OF THE ARCH OF THE AORTA.

By E. L. DIXON, L.R.C.P.

On January 13, 1866, a compositor and pressman, aged 47, called upon me on account of a cough which had been in existence for years, had been worse in winter, and for the past year had been very troublesome. There had been only trifling expectoration of a mucous character, and never any hæmoptysis; his voice had been very husky for the past six weeks; he had lost flesh, and had occasional night sweats. He had been accustomed to drink somewhat freely of spirits. Accidentally discovering that there was no pulse at the right radial, I was led to make a more searching investigation than I otherwise might have done. The left pulse was 93, small and regular. I was examining the arteries of the neck when his face became suddenly congested, and he was insensible for a few moments, and I could not, therefore, determine the condition of those vessels. He told me he had also suddenly lost consciousness for a few minutes the day previous, and once again a fortnight before. The right pupil was contracted, but slightly sensible to a bright light; the left was dilated, irregular, and fixed—the result, he said, of an accident fifteen years before. There was no increase of cardiac dulness, nor, indeed, any marked abnormal diminution of resonance on percussing the chest. Respiration loud and blowing under the sternal end of right clavicle; in other respec's normal. The heart's impulse and sounds were very faint in the cardiac region; there was no bellows sound either before or behind in any part of the chest, but the double sound was distinctly heard at the upper part of the sternum, especially on the left side, and there there was to the touch, perhaps, faint deep-seated pulsation, but there was no sternal bulging. The tongue was white, but the appetite and digestion were good, and the bowels were free. He had no subjective sensation of beating, no pain between the shoulders, and no difficulty of swallowing. He did not recollect having ever felt anything give way internally, but said his illness had come on gradually. The diagnosis was thoracic aneurism pressing upon the pneumogastric. He was ordered to use a sparing diet, to lie in bed, and keep perfectly quiet, and take potass. iod., tinct. digital., āā gr. iv. ter die.

April 3.—Spat up a little darkish-coloured blood, and also had a paroxysm of dyspnœa of short duration, in which death was momentarily expected by the bystanders.

4th.—Another paroxysm lasting half-an-hour, which I witnessed, and in which the rhythm of the breathing was similar to that described below.

5th.—Another paroxysm.

7th.—Complained of pain about the second and third dorsal vertebræ. As till the last few days he had been in the country away from my observation, he had been taking the mixture since it was first prescribed; the iodide (gr.v. ter die) was therefore now ordered without the digitalis. It had been impossible to keep him in bed, as he had generally felt so well.

18th.—A little more blood mixed with mucus expectorated.

May 31.—Another attack of dyspnœa.

August 21.—Had been again staying in the country, had continued the iodide, and had kept very well, except that he had had a paroxysm on the 17th, and again on the 20th after dressing. Complained of heat at the vertex, and of confusion of mind and giddiness on raising the head suddenly; also of sickness and vomiting of "phlegm" after taking only a small quantity of food. The pulsation beneath the sternum was much more perceptible than when I first saw him. Iodide omitted and bismuth prescribed.

23rd.—Suddenly seized this evening with an apnœal attack, in which the face grew livid, and he became completely insensible. There was a succession of shallow respirations, decreasing in depth until the breathing absolutely ceased for some moments; then there was a series of deep gasps with immediate very prolonged expirations, the intervals between the inspirations varying in duration, but being frequently thirty seconds, and in one instance so much as forty-five. After three or four of these gasps the frequently repeated shallow respirations recurred for some minutes, to be again followed by the violent inspirations. During the latter the pulse became almost imperceptible, and there was no pulsation at the sternum, although one sound of the heart could be heard. When the respirations quickened there was visible throbbing at the middle of the sternum, and the pulse returned quick and rather hard, to again disappear. After this kind of breathing had continued for two hours he began to have carpopedal contractions, and afterwards general twitchings of the arms, which gradually increased in amount. He died after about four hours, this peculiar mode of respiration continuing to the last.

Post-mortem Examination Sixteen Hours after Death.—Rigor mortis well pronounced; countenance placid; half an inch of adipose tissue beneath the skin of abdomen. On displaying the cavity of the chest, the mediastinum was seen somewhat wider than usual, and on dissecting away the thymus the aortic arch was found enlarged and projecting. On its anterior surface the left pneumogastric was very plainly seen; it did not seem inflamed or flattened out, although it must certainly have undergone considerable stretching. The dilatation of the vessel commenced immediately after it cleared the heart, and continued as far as the termination of the arch, where it ended rather abruptly. The coats were atheromatous and thickened, except where the vessel came in contact with the trachea, of which two fragments of a ring were partially loose in the aneurismal cavity; and here the mucous membrane of the trachea was the only partition left. Within the cavity there were about 4 oz. of dark jelly-like coagulum; after sponging this away, there were seen large masses of decolorised fibrin of various consistence, but denser the nearer to the walls of the vessel. The most eccentric part of this deposit was throughout a great part of the aneurism very tough, and was adherent to the walls, from which leathery concentric layers could be stripped off. The innominate artery was plugged with tough fibrin, which could be drawn out as a cord; the vessels of the left side were pervious. The heart was large, flabby, and burdened with fat; but its tissue was not examined microscopically, as nothing could be brought away from the room. Lungs congested; in the apex of the right a bit of calcareous matter. Liver slightly fatty. Kidneys congested; capsule of one slightly adherent.

Although in this case there was neither pulsating tumour nor *bruit de soufflet*, yet there was no difficulty in arriving at a correct diagnosis. The man's period of life, his habit of spirit-drinking, and his vocation, in which there was occasional violent exertion, all favoured the idea of possible disease of the artery resulting in aneurism. There was no pulse on the right side; the right pupil, too, was contracted; there was hoarseness, suggesting implication of the recurrent laryngeal and paroxysmal attacks of dyspnœa; there was loud blowing respiration under the right clavicle with no very marked dulness, which might be explained by compression of a bronchus; and there was the faint obscure pulsation beneath the upper part of the sternum. The occurrence of slight hæmoptysis indicated the possibility of death from hæmorrhage, but the small quantity of blood expectorated and its venous quality were in favour of the idea that it depended upon congestion of the lung from the encroachment of the tumour. The iodide of potassium was given, as has been recommended, for a prolonged period, but not in large doses; and perhaps it may have had some effect in favouring the production of the large amount of coagulum found in the sac. The influence of the recumbent posture could not be had, as he could not be prevailed upon to maintain it. One of the most interesting features of the case was the strange alteration of the rhythm of the respiratory movements which existed during the apnœal attacks. These attacks, too, although their ultimate cause was persistent, only occurred occasionally, and could not always be traced to over-exertion or any other excitant.

Preston.

SPONTANEOUS SLOUGHING OF AN ENLARGED BURSA.

By JOHN WARD COUSINS, M.D. Lond., F.R.C.S.,
Surgeon to the Royal Portsmouth Hospital.

N. M., aged 26, a delicate-looking woman, had been troubled for eight years with an enlarged bursa over the right patella. After a long walk in the month of April, 1865, it suddenly became very tender and painful. She came under my care on the 26th of the same month; the tumour was then the size of a small orange, very firm, and resisting on pressure, and the skin over it was red and shining. It was punctured with an exploring needle, but no fluid escaped. In a few days all the inflammatory symptoms had much increased, and the integument over the anterior surface looked dark-coloured and gangrenous. At this point the cutaneous structures soon gave way, and the dead fibrous tissue of the tumour protruded through the wound. Charcoal poultices and chlorinated lotions were assiduously applied, and the entire mass soon separated, leaving behind it a deep cavity. The general condition of the patient now rapidly improved, and healthy action was soon established in the wound, and, after a few weeks' careful dressing, the part was soundly healed.

Remarks.—This bursal tumour had existed for many years, and from the gradual thickening of its wall it had acquired many of the characters of a solid growth. Chronic tumours of this kind are prone to inflammation, and occasionally they even suppurate, pointing externally like an ordinary abscess; but spontaneous gangrene and separation *en masse* of an enlarged bursa is certainly a very unusual termination. The prolonged exercise may have been the exciting cause of the disturbance, but the low form of the inflammatory action must have resulted from a depressed state of the vital power of the whole system.

THE LATE DEPUTY-INSPECTOR BURRELL.—Dr. W. H. Burrell, Deputy-Inspector of Hospitals, died on the 31st ult. at Exmouth, aged 71. In 1849 Dr. Burrell sat as one of the members of a Board appointed by the War-office to make inquiries concerning yellow fever, and contributed a valuable paper on the subject, which was afterwards published by the General Board of Health with their second report on quarantine. Subsequently Dr. Burrell, while principal Medical officer at Malta, drew up an elaborate account, from official records then at his command, of the plague which ravaged that island in 1813. On the appointment of the Barrack and Hospital Commission Dr. Burrell was appointed by Lord Herbert to act in conjunction with Dr. Sutherland and Capt. Galton, and he contributed in no slight degree to the success of an inquiry which has since led to so great an improvement as regards the comfort and sanitary well-being of the soldier.—*Times*, Nov. 2.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

WESTMINSTER HOSPITAL.

CALCULUS VESICÆ—LITHOTOMY—CURE.

(Under the care of Mr. CHRISTOPHER HEATH.)

THE two following cases are examples of stone occurring in very young children, with the usual symptoms, for the relief of which the parents applied, when the cause of them was detected and removed. In the second case, it is remarkable that the stone had been detected at another institution, but that it could not be felt upon the operating table, and no operation, therefore, had been performed. Mr. Heath prefers the lateral to the median operation for children, and endeavours to carry his knife in the first incision directly up to the staff, by which the subsequent steps of the operation are much facilitated. In both operations the small stone eluded the forceps on their first introduction, and was therefore extracted with the scoop.

We are indebted to Mr. Moore, the House-Surgeon of the Westminster Hospital, for the following notes:—

Thos. H., aged 4, admitted into Percy Ward February 2, 1866, with calculus vesicæ.

History.—He was brought among the out-patients with prolapsus ani. Mr. Heath, suspecting the existence of stone, sounded the bladder, and found one, and the patient was admitted under Mr. Brooke, who allowed him to remain under Mr. Heath's care. The mother has noticed that he has not been able to hold his water from birth, that he has been accustomed to cry after making water, and to pull the penis. For the last two years there has been prolapse of the rectum after every motion.

February 6.—Mr. Heath performed the usual operation of lateral lithotomy, and with a scoop extracted an irregular uric acid stone, weighing 29 grains. The operation was a little complicated and delayed by the prolapse of the rectum, which occurred when chloroform was administered, and upon the slightest effort of the patient.

7th.—Child perfectly comfortable. Part of the water passes by penis. Bowels have been opened, and the prolapse has not recurred.

9th.—Everything satisfactory. The prolapse has not recurred.

13th.—Convalescent. Urine passes in great part by urethra. Prolapse has not recurred.

27th.—Wound perfectly healed.

March 5.—Discharged cured.

PHIMOSIS—CALCULUS VESICÆ—LATERAL LITHOTOMY—RECOVERY.

J. F., aged 3, on June 5, 1866, was brought among the out-patients by his mother, suffering from constant pain in making water. Has had bladder symptoms for a year, and a few weeks back was taken to another Hospital, where he was sounded, and a stone felt, but upon admission for operation it was not again found. Mr. Heath sounded and failed to find the stone, but as the boy had phimosis, he sent him into the ward and circumcised him. Under chloroform he was then again sounded, and a stone was felt.

19th.—Mr. Heath performed the usual operation of lateral lithotomy, and, with a scoop, extracted an oval uric acid calculus, weighing thirty grains. There was a little bleeding from the wound at the time of the operation, and a piece of sponge was therefore placed in it.

20th.—Boy had a good night, and the sponge came away of itself. Urine passes through wound. As he seemed a little feeble, he was ordered two teaspoonfuls of wine every six hours.

25th.—Has been a little flushed and feverish for the last two days, and last night had an attack of dyspnœa and was very ill. A poultice was applied to his chest, and saline mixture was given. He is better to-day, though his breathing is a little rough. The child in the next bed having developed scarlatina, the boy was removed into another ward.

27th.—The chest symptoms have disappeared, but the boy refuses food, and the wound is looking unhealthy. Wine ʒij. daily.

July 2nd.—The boy has improved, but slowly; some of the urine now passes per urethram; wound cleansing.

15th.—Boy allowed to get up, though the urine still passes partly by wound. Ordered middle diet and half a pint of porter.

24th.—Wound nearly closed.

31st.—Discharged cured.

CASE OF HYDROPHOBIA—RAPID DEATH—AUTOPSY.

(Under the care of Mr. HOLTHOUSE.)

The following seems to be a well-marked case of hydrophobia, judging from the clinical symptoms. There is no good evidence—indeed, we believe, no evidence at all—as to the dog's condition, and, unfortunately, the animal was killed soon after it had bitten the man. It is a popular prejudice that to kill a mad dog which has bitten any one renders the person bitten less liable to become rabid.

Hydrophobia, apart from its human interest, is of great importance scientifically. It is an exceedingly strange disease, and doubtless whoever discovers any links in the pathology of this affection will have discovered much of value in reference to diseased conditions of the nervous system generally.

The period of incubation varies. The symptoms rarely occur before the fortieth day, and rarely after two years. Dr. Hall Thompson, however, has recorded a case in which hydrophobic symptoms appeared seven years after a bite. The usual time, according to Dr. Hamilton and Dr. Hunter, is from thirty to fifty-nine days. Much valuable information on these points will be found in Aitken's "Practice of Medicine."

In Mr. Holthouse's patient's case the disease ran a very rapid course. As usual, nothing of importance was detected at the post-mortem examination. The cord and, we believe, the medulla oblongata and pons have been forwarded to Mr. Lockhart Clarke. Mr. Clarke has done more than any one to dissipate the obscurity and, we may add, the mystery that hangs about the medulla. Every part of it is familiar to him, and if there be in Edward C.'s medulla oblongata any decided alterations in the ganglion cells or nerve fibres, they are likely to be detected. The throat symptoms seem to point especially to the region of the nucleus of the spinal accessory nerves. This patient's voice, however—*i.e.*, voice as distinguished from articulation—did not seem to be affected, and therefore the muscles moving the vocal cords probably escaped. But the spinal accessory nerve is one of those nerves which supply motor power to the vagus, and the vagus gives branches to the pharynx, etc., and therefore it seems important to scrutinise the deep origin of the accessory nerve carefully.

The question of periodicity is involved, although the period of incubation is very far from being definite. The poison requires a long time before it works those changes in the tissues of the body which permit the symptoms. How it is that a poison which, one would suppose, acts generally on the whole blood or the whole body, or perhaps on the whole of the nervous tissue, should produce symptoms so very local as those referred to the throat, it is not easy to understand. But this point must be studied widely from the facts of the periodicity or intermissions of ague, epilepsy, tetanus, etc., and from a large consideration of the relations of nutritive changes to functional activity. In this way of looking at the subject, such periodicities as that of the respiratory act must be considered, and also the changes in time which the poisons of small-pox and scarlet fever produce.

For the notes of the following case we are indebted to Mr. W. Moore, House-Surgeon.

Edward C., aged 58, was admitted under the care of Mr. Holthouse at 4.30 p.m., October 31, with symptoms of hydrophobia.

History.—He states that three months ago he was bitten by a dog, which he said was mad. This was not certain; the dog was killed immediately afterwards. He came to the Hospital next day, and the wounds were well cauterised. There was a lacerated wound on the palmar aspect of the left wrist immediately above the thumb, and a less one on the last phalanx of the forefinger of the same hand. The wounds afterwards scabbed over, and the patient had no further trouble till three nights before admission. The following two days he felt a shooting pain up the arm, which, however, left him; the next morning he was seized with a peculiar inability to swallow his coffee, though he attempted to do so frequently. His attempts caused spasms, which he compared to a feeling like that one has when one jumps into cold water. A Physician, a stranger, who saw him, not knowing the man's comparison, made the same remark as to the kind of breathing.

Symptoms on Admission.—Extreme restlessness and much excitement of manner, though no depression; he frequently jumps up in bed and gasps with a peculiar catching respiration, and no entreaties can prevail on him to drink, and only make him more excited and increase the spasms; these spasms he likens to that caused by application of cold water suddenly to the surface of the body; he was perfectly rational, but talking increased his excitement; there was rather more than a usual amount of saliva of a viscid character, and he frequently spat out.

He was ordered strong beef-tea, with small quantities of brandy, to be given as injections. Half a grain of morphia was placed upon the tongue, and this he swallowed.

November 1, 9.30 a.m.—He had taken three morphia powders during the night, and had dozed a good deal; state much the same as at last report. He was this morning taken into the operating theatre and put under chloroform. Mr. Holthouse divided the median, the musculo-spiral, and the external cutaneous nerves at the region of the elbow. After somewhat recovering from the chloroform, and for the space of half-an-hour afterwards, he seemed greatly excited, talking wildly, and was with great difficulty kept in bed. He, however, soon became quieter and quite rational, being anxious to know if we thought he would recover, yet not seeming much depressed. His bowels acted before the operation; motions of dark colour; he also passed water. Pulse was 92, of fair strength. 2 p.m.—Has had two injections of beef-tea since the operation, and he also gulped down a very small quantity of porter and ate some bread and cheese. A pipe of tobacco with an addition of some stramonium was offered him to smoke. This he accepted most eagerly and thankfully, but as soon as he attempted to take a whiff he put the pipe away from him and said he couldn't—it caused a spasm—and he could not be persuaded to try it again. His pulse was 104, and of tolerable strength. He allowed any one to touch him, and it did not appear to excite the spasms; and a mirror reflecting light upon him did not seem to trouble him much; but fanning him did. 6 p.m.—Has since last note eaten a little piece of meat, but is now much more excitable, throwing himself about a good deal, and, though on the whole still quite rational, seems to wander a little, and talks about his "poor boy Teddy." He is constantly spitting up viscid saliva, which seems more abundant, and which seems to trouble him much, creating the spasms more frequently. These spasms are now also increased by persons moving about by the bedside; but it does not excite him much to touch him; he also jumps out of bed every few minutes and says he wants to pass water and cannot. Pulse 110, more feeble. The House-Surgeon passed a catheter and drew off a quart of urine, which was found to contain a large amount of albumen. The patient then had a brandy and egg injection with beef-tea. This was retained. A blister placed on the spine had not yet risen. He tried again, but could not smoke. 8 p.m.—Still more excitable, lying down and then jumping up wildly, and throwing his arms about. He speaks more wildly, but still is sensible when spoken to. The spasms of the throat with the peculiar catching respiration are very frequent; but there are no general spasms. Brandy and egg injection again given, and ordered to be repeated every two hours. Morphiæ hydrochlor. gr. ss. placed on blistered surface of spine. Pulse more rapid, still with some power. 10 p.m.—Is now raving, talking most wildly—chief topic, "his poor boy Teddy." Lies on his back, shouts, and throws his arms and legs about, and then starts constantly as spasm catches him or on slightest noise or movement. He makes a kind of snarling noise in his throat, but has not spit up for last half-hour any of the viscid saliva which previously (the nurse said) had been pouring in great quantities from his nose and mouth. Lies quite prostrate on his back, not able to get up. No more injections have been given him, as they render him more violent. Pulse 115, very feeble. 12 p.m.—Much in the same state as last, lying on his back, kicking his legs and throwing his arms about, and occasionally shouting, but not so violent, being a good deal exhausted. His head is drawn back to a certain extent, but there does not seem much fixed spasm about the neck. Pulse very feeble; temperature 102. 1.45 a.m.—Suddenly seems quite exhausted, and now lies prostrate on his back and quite quiet, only murmuring a little, and at 2.30, without any convulsions, he died, only as it were stretching himself twice. He was not sensible.

Autopsy by Dr. Willis.—An abrasion of a portion of the epithelial lining of the œsophagus was found, and also a congested patch at the cardiac end of the stomach. In the stomach were coffee-ground contents. The valvulæ conniventes at the first part of the duodenum were injected. Rather more fluid than natural in the arachnoid cavity and in the ventricles of the brain. The spinal cord was sent to Mr. Lockhart Clarke for examination; otherwise nothing else worthy of note.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 10.

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THE PROPOSED INTERNATIONAL MEDICAL CONGRESS.

We have already indicated the subjects for discussion at the proposed Medical Congress, to be held at Paris during the Great Exhibition next year; but along with the regulations to which we have also referred, the Committee have published certain commentaries intended to guide researches in the directions that will prove most beneficial to the cause of science, which we think are worthy of some consideration.

As to the pathology of tubercle, the Committee begin by pointing out that not long ago all questions as to the nature, seat, and consequence of this seemed to be set at rest, but that more recently certain inquiries had again opened the floodgates of discussion, insomuch that among the questions now proposed are such as, whether there is in reality any special product characteristic of tubercle, how this is formed, whether it has a definite anatomical site, whether it may not be the product of a peculiar inflammation, especially of the so-called *caseous pneumonia,* and whether or not one can be inoculated with tubercle. Besides these points, it is proposed to investigate the relations of tubercle in different countries, its progress, and how this is affected by food, climate, age, sex, etc.; how in turn it influences the course of other diseases, especially as to their mortality, and also as to the particular way it manifests itself in various parts of the world.

Attention is next invited to the accidents which lead to death after the severer operations, notwithstanding all the improvements which have taken place in Hospital construction, and, in fact, in every department connected with operative procedure. Passing over accidents immediately relating to the operation itself, as well as those causes of death beyond the control of the Surgeon and depending immediately on the disease, attention is specially invited to those fatal affections for which the Surgeon is in nowise responsible (?), and which sometimes present themselves where everything appeared to be proceeding satisfactorily. Such are diffuse cellulitis, gangrene, erysipelas, inflammation of the lymphatics, phlebitis, pyæmia, tetanus, etc. All do not appear to be equally common in all countries; thus, tetanus, so common in the tropics, is but rare here, and general pyæmia, with phlebitis, and metastatic abscess, formerly so frequent, seem to have given place to erysipelas and certain latent forms of pyæmia as the great causes of death. Again, the results of certain operations in France and in England appear to have excited a suspicion, which is still further borne out by the experience of the Crimea, that a difference in constitution may account for this inequality of success; and to this point attention is specially invited, not in its bearing on these countries alone, but as applied to all others.

The propagation of venereal diseases is to be discussed next, and a question is raised as to the exact ratio in the spread of these disorders when prostitution is regulated, tolerated, or clandestine. The document affirms that surveillance alone is insufficient, and the great object of this discussion is to see if any plan can be hit upon which will not interfere too much with the liberty of the subject, and will yet prove rather more efficacious in limiting the spread of the maladies than presently existing restrictions have shown themselves to be, more especially as regards soldiers and sailors.

The influence of food on the production of disease, as seen in different countries, stands next. Drink and insufficient food are not to be taken into consideration; food, proper and improper, is alone to be noticed. The influence of diet, exclusively or predominantly animal or vegetable, on the production of disease and the progress of epidemics constitutes the nucleus of this portion of the proceedings, but regard will also be had to the mode in which food is usually prepared, as salting, smoking, etc. From the class of improper or hurtful articles of diet all poisons are excluded, and attention is to be solely directed to changes, artificial or natural, which render certain substances otherwise wholesome quite the reverse, and to the influence of such in the production of certain diseases whose etiology has not yet been settled—such as pellagra and others.

The attention of the Congress will next be directed to the influence of climate, race, and condition in life on menstruation as regards its beginning and its cessation. Three classes in life are recognised—the easy classes, the workwomen and poor women in towns, and peasants, the opinion now prevalent being that these present notable differences as to the points just mentioned. As to country, not only is it desired that their homes should be mentioned, but also such characters as the colour of the eyes and hair, as well as other anthropological characteristics. The effects of climate upon those of the same race should be particularly attended to, and where it is possible to make observations on two races, the mixed or intermediate one should also be noticed. The following form of table is proposed as a basis:—

Subjects observed.	Age.	Social Condition, Employment.	Age at First Menstruation	Menstruation regular or irregular.	Intervals between Menstrual Periods.	Duration of Flow.	Married or not.	No. of Children and of Miscarriages.	Age at Time of Cessation.

When discussing the acclimatisation of Europeans in warm countries, generalities are sought, rather than special exceptions, and a race is only to be considered acclimatised when it becomes capable of self-maintenance for an indefinite period. Emigrants and colonists must not be confounded, and hence numerical increase is not the true criterion to go by; no mingling of races is recognised, and the soil must be cultivated by the colonists themselves, not by their slaves. Nevertheless, papers relating to the less perfectly acclimatised races will be gladly received, especially when accompanied by full particulars as to Medical geography and meteorology.

Finally, attention is directed to human entozoa and entophytes; but as certain departments of this subject are well known, whilst others are scarcely if at all so, the epiphytes and epizoa are to be excluded from consideration, as are the animal parasites which occasionally appear during the progress of certain diseases. Even among those that are the direct causes of disease, natural historical details are to be preferred to pathological, whilst hygienic measures with regard to Medical police are entirely excluded. Those animals which undergo a variety of transformations are selected as most worthy of attention, and it is considered better to look at these from a point of view which will involve their complete history than to limit all details to that period when they inhabit the human body. The same rule is to be observed with regard to vegetable parasites, and not only in this connexion, but in as far as all the other subjects are concerned, observation and experimentation are expected rather than dogmatic assertions and reassertions.

It will thus be seen that the field for discussion is ample, and, although some may consider that other subjects are as well worthy, if not more so, of investigation, still the sittings of the Congress are limited to a fortnight, and no one can say that the selection as far as it goes is not judicious, seeing that the meeting is to be one of Medical men, not of specialists. We most heartily wish it every success.

MODERN ONCOLOGY.

"Modern oncology!" exclaims our oldest reader. What's that? Who ever heard of it? What can be the use of such new-fangled terms? Let us, then, with such apologies as are due, present to you, Mr. Reader, the newest offshoot of the science of pathology, and you must pardon the name, because the thing exists and must have one. The name oncology boasts a very ancient lineage. Its sire is the Greek descendant of a well-known Aryan root, and, in the form ὄγκος, signifies any lump, burden, weight, or tumour, just as does its less refined Anglo-Saxon relative *hunk* or *hunch*. Its dam is the well-known and prolific λόγος, which is out of the ancient root *leg* or *lay*, and is the very personification of orderly arrangement, and has been mother of scientific terms without end. Now, since men have attained to something like an orderly arrangement—a doctrine, we may say a science, of tumours—ought not that science to have a name, and will any one give us a better one than oncology? Can we Anglo-Saxonise it into *lumpcraft?* or would it be decent to speak of a Hunterian Professor as a *swellencraeftsman?* We think not; but we may venture to speak of him without offence as a profound oncologist.

Oncology is truly a creation of the modern scientific era. The ancients, as may be seen in Galen's treatise περὶ τῶν κατὰ φύσιν ὄγκων, were perfectly well acquainted with the leading varieties of tumours, but assigned the imaginary humours and elements as their essential causes, believing thus that blood accumulated caused phlegmon; bile, erysipelas; black bile, scirrhus; phlegm, œdema, and the like. Moreover, during that ancient period, which extended almost to the end of the 18th century, scirrhus was commonly reckoned amongst the effects of chronic inflammation. Hunter put it into the class of specific diseases, and thought it might possibly arise from a specific poison. Subsequent pathologists, up to the microscopic era, contented themselves of necessity with classifications drawn from naked-eye appearances, and from resemblances to various objects in the animal and vegetable world. Then the words "pancreatic sarcoma," solanoid, milt-like, and nephroid, were applied to tumours from resemblances to sweetbread, potatoes, kidneys, etc., etc. Still, from Laennec to Carswell, the best pathologists of the premicroscopic era worked energetically and usefully, defining anatomical characters and clinical history. About 1836, Müller began to work at the microscopical structure of tumours; Schwann and Schleiden's researches into the cellular origin and constitution of living tissues supplied pathologists with a ready explanation, and the terms blastema and cells were in high honour. Then came Virchow's "Cellular Pathology," affirming the genesis of tissue, healthy or morbid, not from *blastema*, but from pre-existing cells. Last came Dr. Beale's doctrine, in which the existence of living matter—germinal matter—is affirmed as anterior to the cell, of which it is the parent. All these advances in general physiological knowledge tell—although not always very quickly—upon pathology; for, speaking generally, we may say that the pathological doctrines of the schools are an application to tissues under disease of the doctrines which physiologists are just getting rid of in their application to tissues in health.

We propose now to consider very shortly the present position which cancer and other tumours hold in the estimation of oncologists, or, if you prefer ten words to one, of "pathologists who have devoted themselves to the study of tumours;" and, in so doing, to introduce to our readers the two latest works on the subject: Dr. Maurice Henry Collis "On the Diagnosis and Treatment of Cancer and the Tumours analogous to it," and Mr. Thomas Weeden Cooke "On Cancer, its Allies and Counterfeits." We may refer, in passing, also to Mr. Moore's clever *brochure* "On the Antecedents of Cancer." Dr. Broadbent's suggestion for its treatment, which bids fair to be successful, has already been noticed in our columns, and will be so again, as we hope, in the shape of a long list of successful cases.

The points in the pathological position of cancer and other tumours to which we desire briefly to call attention, are shown by the questions—What is the true definition of cancer? Is it "heterologous" or "homologous"? What is the meaning and use of the word "malignant"? Ought one, or more than one, genus of tumour to be included under the term cancer? and what is its true position with regard to other diseases, and especially to those tumours which Mr. Collis speaks of as "analogous," and Mr. Weeden Cooke as "allies and counterfeits"? Other questions remain, such as, Is it at first a local or a constitutional disease? and is it, or is it not, hereditary? These require for their solution a more precise definition of the words "local" and "constitutional."

The first point we would comment upon is the doctrine of *heterology* or *heteromorphism*. This doctrine was originated by the illustrious Laennec, and, amongst late oncologists of authority, has been maintained by that most clear, precise, and logical writer, H. Lebert; and it has received much more support in France than in Germany. According to this, cancer is a disease depending on the production of an accidental tissue altogether foreign to, and alien from, the animal economy, both in minutest details and its totality. "Le cancer," says Lebert, "est une maladie spéciale, différente de toutes les autres." "Le tissu cancéreux est différent de tous les autres tissus tant normaux que pathologiques." "C'est une véritable substitution d'une matière nouvelle aux tissus normaux." Neither is it, according to his view, a tissue composed of embryonic forms of normal or homœomorphous tissue, but a something quite distinct.

Now, this doctrine of heteromorphism was opposed by Müller. "No division of pathological structures into homologues and heterologues," says he, "can be maintained. The most innocent growths do not differ in their minute elements nor in their growth from cancer."(a).

Hughes Bennett, on the other hand, doubts "whether the true cancer cell be ever formed by transformation of a previously existing one," although he admits that existing cells, as in the liver, epithelium, and cartilage, may so assume the characters of cancer cells as to be undistinguishable from them *without a knowledge of their origin.* We cannot allow the name of Hughes Bennett to pass from our pen without bearing testimony to his high rank amongst oncologists, and to the eminent services he has rendered to all students of pathology and clinical Medicine, not only by the matter, but by the mode of elaboration of his various works, and especially that On Cancer and Cancroid Growths. (b) Any one who wishe to "work at" any given subject, may take this book as a model.

(a) On Cancer. By West. London. 1840.
(b) Edinburgh. 1849.

Turn we now to Dr. Collis and Mr. Weeden Cooke, to see what they say on this point—and we must bear in mind that the question is not whether cancer-cells exist in, and are characteristic of, that disease; nobody denies this, nor yet that the fact constitutes a good ground of diagnosis. The question is as to the parentage and relationship of the cancer-cell, and on this point Dr. Collis is clear and precise.

He looks upon the cancer-cell as a "monstrous" deviation from the common lymph-cell In his first chapter he takes the cell of connective tissue, and that cell which is found in plastic lymph, granulations, etc., as types. If there be redundant growth, imperfect development, and irregular grouping of such cells, we may have such tumours as those known by the names fibrinous, fibroid, soft polypi, and true colloid (not cancerous, but that kind of jelly material found in many polyps and other tumours of the sort). But if the cells present a very abnormal degree of size, irregularity, and reproductive energy, then we have tumours of two other groups—the worst, known by the name *cancer*—whilst those in which these abnormal features are less strongly developed are known as *fibro-plastic* and *myeloid*. Dr. Collis gives the formula, that the more nearly the cells of any tumour approach the healthy lymph-cell in form and power of development the more "benign" is the tumour. Any deviation in the direction either of exaggeration and hypertrophy of the cell, or of imperfect power of development into fibre, indicates a tendency to "malignancy"—that is, to the characters of cancer.

Mr. Weeden Cooke, though not insensible to the value of the cancer-cell as a means of diagnosis, gives in his adhesion on the whole to the opinion of Wedl, whose words he quotes from Busk's translation, in the old Sydenham Society's edition, p. 608:—

> "There is but one large family of new formations, the different members of which are associated in many ways, and should be described as constituting so many categories. For these the names commonly in use—as tubercle, cancer, connective tissue, new formation, osteophytes, etc.—should be retained; but the different growths must not be regarded as by nature and essentially different species."

Thus, then, the tendencies of modern oncologists point strongly towards unification; towards considering many at least, if not all, of the multifarious kinds of tumours—though each requiring separate study, and possibly different treatment at the bedside—yet as so many members of one group, all starting from a common *fons et origo*.

In a subsequent paper we shall treat of the other questions, and see how they are viewed by the authors whom we particularly wish to notice.

"SWALLOW, SWALLOW, FLYING, FLYING SOUTH."(a)

WHATEVER may be said about the ingratitude of invalids to their Doctors, no one can fairly charge them with ingratitude towards a climate that has benefited them. If any invalid, especially if a *poitrinaire*, has in any marked degree regained health and strength by a winter residence in any foreign health-resort, he seems to feel an almost irresistible temptation to rush into print and recommend his Paradise to all fellow-sufferers as, *par excellence*, the place to go to. Every year brings us a deluge of books, little or big, scientific (more or less) or chatty, each vaunting some one place as far superior to all others as a winter resort; so that, unless the invalid intent on change will be entirely guided by his Medical attendant, he must be often sorely puzzled to know which among all these Edens to choose. We should rather like to know the average number of books on foreign climates yearly sold. As it has been calculated that at least some eight thousand invalids leave England every year with the swallows, and each probably furnishes himself with at least one of these books, and many, no doubt, with more than one, the total sale must be very handsome, and highly satisfactory to the publishers. Some very curious and instructive information might surely be obtained about the average number of such works each invalid buys, the size and price most in favour, and so on. We commend the subject to the Statistical Society; while for our part we must content ourselves with a brief notice of a few of these books. To many an invalid anxiously desirous to try the effect of a winter abroad, the wisest and kindest counsel would be *Punch*'s celebrated "Advice to Persons about to Marry—Don't." And to a considerable number of those who do yearly leave our shores in search of health, it really does not matter greatly where they go to. The overworked, the used-up, the dyspeptic, do not need any particular climate so much as a thorough change of scene, surroundings, and habits; and so long as they will live sensibly, and make good use of extra sunshine, fine air, and beautiful scenery, they are pretty sure to derive benefit from a winter at any of the health resorts on the coast of the Mediterranean, the places chiefly spoken of in the works of which we have given the titles.

But in the case of sufferers from pulmonary or heart complaints, rheumatism, and some other diseases, while change of climate may afford the best, if not the only, means of gaining a renewal of health and strength, a judicious selection of the climate to be resorted to is of the utmost importance. According to the type and stage of the disease, and the constitution and temperament of the patient, it may make all the difference between success and failure, gain and loss, whether he chooses a rather stimulating, dry, and exciting climate like that of Nice or Cannes, or a more humid, tempered, and sedative one, as that of San Remo or Hyères. Mentone stands between these places, being less exciting than the former, more so than the two latter. Some writers would no doubt altogether deny that the climate of Mentone is at all exciting; but Dr. C. T. Williams, in his excellent "Notes on the Climates of the South of France," lately published in one of our contemporaries, says that the English Physician resident at Hyères informed him that "many patients coming from Mentone and Cannes in a state of nervous excitement and wakefulness, brought on by the stimulating effect of the air, have slept well and soundly at Hyères." That the climate of Nice is rather stimulating, we suppose no one will deny. Invalids often make great complaints of the wakefulness it induces. Dr. Chambers, indeed, in his admirable "Lectures on the Climate of Italy," says that the nervous system, being in a healthier condition in Italy, requires less sleep and renews itself more rapidly, and that, though you do not sleep so much as in England, you do not suffer from the want of it, a short Italian sleep doing as much for you as a long English sleep. People sleep *faster*, in fact, though not so soundly; but this will not apply to invalids, who often suffer severely from want of sleep. Mr. Aspinall, in the little work on San Remo, says:—"There must be something peculiarly soothing and conducive to sleep in the air of San Remo. At Nice, sleeplessness was a very general complaint, and I, amongst others, suffered dreadfully. Here, on the contrary, I rarely pass a sleepless night, and I find that it has the same effect almost universally. No one who has not experienced sleeplessness in all its horrors can fully appreciate this inestimable benefit." Nice retains its reputation as an admirable climate for atonic forms of dyspepsia, for scrofulous disorders, and some gouty and rheumatic diseases, but few would now send patients with pulmonary complaints there, for the breadth of plain between the protecting mountains and the sea, and the gaps in the mountain range, render the place extremely subject to sudden and violent changes of temperature. There are two suburbs of Nice, Carabaçel and Cimier, which are much more perfectly protected, and enjoy a moister and much less exciting climate, but invalids confined to these quiet spots are apt to get dull and hipped, and to long for the more lively and amusing promenades of Nice, a single visit to which may, by a sudden encounter with a piercingly cold wind, destroy all the good previously gained. The climate of Cannes is warm and dry, and decidedly stimulating, though perhaps not so much so as Nice, and it possesses a decided advantage over that place in being better protected from northerly winds and less exposed to sudden changes of temperature.

(a) Winter in the South of Europe; or, Mentone, the Riviera, Corsica, Sicily, and Biarritz, as Winter Climates. By J. H. Bennet, M.D., M. R.C.P.L., Doctor of Medicine of the University of Paris, late Physician Accoucheur to the Royal Free Hospital, etc. Third edition. London: J. Churchill and Sons. 1865.

Nice and its Climate; with appended Remarks on the chief Causes of Pulmonary Consumption and on the Action of Climate in that Disease. By Edwin Lee, M.D., etc. Second edition, with alterations and additions. London: W. J. Adams, Fleet-street. 1865.

The Health Resorts of the South of France: Notices, General and Medical, on Hyères, Cannes, Pau, Biarritz, Arcachon, with Remarks on the chief Causes of Pulmonary Consumption, and on the Influence of Climate in that Disease. By Edwin Lee, M.D. Second edition, with alterations and additions. London: W. J. Adams. 1865.

San Remo as a Winter Residence. By an Invalid. 1862-65. London: J. Churchill and Sons. 1865.

Dr. Bennet is an enthusiastic, but not indiscriminating, admirer of Mentone; he believes "that the time is fast approaching when tens of thousands from the North of Europe will adopt the habits of the swallow, and transform every town and village on the coast into a winter retreat;" and remarks that "the Riviera is the first point where birds of passage from the North make a halt for the winter months." Of all the health-resorts of the Riviera he considers Mentone to be very markedly the most preferable, but as he has spent six successive winters there, and is himself a most happy example of the benefits that may be derived from the place, he has a good right to speak in its praise. His book is a charming work, very pleasantly and well written, and full of information on the climate and situation of Mentone, its geology, physical geography, and meteorology, and on its Medical and social aspects. He treats also of the tides, colour, fishes, and birds of the Mediterranean; and of various other places in Italy, Corsica, and Sicily which he visited in search of health before finally settling down at Mentone. The book is also admirably got up, and is well worth reading by those even who are happily free from any fear of having to exile themselves for health's sake, while for visitors to Mentone or any part of the Riviera it will be a most valuable and agreeable companion. It is indisputable that Mentone is a much safer health-resort than Nice; there is much less space between the sea and the protecting amphitheatre of mountains, and the range of these is much more perfect, so that the place is completely protected from all northerly winds, including that scourge the mistral. Backwards from the town towards, but not through, the mountain range run many most charming valleys, affording a great variety of wandering and excursion ranges. The vegetation is extremely luxuriant, the lemon-tree attaining a degree of perfection unknown in any other part of France, while the olive grows to great size and beauty, giving very pleasant shelter when the sun's rays become too powerful. But some consider the atmosphere too still, and the houses are generally so close to the sea that not a few invalids suffer from its noise and stimulating effects.

Mr. Aspinall's work—"San Remo, by an Invalid"—is a chatty little book, without any pretensions to Medical knowledge. He has passed two whole winters at the place, and, grateful for the benefits derived, strongly recommends it to others. He considers that it "combines in a modified degree the invigorating qualities of Nice with the warmth of Mentone, but without its closeness; and is thus peculiarly adapted for diseases of the chest, especially if the digestive organs are impaired;" that it possesses an unusual freedom from dust and the risk of cold winds, and that "it will ere long be the great winter sanatorium for diseases of the chest." Dr. Edwin Lee's works have each reached a second edition, and are probably already well known to our readers.

Go where he will on this coast, the invalid must never forget that, however warm the day or hot the sunshine, the sheltered places and the nights are cool, if not cold; he must dress as warmly as for an English autumn, avoid being out after sundown, and shun all fatigue. Excellent advice on these points is to be found in more than one of these books.

One word more we will add; that the whole of the Corriere or Riviera is an excellent winter residence for delicate, strumous, or scrofulous children. A winter or two in those warm bright sunny climates will often suffice to build these frail, tender, *souffrantes*, little plants into healthy, life-enjoying, useful men and women, and we should much like to see this happily endowed region more often visited for this purpose.

THE WEEK.

DECLINE OF THE CHOLERA.

Seventy-three deaths from cholera, 28 from diarrhœa, 101 from both forms of disease, were registered in London last week. The deaths from cholera and diarrhœa in the last six weeks were 244, 251, 254, 199, 144, and 101. Of the 73 deaths from cholera, no less than 28 occurred in the two sub-districts of Woolwich Dockyard and Plumstead. The bad hygienic condition of the people is discussed in papers by Dr. Finch, Mr. Ruegg, and Mr. Grant, the assistant-engineer of the Metropolitan Board.

PROFESSOR HAUGHTON'S RESEARCHES.

We have again to draw attention to the valuable investigations of Dr. Haughton into the subject of animal mechanics. This indefatigable worker has been engaged in studying some of the peculiarities of the anatomy of the ostrich, crocodile, and macacus. The results thus obtained formed the subject of certain papers read before the Royal Irish Academy, and have been subsequently published in a separate form. We would commend his example to certain others of our anatomists.

FEVER HOSPITAL FOR THE EAST END OF LONDON.

The advantages of a Cholera Hospital have been well illustrated by what has been done at the temporary Hospital at Spitalfields. This Institution, we can vouch, was most excellent in its arrangements, both for nursing and for Medical treatment. The services of a Physician of high standing were at once secured. Now that the epidemic is nearly over, attention has very properly been drawn, by the Medical Officers of Health of the East-end, to the necessity of doing something to meet the continual emergencies of typhus and other allied diseases, as well as to combat the sudden and desolating outbreaks of Asiatic cholera. If we may say such a thing without fear of being misunderstood, we would remark that cholera has done good service in rousing public attention to the care of patients suffering from the epidemic class of diseases. It is with extreme pleasure we learn that many influential people are taking steps to convert the able organisation of the Cholera Hospital into one for the establishment of a permanent Fever Hospital. A Fever Hospital is more urgently needed for the East-end than for any other part of London. Indeed, it seems strange that such a project has not been thought of before. It has, as we happen to know, long occupied the attention of Medical men; but it requires the stimulus of an outbreak of cholera to compel the public to look into a class of allied diseases which never suddenly alarms the whole people. Cases of acute disease are by far the fittest for Hospitals, but cases of fever and all infectious diseases are excluded by rule from the general Hospital at the East-end—the London Hospital. For all reasons it seems most desirable that this project should be energetically supported. A memorial in favour of the proposal has been addressed to the committee of the Temporary Cholera Hospital by the following Medical Officers of Health :—Robert Barnes, M.D., F.R.C.P., Medical Officer of Health for Shoreditch; John Liddle, Medical Officer of Health for Whitechapel; Thomas Orton, M.D., Medical Officer of Health for Limehouse; Thomas Sarvis, M.D., Medical Officer of Health for Bethnal-green; M. Corner, M.D., Medical Officer of Health for Mile-end; W. P. G. Woodforde, M.D., Medical Officer of Health for Bow; John James Rygate, M.B., Medical Officer of Health for St. George's-in-the-East; Samuel K. Ellison, Medical Officer of Health for Poplar.

THE ARMY MEDICAL DEPARTMENT.—THE MEDICAL OFFICERS OF THE GUARDS.

Our readers are probably aware of the treatment which has been accorded to the Medical officers of the Guards. It is another instance of that breach of faith of which our Profession has so frequently complained. Young Medical men were tempted to enter the Guards as Assistant-Surgeons by a distinct understanding that they were to remain in their regiments, and that the promotion was to be by regimental seniority. They have continued at their labours for year after year in perfect confidence that such promotion would come at last, only to find that a warrant was prepared six years ago, and preserved like a secret weapon until it should suit H.R.H. the Commander-in-Chief to deal a blow which would prove fatal to their Professional hopes and prospects. The Duke of Cambridge has carried his point! The effect of the Parliamentary debate was dexterously allowed to subside by the delay of a few months. In spite of the opinions expressed in the House of Commons, in spite of the remonstrances of the Guards' Medical officers, and the present grievous unpopularity of the whole Army Medical Department, H.R.H. has promoted an Assistant-Surgeon of one regiment of the Guards to be the Battalion-Surgeon of another, over the heads of all his regimental seniors. It is a very pretty piece of official jobbery, and the process adopted has been remarked upon by the *Pall-mall Gazette* as curious. An Assistant-Surgeon is first promoted to the rank of "Staff-Surgeon," and then transferred, with his superior rank, to the Guards by the Director-General.

THE MEDICAL BENEVOLENT FUND.

At a special general meeting of the subscribers to the Medical Benevolent Fund, held on Tuesday, October 30, the following gentlemen were elected trustees :—H. W. Acland, M.D., F.R.S., Regius Professor of Medicine in the University of Oxford; James Paget, Esq., F.R.S.; and Ed. H. Sieveking, M.D., Physician to H.R.H. the Prince of Wales. This Society sustained a severe loss in the lamented death of its treasurer, the late Mr. Toynbee, but, as our readers are already aware, has found a worthy successor to him in Dr. Sieveking. We are always glad of an opportunity of saying a word in support of the Medical Benevolent Fund, for we believe there is hardly any other Society which does so much good in such a quiet unobtrusive way, and at so little cost. The following extract from their "Biennial Appeal" will speak more strongly for them than any words of ours :—

> "There are now thirty annuitants between sixty-seven and eighty-eight years of age, and in most instances in feeble health, who are saved from want in their declining years. In addition to these, in the year 1865, £770 was distributed to eighty-eight cases of distress, some being of the most painful and urgent character, and already, in the first seven months of the year 1866, sixty-five applicants have received relief, amounting in the aggregate to £680. Very few of these could have been reached by any other existing charity, and besides the alleviation of misery it has frequently happened that the grants have been the means of enabling the recipient to regain a self-supporting position."

The applicants have not to endure the annoyance, exposure, delay, and expense of any public canvass; they are put to "no expense beyond such as is necessary to furnish evidence of their need and worth," two or three postage-stamps being generally all the outlay required, and the relief is prompt. We surely need say no more to strongly recommend the Society to the support of all Medical men.

SPIRIT VALUE OF PURCHASED TINCTURES.

In the *Pharmaceutical Journal* for October Dr. Attfield makes an *exposé* which deserves the attention of all who dispense their own medicines. We will give it by way of an extract in his own words :—

> "Of twelve specimens of proof-spirit tinctures recently purchased in different parts of the country and sent to me for examination, not one contained the right proportion of spirit. On being distilled to dryness they all furnished distillates having specific gravities below that of proof spirit. The following table shows the strength of each specimen as indicated by the above process :—

Name of Tincture.	Quantity sold for 4d.	Alcohol in 100 parts.
Tincture of rhubarb . .	1 fl. oz.	41·
" " . .	1 "	36·5
" " . .	2 "	44·5
Laudanum	1¼ "	33·5
"	1¼ "	41·
"	1¼ "	34·
"	2 "	34·
"	—	41·
Paregoric elixir . . .	1½ "	39·
" . . .	1½ "	45·5
" . . .	1½ "	39·
" . . .	2 "	45·5
Proof spirit, B.P.		49·
Rectified spirit, B.P.		84·

> From this table it is evident that only three of the twelve contained an amount of alcohol even approaching that of proof spirit, and even those, instead of 49 per cent., contained but 44½ and two 45½. Five varied from 39 to 41 per cent. The remaining four contained only 36½, two 34 and 33½ respectively."

One maker, we are told, actually seemed to be under the impression that rectified spirit was the same thing as alcohol, and diluted it accordingly.

EXTRACTUM CARNIS.

The *Chemical News* and the *Pharmaceutical Journal* both publish in full an important paper by Messrs. Deane and Brady upon the micro-chemical examination of this substance, which, prepared under various circumstances, has come into extensive use as an analeptic. Eight specimens were examined by the writers of this paper. 1. A cold-water extract made by themselves was prepared by simply macerating carefully selected lean meat, cut very small, in water at 60° Fahr. for twelve hours, and evaporating the liquid obtained at a temperature considerably below boiling-point to the consistence of a soft extract. This was purely an experiment made for the purpose of future reference, and as the amount of extract obtained did not exceed 2 per cent. on the meat employed, it obviously could never answer in a commercial point of view, the cost being nearly 34s. per pound for the flesh only, without any allowance for fuel and labour. The resulting extract is light-coloured, very fragrant, readily soluble, and highly hygroscopic in damp weather. The solution is pale and of a very pure flavour. 2. A hot-water extract was prepared similarly by first macerating the meat in cold water for twelve hours and then transferring the whole to a water-bath heated by steam. The temperature was afterwards gradually raised to 160° Fahr., the fluid strained off while still hot, and evaporated carefully as before. The product is perceptibly different from the former, being somewhat darker in colour and containing a small but sensible proportion of gelatinous matter. The flavour and odour were similarly unexceptionable, and the tendency to absorb moisture nearly as great as in the former sample.

3. A specimen from the Royal Pharmacy at Munich, forwarded by Professor Pettenkofer, was very similar in flavour and odour to their own hot-water extract. 4. A South American extract prepared by Giebert, and sold with the approval of Baron Liebig, was a fair sample, with, however, a larger amount of gelatine and less odour and taste than their own preparations. 5. A first importation from Australia was muddy, inferior in taste and odour to the South American sample, and contained much uncrystallisable extractive. 6. A sample prepared by Messrs. Harvey and Reynolds was very similar to the Munich sample, and leaves little to be desired as a commercial article. 7. A sample from Gillon and Co., of Leith, was fairly satisfactory, although the writers were somewhat disappointed in its microscopical reactions. 8. Gillon's extract of meat lozenges, of course, were found to contain starch, but it is stated by the manufacturers that no more is used than is necessary to facilitate the rolling.

The conclusions which the writers come to are the following:—

> "1stly. That supposing an accurate knowledge to have been previously obtained of the nature of the appearance of a reliable sample, the microscope does afford a ready means of ascertaining proximately the value of ext. carnis, the sensible characters, such as colour, taste, and odour, having been, as a matter of course, considered in the first place and due weight assigned to them. (Drawings of the microscopical appearances are given.) 2ndly. That the value of a sample is in direct relationship to its crystalloids, and inversely to its colloid constituents, and these may be separated by the process of dialysis. In connexion with this we may state that the hygroscopic properties of this extract bear some relation to the amount of crystalloids contained in the samples, as we have found the specimens containing the most gelatinous matter keep their consistence best when freely exposed to the air, but of course the rate of deliquescence depends on the state of the atmosphere. 3rdly. That in a comparative way the proportion of gelatinous constituents may be readily estimated by a solution of tannic acid."

FROM ABROAD.—PROFESSOR STORER ON LADY DOCTORS—THE PARIS FACULTY OF MEDICINE.

Professor Horatio Storer, of the Berkshire Medical College, who has for some years held the post of Physician to the "New England Hospital for Women" (which has been instituted not only for providing a Hospital for women, but also for the "experiment of testing the ability of women to become fitted to practise as general Physicians"), has just resigned. The lady directors, it would seem, in the go-ahead spirit of the movement they have undertaken to direct, interfered with rules with respect to consultations and other matters which were so contrary to those accepted by Medical etiquette, that the Doctor had no alternative but to resign an office which he seems now heartily sorry that he had ever undertaken, contrary to the advice of eminent Professional friends.

> "My position upon this question," he says in his letter of resignation, "has been of perfectly good faith. I have withstood alike entreaties, overtures, threats from those who disapproved of my course; for, on the one hand, I have desired to do what little I could personally towards the real enfranchisement of women, provided this were a means to such an end; and, on the other, I have thought that by elevating the few women who might be better educated than the mass of those of their sex assuming Medical honours and responsibilities and masculine appellations, our Profession might be purged, to a certain extent at least, of many claimants utterly unfitted for its membership. Under these circumstances, I shall probably be allowed, both by those endorsing and those regretting my late position, to have had good opportunities of judging as to these questions. It is sufficient for me to say that, despite exceptional cases—exceptions in every sense of the word—I think that the experiment has been a failure; and that, were there no other reason than a physiological one, perfectly patent, though its importance has been so much lost sight of, women never can, as a class, become so competent, safe, and reliable Medical Practitioners as men, no matter what their zeal or opportunities for pupilage. For certain of the Professional ladies whom I have met I have personally the highest esteem and respect (several are referred to by name, one having acted as assistant to the Doctor in private practice for two years). Such are, however, at the best but very exceptional cases, and I am driven back to my old belief—the same that is entertained by the mass of mankind—that, in claiming this especial work of Medicine, women have mistaken their calling—a belief that, contrary to assumptions that have been made by interested parties, I have found to be generally held by ladies of true refinement and delicacy, and by the majority of female patients, no matter what their station in life."

All the Paris Medical journals represent the Faculty of Medicine as at a very low ebb, and as ill qualified to maintain the celebrity which once attached to the school. The body, in fact, may be said to be for the most part an assemblage of veteran professors, trading—not to speak disrespectfully—upon former well-merited reputations, but certainly not qualified to place Medical science upon its proper footing before the present race of Medical students. In our own country we have seen enough of the obstinate adherence of seniors to posts which they once adorned but no longer fill to the same advantage as heretofore; but in Paris the case is still worse, as there not only the examining but the teaching is in the hands of the Faculty, which holds it as a monopoly. With us, if our students are examined down to the knowledge of a remote period, they are at least taught up to the highest level; and, after they have succeeded in disembarrassing their mind of much that ought never to have been intruded into it, they may take advantage of acquisitions which, as far as examinations were concerned, were superfluities.

However, a crisis has arrived, and resignations in the Faculty, either voluntary or invited, are to be numerous. Already those of MM. Bouillaud, Andral, Cruveilhier, Trousseau, Piorry, Grisolle, Guillot, and Jobert are announced as accepted or imminent, and others will follow. That some of the vacated posts will be filled with difficulty is acknowledged; for, with all the acquisitions of many of the *agrégés*, it is doubtful whether they will be able, when their hopes so long deferred are realised, to maintain, or rather to restore, the former celebrity of the school. Moreover, the mode of nomination or choice is at present involved in complete obscurity. Most of the journals recommend the re-establishment of the *concours* as a panacea, but M. Guérin, himself once an advocate of this institution, now entertains grave doubts as to its efficacy. He says:—

> "The *concours* is not fitted either to render justice or to lead to the discovery of truth in the regions of elevated science; it is a means, rather, for bringing into prominence merits of a secondary order—information, memory, and the talent for exposition; but it excludes all superiority and originality. Employed for nominations to the lower, or even medium grades, it is fitted to render evident that which is still in a latent condition. It may educe good pupils, and even those who may become masters; but it prevents the discovery of the masters themselves, and directly closes the door to their admission. In fact, it has not been sufficiently observed that for a *concours* we must have judges, and the judges furnished by schools are not more disposed to favour the advance of those opposed to them by this channel than by the mode of election. It is a truth of all times that learned bodies entrusted with the recruital of their numbers, no matter by what mode, only summon those who are partisans of their ideas, doctrines, and practice. This truth is disputed only by those who are continually giving proof of its exactitude. It is true, as has been said, that the *concours* may be improved by a better selection of the juries; but it still will be the *concours*, and we maintain that meditative, original, independent intellects will be scarcely disposed to manifest their superiority in this fashion. . . . The preponderance which the Faculty has always accorded to abilities of a second rank has stifled in its germ merit of quite another character."

M. Guérin proposes, as a substitute for the *concours*, that the Minister of the Interior should make choice of a candidate from three presentations made to him—one by the Academy of Sciences, another by the Academy of Medicine, and a third by the entire Medical body of Paris.

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MONOPOLY OF MEDICAL EDUCATION.

(*From a Correspondent.*)

The subject of Medical education has been for some years past forcing itself on public attention, and has at length acquired an importance which demands mature consideration.

The public services—at least the naval and military—have suffered for several years from the difficulty experienced in obtaining Medical officers. On many occasions from forty to sixty vacancies have existed in one or other of these branches of the public service, and it has happened that not only were the candidates insufficient as to number for this purpose, but of those who have presented themselves a very considerable number have been found so deficient in both Medical and general education as to call for their rejection on the part of the military and naval Medical authorities.

This is the more remarkable, as each candidate is required to possess a diploma or licence, or other Medical qualification, from at least one of the Medical licensing bodies of the United Kingdom, and must therefore have passed an examination as to his fitness to become a Medical Practitioner.

It is unnecessary to canvass here the merits or demerits of her Majesty's military and naval Medical service. The latter may be great or greater than they should be; but this is not for present consideration, whilst the broad fact of numerous rejections on the part of her Majesty's Medical authorities stands before us and claims our prior and serious attention.

Nor is this all. The several licensing bodies themselves have found it their duty to reject a large proportion of the candidates who have presented themselves for examination. At a late examination of the London University, out of upwards of seventy candidates, more than thirty were rejected; and similar results, although not to an equal extent, have occurred at other Medical institutions.

It is fair to presume from such facts that the Medical education of the present day is defective, and must at no distant period claim the serious attention of the licensing bodies, and it may be of her Majesty's Government. Indeed, it is somewhat surprising that this matter has not been brought more prominently before the notice of the legislature, when so many subjects of less importance have received every consideration. That some of these rejections may be ascribed to the higher standard of Medical and general education required of candidates of late years cannot be questioned; but it may well be asked, have the means of acquiring education and the mode of administering it kept pace with the additional requirements? To this a negative must unquestionably be given, and we do not hesitate to assert that whilst the standard of education has been raised, the means of attaining Medical instruction at least have been restricted and the mode of imparting it seriously impaired.

It is unnecessary at present, and would complicate the subject perhaps, to consider this question throughout the several Medical establishments and licensing bodies of the United Kingdom, it will be sufficient to apply ourselves to the London Medical schools and the licensing bodies of London, especially of the Royal College of Surgeons.

It is a remarkable fact that within the last twenty years the number of Medical schools in the metropolis has considerably diminished. This diminution has been caused by the direct influence of the Council of the College of Surgeons, London; at the same time, the cost of Medical education has been seriously increased, whilst the means of attaining instruction has not received a corresponding improvement.

From twenty to thirty years since the Medical schools of the metropolis consisted of the private and the Hospital schools. The former were conducted by teachers recognised by the College of Surgeons and other licensing bodies, and were open to all who had the ability and the desire to conduct them; the latter were more directly connected with an adjoining Hospital, and were nearly confined to the Hospital Surgeons and their immediate relatives and friends. The private schools have long since disappeared, and the Hospital schools (now generally designated as Colleges) enjoy a *monopoly of Medical education* unjust to the Profession at large—at least to many deserving members of it—inimical to the diffusion of Medical education, and injurious to the interests and advantage of the public and of her Majesty's public service.

The private schools in the metropolis were then six in number—viz., Webb-street; the Aldersgate; Hunterian, or Windmill-street; Bedford; Sydenham; and St. George's, Grosvenor-place. Most of these had existed for many years, and had, during the Peninsular War, given numerous skilful Surgeons to the public service; with them were associated the names of William and John Hunter, Joshua Brookes, Carpue, King, Grainger Skey, Wilson, Dermott, Pettigrew, etc., all of whom competed honourably and successfully with the rival and more favoured Hospital schools.

Some of the above private teachers received lucrative and honourable appointments on or about the period of the cessation of their schools. On others the influence of the College exerted an injurious effect, and all disappeared as competitors in the honourable, if not lucrative, struggle in which they were engaged, and their more powerful rivals only remain to occupy the field and supply the vacancy thus created.

It may appear strange to some that the closing of the private schools should be ascribed to the influence of the Council of the London College of Surgeons, but a little explanation will render this tolerably apparent.

The private schools as originally constituted and conducted up to about the year 1836, now thirty years since, were distinguished more as schools of anatomy and physiology than as complete schools of Medical instruction; in some, one or more additional branches of education were conducted, but in few of them was a complete system of Medical teaching established. This was not found to be a serious defect, as the minor or less important branches could be studied in other schools.

The private schools had the advantage of being conducted by some of the best anatomists of the day, who devoted themselves almost exclusively to the instruction of their pupils, and whose income was chiefly derived from this source. The pupils passed from the lecture and dissecting room to the private class-room, where they were taught by question and answer the various branches of Medicine necessary to their examination and future pursuits, and were thoroughly grounded in the knowledge of their Profession.

The Council of the College disapproved of this system, and determined that all schools should possess a complete body of teachers, so that all branches of Medicine might be learned in each school.

The policy of this is an open question, which we will not enter on here; but the College added the condition that the lecturer on Surgery should be an Hospital Surgeon. This was fatal to the system of private schools, as no Hospital Surgeon would take up a position as a teacher in a private school which would place him in opposition to the influential Council of the College.

It cannot be stated that this was effected by means of express by-laws or other regulations of the College. These were not necessary. The attitude of hostility taken up by the Council towards the private schools was sufficient to deter men from joining them, and the private schools rapidly disappeared.

As the private schools attracted a considerable number of pupils from the adjoining Hospitals by diligent and successful teaching, and by usually a reduced scale of fees, the suppression of the private schools added to the emoluments of the Hospital school teachers, and, as it unfortunately happens that the same individual may act as Hospital Surgeon, school teacher or lecturer, member of the Council, and as one of the Court of Examiners of the College, this latter body were individually interested in the abolition of the private schools. The writer was himself engaged as a lecturer in a private school at this period, and has no hesitation in ascribing the suppression of that one of the most flourishing and useful in the metropolis, having a class of sixty pupils, to the baneful influence of a late president of the College of Surgeons and a rival lecturer at a neighbouring Hospital school.

This is a most anomalous and objectionable combination of offices in one individual, and should not be permitted to exist.

The suppression of the private schools has led,—1. To an inadequate class of teachers—men who teach, not because they care for teaching, but in the hope that it will *lead to something* better. 2. To an increase in the scale of fees, and consequently has acted injuriously on the Medical education of the classes attending the schools. This we propose to show at another opportunity.

THE METROPOLITAN POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

(*From a Correspondent.*)

If the Metropolitan Poor-law Medical Officers' Association were to enlarge its boundaries, and to admit the Poor-law Medical Officers of the United Kingdom, we can conceive of no Medical Society whose proceedings would be more instructive and useful. They have quite an unworked mine to draw from. They might give the world that great desideratum, an account of the ethnological peculiarities of the population of the three kingdoms, and especially of England. They might describe the habits, the moral character, diet, doings, earnings, and sufferings of the true English population, the descendants of the serfs and *adscripti glebæ*, as well as of the degenerate denizens of cities, in a way that has never yet been done. The various diseases incidental to age, poverty, debility, and intemperance might be depicted from the life. With plenty of real scientific work before them, the interests and mutual co-operation of their body in a political sense might receive the benefit of counsel. But it would be a great mistake at the outset to put too prominently forward the claims of the Poor-law Officers as against society, or to give the Association the aspect of a trades union. We see with pleasure that it repudiates distinctly the idea of antagonism with the Poor-law Board. That Board has always acted as protector and fosterer of Medical interests, so far as was compatible with the law of the land, and with the discretion which the legislature in a free country is obliged to leave to the local authorities. Not by coercion, which in this country could hardly be effected, but by mediation and remonstrance, the Poor-law Board has steadily improved the position of the Medical men; the shifting the burden of providing expensive medicines, as cod-liver oil and quinine, from off their shoulders may be cited as one instance, which, with the gradual improvement which is sure to ensue in the composition of Boards of Guardians themselves, point to the time when Poor-law officers, relieved from the drudgery of apothecaries' work, may be the Hospital Physicians and Surgeons of their localities. It is quite clear that life appointments are the fruit of an exceptional interference with the laws of supply and demand fostered by the Poor-law Board, but not always popular with guardians, who are ready to ask why Medical attendance should be protected more than any other marketable commodity from the conditions of the "annual tenders," and from the competition of neighbouring Practitioners. We cannot help observing, with reference to some of the published sentiments of the Association, that scientific questions ought to be dealt with in a scientific way, and that scientific controversies are none the less ably handled when facts are adduced in support of dicta, when great precision of terms is employed and sneers abstained from, and when a generous estimate is made of the merits of an antagonist. It is curious that in a discussion on the cubic space necessary for Workhouse Infirmaries no facts should be brought forward showing the ill effects of crowding, which are but too well known in Hospitals in the shape of erysipelas, pyæmia, and Hospital gangrene, in various forms and degrees; are these present in Workhouses, or are there other facts to show that 720 cubic feet of space are insufficient per bed? It may be asked again, whether the inmates of Workhouses are similar to those of Hospitals; so that admitting 1250—2500 to be required in Hospitals, is that space necessary in Workhouses? What is the proportion of acute diseases, of fever and erysipelas, or of offensive cases such as ulcers? Is it not the custom to allow double cubic space to such cases? and, if so, can it be shown that Dr. Smith's 720 is too little for cases of debility and slow decay of aged persons, most of them women? It may, lastly, be asked, as an appeal to the quality known as *verecundia*, whether it is quite prudent to indulge in sneers at Dr. Smith, and whether men who have not published one single scientific observation in their lives are quite prudent in measuring themselves against one who must have spent years in the most accurate and painstaking experiment and numerical calculation of results. Dr. Smith's views do not, as the Association alleges, "derive significance from his official position," but from the fact that he is known to have worked laboriously at questions relative to the consumption of oxygen and generation of carbonic, and so to have acquired materials for an independent opinion long before the present disputes were heard of.

It seems the prevalent opinion that the Cubic Space Committee, having regard to the basis of facts, will recommend the minimum of 60 feet floor space—*i.e.*, wards 20 feet wide, with beds each standing in 6 feet of width, and 10 to 12 feet high; total 720, *plus* the space corresponding to doors and fireplaces. We should greatly prefer 80 feet floor space, and 9 to 10 feet in height, for no amount of dilution by height can equal the advantages of gentle renewal of air at the level of the bed.

There is so much to be done for the improvement of Workhouse infirmaries that it is a great pity that time and force should be wasted in mere party discussions. Let us again refer to the vagrants whom the Homeless Poor Act has saddled upon the Workhouses. Here is a nuisance condemned by every one who has practical experience. Can the Poor-law Medical Officers tell us of nothing that will help to get rid of this incubus?

THE "INTRODUCTORIES" AT DUBLIN.

(*From our own Correspondent.*)

Dublin, November 7.

According to annual custom, I shall endeavour to send you a very brief report of the opening addresses at our Medical schools. The first in order of time was that delivered on Thursday, November 1, as introductory to the course of clinical instruction in the Richmond, Whitworth, and Hardwicke Hospitals, by Mr. Hamilton, one of the Surgeons to the first-named institution. Having pointed out the facilities for teaching possessed by the Hospital in its extensive museum and in its collections of drawings and casts, and having dwelt upon observation and judgment as the two qualities most essential to the formation of a first-rate Practitioner, Mr. Hamilton proceeded to speak of the important aids with which the well-directed *invention* of modern times had enriched the Profession, as the laryngoscope, the use of which was so well taught in the Hospital by Mr. Wilson; the endoscope, rendered so efficient by the improvements of Dr. Cruise; Mr. Holt's valuable instrument for the treatment of stricture; Dr. Richardson's refrigerator, etc. He spoke in terms of high commendation of the conduct of the pupils in the Medical Hospitals; of Mr. Carroll, who, in the unremitting discharge of his duty, had contracted fever; and of Messrs. Clarke, Henry, and Fawcett, who had shown such untiring zeal in their attendance on cholera patients that the Physicians and Surgeons intended to bring their eminent services before the Board of Guardians. In conclusion, Mr. Hamilton spoke in feeling terms of the loss sustained in the death of Dr. Hutton, one of the staff of the Hospital.

The Ledwich School of Medicine, Peter-street, was opened on the same day by Mr. O'Leary. Having alluded to the short time which had elapsed since he was himself a student, whereby he was, perhaps, better able than others to enter into the feelings of those who were then just commencing their studies, the lecturer endeavoured to assist the younger portion of his audience in answering the to them important questions —"What is the nature of the Profession of which I seek to become a member? How may I best attain a successful issue?" and "What may be eventually the result to me?" Having spoken upon these points, and upon the importance of an accurate study of anatomy, physiology, etc., as preliminary to the attainment of distinction as Practitioners, Mr. O'Leary said:—

> "Gentlemen, one word more of advice and I have done. In our pursuit after special knowledge we must be careful not to neglect the cultivation of those acquirements which stamp their possessor as the gentleman, and impart dignity to, and command respect for, the character of the Medical Practitioner. You cannot too soon learn to divest yourselves of any undue tendency to levity of manner or of speech, or to cultivate amongst yourselves those feelings of mutual respect and generous and honourable toleration which should ever characterise the intercourse of gentlemen of the Medical Profession. Remember that the time is not far distant when you will be called upon to pass from the irresponsible position of a student to fill another of the highest and gravest responsibility, and that the manner in which you discharge its onerous duties will be closely watched by the eyes of a justly critical and exacting world. School yourselves, then, in time to entire discretion in word and action, in order that, when you come to enter upon your Professional duties and meet the world's gaze, it may not be seen that the honours of your new position sit upon you awkwardly like an ill-fitting garment. Strive ever manfully upward to honourable distinction; that once attained, wealth will assuredly follow. And through all your future career, however you may be situated, bear ever firmly in your memory the grand truths conveyed in those beautiful lines of Longfellow—
>
> 'Lives of great men all remind us
> We can make our lives sublime,
> And, departing, leave behind us
> Footprints on the sands of time.'"

The annual distribution of medals and prizes at Dr. Steevens' Hospital and Medical College took place on Saturday, the 3rd inst., Jonathan Pim, Esq., M.P., presiding. The following is a list of the successful candidates:—

Cusack Medals and Exhibitions.—Senior: Benjamin Lynch, Dublin. Middle: Richard Bookey, Carnew. Junior: Edward A. H. Roe, Belturbet. Midwifery Assistants: Mr. Ambrose H. Kelly and Mr. Christopher R. Sharpe.

Certificates of General Attention and Proficiency at Terminal Examinations.—Bell, Chichester A.; Bookey, Thomas L.; Burke, John G.; Corry, Geo.; Kennifick, John; Lawson, Joseph; Lombard, Daniel; Olden, Dominick; Power, Thomas; Preston, Eyre F.; Swan, Richard; Webb, Patrick R.; and Wood, John.

The course of clinical instruction for the session 1866-67 was opened in the Meath Hospital and County of Dublin Infirmary, on Monday, November 5, in presence of a crowded assemblage, with an able and eloquent lecture by Dr. Wm. Stokes, jun., the Junior Surgeon of the Hospital. This admirable address, which, I may add, was most impressively delivered, I shall send you *in extenso.*

REVIEWS.

A Practical Treatise on Apoplexy (Cerebral Hæmorrhage): its Pathology, Diagnosis, Therapeutics, and Prophylaxis; with an Essay on (so-called) Nervous Apoplexy, on Congestion of the Brain and Serous Effusion. By William Boyd Mushet, M.B. Lond., M.R.C.P., Physician to the North London Hospital for Consumption, etc. London: John Churchill and Sons. 1866. Pp. 194.

It is the privilege of the reviewer to find fault even when, on the whole, he commends, and is justified in his commendation. And so we are going to find fault with Dr. Mushet, not on account of that which he has written, but on account of the difficulty some persons are likely to meet with in reading his book, due to the readiness with which he has permitted his thoughts to run away with him, and obscure the distinctness of the arrangement which he had evidently laid down for his guidance. Whatever it may be to a book-maker who is crammed full of his subject, and cannot fail, on opening the sluices, to send forth a volume calculated to instruct the world, it is everything to a book-reader that he shall be able readily to find in what is given him that which he desires to discover. In the next edition we would advise Dr. Mushet either to render the order of his discussion more obvious or to append an index. The book is an excellent one, shows much thought and careful study of previous writers, and we are only anxious that it should be made as useful as it is capable of being made to the class of persons who are accustomed to have their food cut up small for them, as the only means to prevent their bolting it, and incurring the subsequent penalty of indigestion.

Dr. Mushet narrows the definition of apoplexy to "a more or less sudden impairment of the functions of the brain and nervous system—of consciousness, motion, and sensation—from extravasation of blood into the substance, or upon or between the membranes, of the brain, arising from internal causes." This definition, with which we are disposed to be satisfied, excludes a number of quasi-apoplectic conditions, and restricts the term apoplexy to spontaneous hæmorrhage into the brain. The greater part of the treatise is occupied by the consideration of the pathology of the disease thus limited, and the relation which it bears to other organic disturbances. The author quotes largely from writers of all periods since morbid anatomy has been pursued as a guide to pathological knowledge, partly with the object of proving the truth of the views which he maintains, and partly to show how easily a man may be led astray, by imperfect or incomplete observation, into inferences at once one-sided and erroneous. With the latter object, no one is free from his criticism on account of a great name or high reputation as a pathologist. Morgagni, Portal, Cheyne, Bright, Andral, Abercrombie, and, lastly, the various contributors to the *Transactions* of the Pathological Society, all come, one after another, under the lash, in most cases deservedly—looking at the matter in the light of modern methods of investigation—but, in all these instances, in order to give point to a truth which cannot be too often repeated, that in a pathological investigation no examination can be too precise, too extended, or too inclusive, when an inference as to the sequence or relations of morbid conditions to one another has to be drawn.

It is needless for us to follow Dr. Mushet through the mazes of his argument as to the relation of heart disease, vascular degeneration, kidney disease, and blood disorder to sanguineous apoplexy. We shall content ourselves with giving publicity to his final remarks upon this subject. He says:—

> "It is interesting to meditate on the point of departure of the morbid changes presented in individuals dying of sanguineous apoplexy. It cannot be rebutted that the waning activities and inclination to inferiorly organised structures in aged and impaired constitutions are sufficient to explain the vascular changes in the arteries of the brain. It is a legitimate analogical deduction that simultaneous actions and alterations ordinarily ensue in the aged throughout the system, by which a due, but reduced, equilibrium is observed. Non-occurrence or inharmonious adjustment of these kindred changes, we can readily surmise, especially in atheromatous subjects, may lead to cardiac disturbance and resulting hypertrophy.
>
> "At any rate, it must be acknowledged that the cerebral vessels degenerate more or less late in life (a constant (?) factor), but do not dispose to apoplexy unless there be (an inconstant factor) co-existent deviation in the central circulating organ.

"Doubtless obstructive cardiac disease in certain cases may pursue its ordinary course and, if the patient survives, terminate in apoplexy when the period or circumstances accrue which engender the requisite co-efficient in the vessels of the encephalon. In many cases, from constitutional depravation, the blood primarily becomes deteriorated more or less gradually, causing paratrophy of the arterial coats and of the general system. The heart, *pari passu*, undergoes hypertrophy (or rather enlargement and thickening, for its muscular substance equally suffers) from the impediment offered to the transit of impoverished or otherwise altered blood through the coincidently impaired capillaries ; or from mal-nutrition the ventricular wall may be unable to resist the retrograde effect of the opposition exerted in the minute vessels, on account of the diminution in the circulating forces, and experience passive dilatation.

"It were unphilosophical to attribute cardiac changes to a simply increased vascular action, in exclusion of local or peripheric obstacles, and the fact that they are mostly remarked in persons not actively employed countenances a systemic cause of production. In the so-called simple hypertrophy of the left ventricle, where there is no disease at the cardiac orifices, it is clear that gradual retardation of the blood in the capillaries from impairment of nutrition or constant presence of toxic materials in the circulation—as alcohol or urea—may give rise to enlargement or dilatation of the organ. Such obstruction long continued entails and finds its acme in atheromatous degeneration. In other instances there is probability that the kidney alone is the original starting-point, from the effects of an impression interfering with its depurating function, by which the blood secondarily becomes disordered, leading to progressive alterations in the walls of the heart and synchronous degeneration in the arteries."—P. 91.

Dr. Mushet is of opinion that—

"It is the combination of the two pathological states (morbid alterations in the heart *plus* atheroma or other degeneration of the arteries) that constitutes the proclivity which, under such circumstances, is indubitably great, more especially with hypertrophy of the left ventricle. In apoplectics the changes in the heart and capillaries react upon each other. All are aware that in the accomplishment of the circulation, although the chief power emanates from the heart, or *vis a tergo*, much energy is developed by the *vis inhærens* of the capillaries. In health the capillary forces of the brain are in a great degree independent of the action of the heart, and tend to accommodate the current to, and rectify any disturbance or irregularity propagated from, the circulatory centre ; but when impaired by disease of the vascular coats, they are subject to local perversion and arrest, and proportionately interfere with, and are interfered with by, any abnormity in the propelling power of the heart and in the ratio of capacity of the cardiac chambers." —P. 85.

As a matter of course, Dr. Mushet discusses the question of venesection in apoplexy, concluding, as most men would conclude now-a-days, that "the value of bleeding in the treatment of apoplexy has not yet been accurately computed, or its mode or extent of effects unquestionably demonstrated." He does not throw the old remedy over altogether, however ; for there are cases in which, whatever good it may do or fail to do, he thinks it is justifiable. The great argument against its adoption is that there are certain cases in which it necessarily tends to kill and not to cure ; that there are others in which, whether it be adopted or not, the patient will most assuredly die; and there are others in which, if left alone and gently managed, the probability is that without venesection he will recover. In the first case it would be wrong to bleed, in the second it would be useless to bleed, and in the third it is very doubtful if bleeding would expedite recovery—it may have done so sometimes, but the proof is wanting.

There is a "Second Part" to the book, in which Dr. Mushet treats upon the so-called nervous apoplexy, and on congestion of the brain and serous effusion. This is a reprint from the *Brit. and For. Med. Chir. Review*. The only portion of this we shall allude to is that in which what has been called "serous apoplexy" is considered. We commend the remarks of the author upon this subject to the serious consideration of a class of men who are only too ready to take refuge in this term as a cloak for their idleness when called upon to make post-mortem inquiries for the coroner. Nothing is more easy than to say that a person has died of serous apoplexy, when it is known that he has died comatose, and a quantity of serum is found effused within the cranium or ventricles of the brain. It saves so much trouble in examining the heart, kidneys, and other abdominal and thoracic organs to ascertain what the serous exudation means.

We shall simply say, in conclusion, that Dr. Mushet's book is well worth reading, and that it will repay a careful study.

Contributions to Practical Surgery. By W. H. Van Buren, M.D., Professor of Anatomy in the University of New York ; formerly Surgeon to the New York Hospital, etc., etc. Philadelphia : J. B. Lippincott and Co. 1865.

The cases detailed in this little volume embrace some of the most interesting and important in the whole range of practical Surgery. The remarks made upon them, and the way in which they were treated, convey many proofs of the readiness with which the American Surgeons recognise and test new methods of treatment which have been found to be improvements by Practitioners in this country, and the keenness of their sense of competition with their kinsmen and fellow-labourers in the good work on this side the Atlantic. The contents commence with three cases of *amputation at the hip-joint* by a *modified process*. Of these, the first was done for an osteo-cartilaginous tumour of the thigh bone commencing at the knee. Amputation in the middle of the thigh was followed by reappearance of the disease in the upper part of the bone. Amputation at the hip-joint was then performed with ultimate success. Two years afterwards, however, the disease appeared in the bones of the pelvis, and proved fatal by pressure upon the bladder and rectum and subsequent peritonitis. In the opinion of Dr. Van Buren, the disease was not of a malignant nature, although the severity of the pain on each occasion of the recurrence of the disease and its invasion of other bones than the one affected primarily, seems to favour the view that it was one of those tumours which lie close to the somewhat indistinct and certainly untraceable line which separates *benignity* from *malignancy*. The two other cases were *compound fractures of the femur*, with extensive laceration of soft parts, from railway accidents, and terminated as these cases always do—fatally. It may be surmised that in one at least of the cases an amputation just below the trochanters might have improved the patient's chances of recovery. The *modified process* of performing the amputation consists in cutting the posterior flap of the antero-posterior operation by directing the knife *from* the skin *towards* the joint before disarticulation, and using a smaller knife to perform the last-mentioned part of the operation. Of this it may be said that, in the hands of an experienced and dexterous Surgeon, no such delay or difficulty in disarticulating with the long amputating knife as that mentioned by Mr. Van Buren usually occurs.

Of the three cases of tracheotomy recorded, one (completely successful) occurred in a child, in whom two foreign bodies, a plum stem and a water-melon seed, were confined loose in the trachea. A peculiar whistling sound, heard both in inspiration and expiration, was the most notable and characteristic symptom. In the operation some delay and hæmorrhage occurred in avoiding the inferior thyroid plexus of veins, and it was necessary to divide the thyroid isthmus entirely. This would probably have been avoided by preferring the upper and more simple operation either of laryngotomy or incision into the three upper rings of the trachea, just below the cricoid cartilage, and above the thyroid body. Of the two other cases, one was for syphilitic disease and necrosis of the larynx, relieved from immediate suffocation, but finally terminating in exhaustion and death ; and the other was for croup, terminating, as is usually found to be the case in this country, in death.

Of two cases of *inguinal aneurism*, the first was a traumatic aneurism of the common femoral from a jam between a wheel and a post, in which the external iliac was tied, after an unsuccessful effort to cure by continuous digital compression. The case was successful. The cause of the failure by compression appears to have been the intolerance of pain on the part of the patient, which does not seem to have been met by changing the site of the pressure, or by intermitting its use during the thirty-six hours through which it was kept up. The author refers the chief difficulty to the spasmodic action of the lower part of the deep or abdominal muscles, causing the artery to slip from beneath the pressure of the fingers, and to the swelling of the parts under the point of pressure. In a similar case, probably, the local employment of the anæsthetic ether spray would tend to overcome these difficulties. The second case was an arterio-venous aneurism caused by a pistol-ball in the groin, under the care of Dr. Mott. The wound healed, and the ball was removed by incision through the skin just below the pubes. A pulsating tumour afterwards formed, which was afterwards found to be caused by a communication between the femoral artery and vein, with the peculiar formation of a second and larger aneurismal sac opposite to the one in the place of communication. This was supposed to have been caused by the injury inflicted on the front wall of the artery by the passage of the ball across it. A ligature was placed by Dr. Mott upon the external iliac artery; the limb sphacelated, and the patient died. The author attributes the fatal result to the deterioration of the condition of the artery, and the impairment of all the vascular tissues of the limb from the circulation of the admixture of the venous blood from the vein. The author adjoins a table of twenty-four of such cases of traumatic aneurism, all but one in the extremities, in which the Hunterian operation of ligature of the artery above was adopted. In two cases in the arm, and one in the leg, amputation was resorted to, in one for a return of the disease, and in two for mortification. In only one out of the twenty-four cases was the patient cured by the operation, and in this the nature of the disease was doubted. In four, ligature close above and below the opening in the artery was afterwards adopted with a successful result. All the rest terminated in the death of the patient. The author comes to the conclusion long ago universally arrived at by authorities in this country, that for these cases the Hunterian operation is not adapted, but that the artery should be tied close above and below the abnormal opening.

For a case of *malignant hæmorrhagic polypus of the nose*, the somewhat unusual and unpromising method of tying the common carotid artery was tried by the author, with the result of accelerating the death of the patient (two hours after the operation). In this case the nature of the tumour was recognised before the operation, by examination (microscopic and otherwise) of a protruding portion. The slowness of its growth and its excessive vascularity suggested the hope of a favourable influence from ligature of the main artery. The uterus was found to be also cancerous, and there were obsolete tubercles in the lungs, concluded by the author to be antagonistic evidence to the supposed incompatibility of tubercle and cancer.

The next case is one of successful *removal* of a solid *fibrous tumour* from the virgin ovary by a long abdominal incision. The omentum was extensively adherent, and required three ligatures, which were cut off close and returned into the peritoneal cavity. Five arteries were tied separately and successively in the pedicle, which was long. The ends of the latter ligatures were left hanging out of the wound. After some smart symptoms of peritonitis, the patient made a good recovery. The author adds his testimony to the impression general in this country, that chloroform during the operation, and opium or morphia judiciously used after it, contribute greatly to a successful result.

In the section on *Diseases of the Rectum*, the author speaks highly of forcible dilatation with the thumbs to paralyse the sphincter temporarily, in cases of fissure or irritable ulcer of the anus, as first proposed by Recamier, of Paris, and recommended by Sedillot and Nelaton. He considers that this operates in the same way as division of the fibres of the sphincter ani, in affording the ulcer an interval of freedom from the irritating effects of its constant contraction. He mentions, in conclusion, that he can find no allusion to this beneficial practice in any of the English works on diseases of the rectum. This charge will not, certainly, apply to the later British works on this subject.

Out of eight cases of *vesical calculus* detailed by the author, six were subjected to the lateral operation of lithotomy. Two of these were phosphatic stones formed by incrustation upon a foreign body introduced into the urethra by the patient; one a piece of slate pencil, and the other a husk of straw. Two were performed after the failure of lithotrity, caused, in one, by irritability of the bladder, and, in the other, by cystitis. One was in a child of three years old, in whom the stone was so small as to weigh only nine grains, giving rise to a suspicion that it might have been easily removed by one of the small lithotrites or scoops now in common use among us. In one case, in an adult, the patient was much reduced by a smart attack of hæmorrhage from the bulb of the urethra, kept up, as the author believes, by the vomiting which followed the use of chloroform. In one case only was lithotrity employed with success. In the remaining case, remarkable for occurring in a female child of the tender age of eighteen months, the stone, which was very small, was removed by dilatation of the urethra.

An ordinary case of *popliteal aneurism* was successfully treated by compression of the superficial femoral by means of Dupuytren's instrument, the success being owing, as is usual in these cases, to vigilant care and attention in managing the instrument. The efficient attention of the House-Surgeon, Dr. John Moore, in this matter is handsomely acknowledged by the author, who hereby offers an example well worthy of imitation to Surgeons who ignore efficient assistance in their operations.

Under the head of *Dislocations of the Femur*, three cases are given—one of displacement into the *obturator foramen*, and two stated to be that form of dislocation into the *sciatic notch* which is believed by many Surgeons to be the least common variety of the four principal forms of dislocation. The first, or thyroid dislocation, was reduced by direct manipulation and pressure upon the head of the bone, upwards and outwards, under the full anæsthetic effect of chloroform. One of the latter was reduced by Reid's method—of flexion, external rotation, and then extension. In the last case, this was found to be unavailing, and recourse was had to the pulleys, with a successful result at the second trial made with the patient placed upon the sound side, instead of being laid flat on his back, as at first. With regard to this last point of the position of the patient during the application of the pulleys in dislocation of the hip-joint upward and backward, it may be remarked that the action of this apparatus, as usually applied in the London Hospitals, is invariably to turn the patient over considerably towards the *opposite side*, and it is difficult to understand how the full effect of the apparatus, applied laterally, can be obtained until that position has been attained; and, moreover, one cannot see why the direction to place the patient, in the first place, flat on his back should be retained in most of the Surgical works treating upon this subject. The last of the author's cases was complicated with a fracture of the bones of the opposite leg and foot, and was characterised by *eversion*, instead of *inversion*, of the toes of the dislocated limb, with about an inch of shortening. The eversion is explained by the author as due to extensive laceration of the anterior fibres of gluteus medius and minimus and obturator externus! But, inasmuch as the last-named muscle is itself a powerful *evertor* of the toes, that part of the explanation will scarcely be considered satisfactory by the anatomist. In this section of his work, the author makes the sensible observation that the full effect of the anæsthetic agent is more necessary, in order to obtain complete muscular relaxation, than in almost any other Surgical operation.

The author gives seven cases of *operation for strangulated hernia of the tunica vaginalis*, of which five recovered and two died. He objects to the term "congenital" as applied to these cases by Haller, on the ground that, in all the cases given, the rupture first made its appearance some time after birth. But here our author seems to have overlooked the fact that non-obliteration of the *canal of Nuck* is essentially a fœtal shortcoming, and that in almost all these cases a portion of bowel passing down before, during, or soon after birth, is one cause of the want of closure, and may very well be—nay, commonly is—unobserved by nurses and parents, unless it attracts attention by its size. The author, further, is inclined to consider that in all such cases the stricture is situated in the serous membrane of the neck of the sac itself, and that therefore the sac should always be opened in the operation. It must, however, be conceded that in case a moderate application of taxis pressure upon the sac after division of the tissues stretched across its neck is effective in returning the contents, the cautious Surgeon would not be inclined to open the sac, nor to acquiesce in the proposition adopted by the author, that this should be done as a matter of course, and without the trial of such taxis pressure in cases recognised to be of this nature. Nor do we see that the case operated on by Mr. Luke, and quoted from the *Medical Times and Gazette*, vol. ix., p. 102, as proof of the above position, really bears upon the point, since the symptoms were effectually relieved and the rupture returned by the first operation without opening the sac; and it was only when the rupture had redescended and become again strangulated under different conditions, and nearly six weeks after the first operation, that it was found necessary to open it.

In four of the cases an unusual quantity of fluid was present in the tunica vaginalis forming the sac of the rupture. This we believe to be very common in this kind of rupture, from the pressure of the hernia causing congestion of the vessels of the cord and epididymis and effusion of the nature of a hydrocele.

The hour-glass contraction often observable in these cases as well as in hydrocele—first pointed out by Mr. Wood ("On Rupture")—is attributed by the author to an effort made by Nature to obliterate the canal just above the testes. In our opinion it may with more propriety be regarded as an indication of the division between the scrotum proper, characterised by the presence of the dartos fibres, and the adipose tissues constituting the covering of the cord above, inasmuch as the constriction is formed by a comparatively superficial band of condensed areolar tissue in that site rather than by a contraction of the serous tissue of the sac itself.

In the following case of *ligature of the subclavian artery* for a traumatic aneurism, resulting from a wound of the brachial or one of its larger branches, the author departed, with a successful result, from the conclusion he had before come to in reference to the inadvisability of the Hunterian operation in such cases. This is stated to have been on the ground of the great effusion of blood and inflammatory changes near the site of the wound, rendering the attempt to search for the wounded artery a hopeless one. The patient ultimately recovered after somewhat extensive gangrene and several attacks of erysipelas in the arm.

With respect to the reasons assigned by the author for his choice of the site of the ligature, it cannot be doubted that they are valid ones. Circumstances, varying as they do with each individual case, must be held to justify the Surgeon in departing from ordinary rules in many of these difficult cases. In no other art is the necessity more paramount for giving elasticity to rules than in that of Surgery, and in none, consequently, do the personal qualities of the operator, in respect to tact and judgment, stand forth more prominently or more critically, to free him from the tyranny of statistics.

The author appends to the case statistics of ligature of the subclavian artery in 101 cases. Of these, in 86 the ligature was applied outside the scalene muscles—53 being successful and 33 fatal. In 8 the ligature was placed inside the scalene, and *all* proved fatal. Three were ligatured between the scaleni, of which 2 were successful and 1 died; and in 4 the ligature was applied below the clavicle, in the first part of the axillary, with the result of 3 successful cases and 1 death. Of the whole 101 operations, 42·5 per cent. were fatal. Of the 86 operations in the site of the third part of the artery, 38 were for true aneurism—25 were cured, 13 died; 12 were for traumatic aneurism—9 recovered and 3 died; 14 for wounded axillary—of these half died; 5 were distal operations, of which 3 died. In 8 cases out of 86 (or 9·4 per cent.) gangrene followed the ligature of the subclavian artery, and 6 out of the 8 died. In 149 cases of ligature of the *external iliac* artery, 15 per cent. were followed by gangrene, making, as the author points out, the danger of gangrene nearly twice as great in the leg as in the arm, whereas in the latter hæmorrhage holds the first place in point of danger. This accords entirely with the conclusion which might be drawn from the greater vascularity and vitality of the superior extremity, and with the more favourable results of amputation and injuries in that situation. In the above 101 cases 21 belonged to American Surgeons, of which 6 were fatal, giving, as the author characteristically points out, a mortality lower than the average of European Surgery. For his fellow-citizen of New York, Dr. Wright Post, he also claims the first successful operation upon the subclavian in 1817; and for Rodgers the first operation ever performed on the primary portion of the left subclavian.

This interesting volume concludes with the details of a case of *salivary fistula of the parotid duct* after gunshot wound, cured by an ingenious plastic operation, after the method proposed by Velpeau in 1823, but not practised by him. The use of silver wire seems to have conduced to success in this case. The book is well got up, and the style of the type makes its perusal easy.

Harveian Society of London.—Thirty-sixth Session, 1866-7, W. Tyler Smith, M.D., President. The following arrangements have been made for the first half of the Session:—November 15, Debate on Cholera. December 6, Dr. Broadbent, "On Cases illustrating Prognosis in Heart Disease." December 20, Dr. Drysdale, "On the Natural History of Syphilis." January 3, Anniversary, President's Address, and election of officers. The chair will be taken each evening at 8 o'clock precisely.

PROVINCIAL CORRESPONDENCE.

IRELAND.

Dublin cannot boast of immunity from the class of diseases which of late years appear, if one may be allowed the expression, a growing institution in most large cities, for diarrhœa, diphtheria, and even cholera are but too often found among the causes of death in what has not inaptly been termed our great town system. It is, therefore, a matter of much importance that an approximation to correct information as to the rise, progress, and decline of such diseases, as well as of fever, should be obtained through the returns of the Registrar-General.

To obtain absolute perfection in these returns is, of course, out of the question from various causes. We will here allude, however, to the difficulty experienced in the early working of the registration from local causes, as prejudice or want of knowledge, and we must also allow for sickness occurring among the registrars themselves or their families, etc., in periods of severe epidemics.

As to position, Dublin is favourably situated for salubrity, standing for the most part on land sufficiently elevated to allow of drainage by gravitation. It lies well open to the west, and having the sea as its eastern boundary to a considerable extent. Its latitude is 53° 20′ north and longitude 6° 17′ west.

Though the neighbourhood of Dublin abounds to the south in highly picturesque mountain scenery, the distance to the mountains is so considerable—about six miles—that no obstruction to the free play of the winds occurs, and in this way, too, Dublin escapes the extreme moisture and great liability to frequent rains characteristic of mountainous regions. The subsoil of the higher parts of the city and environs is chiefly calp limestone; at Kingstown and in some other of the environs granite forms the subsoil. The lower portions of the city—those to the east and south-east, as well as parts of the suburbs in the same directions—stand on reclaimed land. It is in those localities that the general level is less favourable for thorough drainage by gravitation, being in places below high-water mark. There is no doubt that low-lying land is more favourable to the development of cholera, as of other forms of epidemic disease of miasmatic origin. It has been observed, however, in Dublin, as in India and elsewhere, that elevation of site cannot be reckoned upon as procuring immunity from the disease where other conditions favouring its development concur. Moreover, relative lowness of site as regards neighbouring bodies of water, streams polluted with sewage, canals, depots of decomposing matter, as well as closeness and want of free ventilation caused by adjoining large buildings, walls, etc., tend much to predispose to the disease and to favour its diffusion when once it finds access to localities so circumstanced. Our experience at the present time corroborates our previous experience on these points.

Were it our purpose to treat just now of all the predisposing agents engaged in the spread and development of the cholera, we would also speak of overcrowding and several other sanitary defects in the social state of the bulk of our people. We shall, however, have to notice these at a future period, and we now proceed to a review of the progress of the disease on the occasion of its present visitation.

In the week ending August 4 this year only three deaths were registered as arising from diarrhœa, although in the corresponding week of last year 13 deaths from this disease were registered. But on the 27th of July in the present (1866) year a girl aged 15 years died of cholera at 22, City-quay; in the same house a girl aged three years died of cholera on the 31st.

The city Medical officers at this time drew "the attention of the authorities to the great neglect of sanitary arrangements" in many parts of the city; the state of the scavenging depots in the city, which were complained of by the inhabitants, many of whom had in recollection the local outbreak of cholera close to one of the depots in 1853, and the general prevalence of fever in such localities. Diarrhœa, sometimes accompanied with vomiting, was noted as prevalent during the week, and in one suburb (Donnybrook) it was observed that scarlatina was on the increase; in one case this disease was of a malignant type. Twelve children perished by convulsions—a very serious indication of deficient sanitary matters.

In the week ending 11th August five deaths occurred from cholera, four of the persons being aged between 20 and 40, and the other being aged between 40 and 60 years. In the Registrar's report we find that "the sanitary sergeant had summoned some twenty parties before the magistrates for various nuisances," but the summonses were all dismissed. The Registrar observes with much justice—"Surely at such a time the law should compel the landlords of tenement-houses to rectify these matters."

At this time cases of scarlatina occurred at Ringsend, and of diarrhœa about Donnybrook and Ballsbridge. In the week ending August 18, 13 cases of cholera ended fatally, and 7 from diarrhœa.

In the District No. 2, South City, where 7 deaths from cholera occurred, the Registrar observes—"The houses 43, Cook-street, and 2, Upper Bridge-street (in which some of these deaths occurred), were in an extremely filthy condition; the smell from the privy and the deficient drainage of the latter house was of a most abominable description. Matters have been somewhat remedied during the last few days."

Fifteen deaths arose from cholera and 10 from diarrhœa in the week ending August 25; 10 children died from convulsions in the same period. On referring to a copy of the Registrar-General's Report for London for 1855, week ending August 25, it is stated that 29 fatal cases of convulsions occurred in the week preceding. The disproportion between the fatality from this disease, making allowance for the relative population, demonstrates a very low sanitary state in Dublin as to dwelling-places, food, etc. The proportion in cases of fatal fever was also greatly in favour of London. No less than 22 deaths were recorded in the week ending April 21, 1866, from convulsions, whereas but five occurred from this cause in the corresponding week of 1865. "The weekly average," observes the Medical Registrar, "number of deaths from convulsions in 1865 was 10." In the weeks ending September 1, 8, and 15, the deaths from cholera were 41, 52, and 55 respectively. The Deputy-Registrar, No. 3, North City District, states on September 15 "that public attention should be directed to the filthy condition of the houses in Greek-street; within one week some 8 or 10 people have died of Asiatic cholera, and at present it is the most sickly neighbourhood in our widely extended district. The number of deaths rose in the following week to 65, and those from diarrhœa to 14, some of the latter presenting choleraic symptoms; fever caused 6 deaths, and convulsions 12. The week ending September 29 the total deaths were 268; in the corresponding week of last year the deaths were 154. Of the former number 98 were from cholera. Of these 29 were of persons between 20 and 40 years of age. Diarrhœa caused 10 deaths, fever 17, convulsions 15, scarlatina 5, and diphtheria 2. At this time cholera became prevalent in Kingstown and Donnybrook, and tended to decrease in the city of Dublin. In the week following the decrease in the city was still more remarkable, there being but 49 deaths in Dublin itself, but in Kingstown the number was 19, and in the Donnybrook district 11. This state, however, did not continue, for in the week ending October 13 the fatal cases had again increased, the total deaths by cholera being 98 in Dublin and suburbs and those by diarrhœa 13, and in each of the two last weeks 118 deaths from cholera have been recorded. Of these, in the week ending October 20, 21 took place in the Donnybrook district and 27 in Kingstown, 64 being registered within the city bounds.

We are now drawing to the close of the fourteenth week of the epidemic here, and without diminution either in its numbers, or, as it appears, of its severity as regards individual cases. In some instances, too, the classes of society who are in better circumstances have suffered from the disease.

In no case, however, so far as our inquiries extend, has the disease arisen without some of the recognised causes having been in operation; and we make this observation after extended inquiries, and after having had personal experience in a very large number of instances.

One thing appears to have saved Dublin from a still greater loss of life from this dread disorder—namely, a tolerably abundant supply of fairly average drinking water. And it is to a deficiency in this respect that we would attribute the proportionally greater fatality from cholera in some of the suburbs.

As your readers are, however, already aware, we have in operation among many of our working classes numerous other causes which greatly tend to increase and foster illness. It is with satisfaction, however, that we are enabled to add that some measures are being taken by those in authority to provide additional district Medical officers, and to remove still existing nuisances, and inquiry is being made as to means for increasing our Hospital accommodation, and for the housing of the relatives of those in cholera. Thus, we trust with the aid of Divine Providence shortly to be able to state that our city is in a far more favourable condition. We must not close this communication without adding that large collections have been made by several charitable persons for the relief of those who have lost their parents, or those to whom they naturally looked for support.

We were anxious to have sent a summary of the speeches of the Rev. Drs. Haughton and Salmon, on the occasion of thanking the Medical scholars of Trinity College for their exertions during the present epidemic.

GENERAL CORRESPONDENCE.

THE TREATMENT OF CANCER BY INJECTION OF ACETIC ACID.

Letter from Dr. W. H. Broadbent.

[To the Editor of the Medical Times and Gazette.]

Sir,—I find that in the current number of your journal priority is claimed for Sir James Simpson in the employment of various substances by way of injection with a view to induce absorption or atrophy of malignant and other tumours. So far as I am concerned, this claim is clearly established. Sir James had evidently conceived the idea, and endeavoured to carry it out, long before my attention was directed to the subject. I may be permitted to add, however, that up to within a few days of the reading of my paper before the British Medical Association I was not aware that injection had been practised at all in cancer, though I confess I should have been astonished if it had not. So far as I know, again, I was the first to employ acetic acid in this manner, but any merit which may pertain to me lies, as you, Sir, pointed out, rather in the fact that I was guided by theoretical considerations which seem to be sound, as they have been confirmed in a remarkable way by results. The priority I should desire to claim would be that of having laid down the principles on which a successful treatment of cancer may be founded. This, I venture to hope, I have done—very imperfectly, it is true—in my pamphlet; and the amount of evidence already adduced will perhaps justify a fuller discussion of them.

It may be taken as demonstrated by the cancerous gland exhibited by Mr. Moore at the Pathological Society, that acetic acid injected into a malignant tumour may produce on the cancer structure *in situ* effects similar to those witnessed in cancer and other cells on the microscopic slide.

The case published by Mr. Moore in the *Medical Times and Gazette* of October 27 may further be taken as demonstrating at least the possibility of absorption of the tumour thus disintegrated—a result of which a single case of my own had merely raised a strong presumption, but of which I now have promise in more than one additional instance. It is satisfactory to have reached this point, and we may hope for a repetition of these results with greater confidence, inasmuch as the conditions of their production approach those of an experiment in the laboratory; the acid is carried directly to the malignant textures, and has on them a certain chemical action from which the further consequences flow.

The points to be ascertained now are how this result may be obtained in the greatest number of cases, by what method it is to be sought in the various phases and stages of cancer, and what will be the ultimate effect. It was not my wish or intention again to write on this subject, except as a contributor of facts, until I had from experience some definite suggestions to offer as to the mode of procedure, and some definite evidence as to the value of the treatment. I think I have, however, reasons for departing from this resolution, since I hear of cases in which the course pursued is not such as I should suppose best adapted to secure the desired end, and anticipations are entertained which are inconsistent with the mode of action of the acid. In the absence of experience, which will require much time, the best guide will be a thorough apprehension of the principles on which we are acting; and a full discussion of these, which would have been premature until corroborated by experiment, may now be of service. Their application to various cases will be comparatively easy.

The chief points which constitute the adaptation of acetic acid for employment by injection against cancer are already sufficiently understood—its action on cells, and its non-coagulation of albumen. These relate mostly to its solvent effects on the tumour itself; the grounds on which absorption of the disintegrated products may be hoped for have not been so fully shown.

These will probably be best exemplified by a comparison between the action of acetic acid and that of caustics. These last owe their destructive effects on the tissues of the body to powerful chemical affinity with their constituents, with which, however, they do not combine as such, but which they change chemically, oxidising, dehydrating, or otherwise decomposing them. It is no longer albumen or gelatin which exists, but some derivative. This alone probably would prevent absorption, but the coagulation of albumen, which in most caustics is associated with the chemical change, seems to be an absolute bar to this process.

Again, affecting the constituents of the tissues chemically, they are indiscriminating in their effects, and though undoubtedly a malignant tumour yields more readily and perishes first, the surrounding parts are so far damaged that suppuration is provoked.

The basis of the action of acetic acid is, of course, chemical affinity, but this is not so powerful as to decompose the tissues, if indeed the tendency is in this direction at all. A piece of white fibrous tissue treated with dilute acetic acid swells up, becomes gelatinous, and loses entirely its fibrillated appearance; but by careful neutralisation it may be restored to nearly its original character and tenacity. Accordingly, when a little acid escapes into the connective tissue, there is smarting at the moment, and probably some inflammation afterwards. We may suppose that the white fibrous tissue has been partially gelatinised, but it is quickly restored by the alkaline blood to its normal condition. Cells thus treated are more seriously affected, the visible evidence of this being the clearing of the cell wall and contents, the change in the nucleus, and ultimately solution. This would seem to indicate a disturbance of those conditions on which the vital activity of the cell depends, and ceasing to grow and multiply, and failing to undergo development, they must undergo disintegration, even if not directly dissolved by the acid. The products of this process are so little different from ordinary plasma, and surrounding parts are so little affected, that absorption takes place.

The conclusions to be drawn from these considerations are, first, not to attempt too much at once. If a tumour of large size could be broken down by a large amount of acid introduced at one or many points, the amount of *débris* might be too large for absorption, and so much acid might pass into surrounding tissues as to excite inflammation, going on to suppuration.

Next, which is even more important, not to repeat the injections too soon. Absorption of such matters as result from the disintegration of a tumour is a slow process. On this point, too, we have the light of experience. In Mr. Moore's case the injection was made on September 5, and it is only on October 1 that the cancerous nodules are found to have disappeared. In the case of secondary cancer of axillary glands recorded in my pamphlet, the injection was made on June 26, and never repeated, and the improvement has been slow but continuous ever since. The disease is not rapid, and we have ample time given us to oppose its advances. The rule to be laid down is at any rate to do no harm—least of all by precipitancy.

When the skin is involved, or when the tumour is of large size and rapid growth, my experience does not lead me to expect absorption. We may, however, cause it to be destroyed and discharged. It may or may not be found desirable to resort to this process largely, but there are certain special cases in which it seems to be the only treatment available. With destruction as the object, the indications become entirely different. The injection should be most thorough, and the acid strong, so that the entire disease may be removed at once. When the skin is broken, our best opportunity is gone; the acid escapes, and, not remaining in contact with the morbid structure sufficiently long, fails of its due effect.

Another question to which it seems to me necessary to refer in connexion with this treatment is the liability to recurrence. As the action of acetic acid is in no way specific, no specific results are to be expected—that is, no such results as are not clearly explicable and referable to the mode of operation of the remedy.

It is possible, perhaps probable, that there will be less liability to local return of the disease after removal of a tumour by acetic acid than by the knife, as the acid, being more or less diffused in the surrounding tissues, may reach germs which would have escaped the knife; and there is the more reason to hope that such will be the case from the excellent results which have followed the application of a solution of chloride of zinc after cutting operations as recommended by Mr. De Morgan. If, however, there are germs implanted in the vicinity of a tumour to which the acid does not penetrate, or if the local conditions which led to the development of the first manifestation of the disease still exist and are not modified by the action of the acid, a new tumour will appear. Local recurrence, therefore, must be expected in a certain proportion of cases, especially when of old standing; but as it will probably be detected early and at once dealt with, no fear need be entertained. So, again, if germs have been already disseminated, the removal of the original tumour will not prevent their development, but there is no danger that germs will be dislodged during the treatment, and set free to work mischief elsewhere.

We touch here upon a point where great divergence of views as to the ultimate results of treatment will exist, according as the doctrine of the constitutional or local origin of cancer is held. I personally look upon cancer as primarily a local error of nutrition, in which not the blood, but the part, is at fault. It may be said to be constitutional, just as almost every disease is, in a sense, constitutional; that is, there is a reason why, under similar circumstances, one person has it and another has not; but I do not believe in any condition to which the term "diathesis" is applicable, except such as is created by the existence of a tumour as a centre of dissemination. Facts, however, and not opinions, are what are required at the present moment; the value of the treatment must be determined by experiment, not by discussion, and I have, therefore, refrained hitherto from even a reference to this subject, and now forbear to enter upon it. But whatever opinions may be entertained on the point of doctrine, the practical conclusion at which Surgeons seem to have arrived is, that a cancerous tumour is more dangerous as a centre of dissemination and as threatening suffering and death than useful as an organ of elimination, or as protecting other parts by concentration of the morbid tendency in itself, and that consequently its removal is, as a rule, desirable. A more safe and easy method of effecting this than the usual operation, without increased liability to recurrence, it is hoped is found in the injection of acetic acid. This alone would be no small gain, even if the disease is to be considered as constitutional. Cases would come under observation earlier, there would be no hesitation in interfering, as now very frequently happens, and the disease would not be allowed to gain head. But it has already, also, been found of great use in cases which either from their situation or character were considered absolutely irremediable. The treatment is as yet in its infancy, and new developments of it will no doubt be made. It is probable that just as some of the salts of nitric, hydrochloric, or sulphuric acid are found useful as caustics, the destructive properties of the acid being limited, and the action modified by the base, so the acetates may find a place in the treatment of cancer—the peracetate of iron, for example. So, again, the chemical homologues of acetic acid may be found to have advantages over acetic acid itself. But at present the work lying immediately in our path is to ascertain what acetic acid will and will not do, and how to turn its effects on malignant structures to the best account. Failures are, of course, to be looked for; it is not to be expected that cancer, from being the one incurable disease, is to become by any treatment the one always curable.

As to the extension of this method of treatment, or modifications of it, to simple tumours, which naturally suggests itself, I do not think it promises well theoretically, and one has not the same strong inducement to try it.

There is one important class of cases, however, to which I should greatly wish to see some similar treatment applied—ovarian cysts. It is scarcely probable that I should, within any reasonable time, have the opportunity of making the experiment under the circumstances which a due regard to the safety of the patient would demand, or I should not content myself with suggestion. It may be thought that a dominant idea has overpowered my common sense, but it seems to me that the same considerations apply as in the case of cancer. The filling of an ovarian cyst is not the result of mere osmosis, but must be due to the activity of cells on its inner surface, while the extension and strengthening of the walls follows, on the principle crudely expressed in the old physiological maxim, "*ubi stimulus ibi fluxus.*" To modify the structure and nutrition of these cells would, if it could be thoroughly effected, put an end to the growth of the cyst. This has been attempted by the injection of iodine, which, though not successful, has shown us that even strongly irritant fluids may be injected with impunity. I should not, as has been done in the case of iodine, empty the sac, but withdraw only a small amount of the contents—little more than would be replaced by the fluid to be injected, which would be, in the first instance, a small quantity of dilute acetic acid. No apparent effects, good or bad, following, I should repeat the injection in a week or ten days, testing the fluid withdrawn. When the contents of the cyst had become decidedly acid, I think it probable that the structure and vitality of the cells lining it would be affected and their growth arrested—a result which I should expect to be followed by resorption of the fluid and shrinking of the walls.

In conclusion, I beg to thank you for the impetus you have given to the investigation of this method of treatment.

I am, &c.

Upper Seymour-street, Nov. 6. W. H. Broadbent.

USE OF THE CATHETER AFTER OPERATING ON VESICO-VAGINAL FISTULA.

Letter from Mr. Spencer Wells.

[To the Editor of the Medical Times and Gazette.]

Sir,—I have just received a "Treatise on Vesico-vaginal Fistula," by Dr. Schuppert, of New Orleans, published this year, in which the author narrates seventeen cases very creditable to him, and also gives what he calls "a critical review of the history of the operation of vesico-vaginal fistula in France, Germany, England, and America." In this "critical review" Dr. Schuppert alludes to some observations of mine which proved that the use of the catheter is sometimes injurious in the after-treatment, and may often be dispensed with, partly or entirely. He says: "Dr. Wells thinks that the use of the catheter is a most troublesome part of the after-treatment, and believes that it might be dispensed with. He looks upon the catheter as a dangerous instrument, citing a case which occurred in Brussels, where the patient died of peritonitis, the point of the catheter having caused ulceration of the bladder. The remarks of Dr. Wells are too prejudiced and partial to deserve a serious consideration."

The last sentence amused me very much, and, thinking "when Dr. Schuppert has had a little more experience he will perhaps agree with me," I turned to his last case, the seventeenth, and found that he closed a fistula, 20 millimetres by 5, by five interrupted silver-wire sutures, and it was "cured in one operation, *dispensing with after-treatment.*" In his own words, the patient "submitted to the operation only upon the condition that I would not confine her to bed, as she had to attend to the wants of her household. I told her that I would not vouch for the result; but she insisting upon it, I acceded to her request. The fistula was closed by five interrupted silver-wire sutures; *no catheter was applied;* no water injections made, she attending to her work as usual. I visited her every day. She passed urine frequently, but none came away but by the natural outlet. Four days afterwards, when I removed the sutures, the fistula was obliterated, and has remained so."

This case of Dr. Schuppert's is so conclusive a reply to his "critical review" of my observations on the use of the catheter, that any further remarks from me are quite unnecessary.

I am, &c. T. Spencer Wells.

3, Upper Grosvenor-street, Nov. 3.

CHANGE OF TYPE IN DISEASE.

Letter from Dr. Markham.

[To the Editor of the Medical Times and Gazette.

Sir,—Will you permit me to say, in answer to Dr. Symonds' letter addressed to me in your Journal, that if I do not attempt a reply, it is because I feel the subject to be one incapable of definite solution? Men naturally argue it from different points of view,—some obey the voice of authority; others have a full confidence in their own experience as a guide in the matter; and others, again, try to get at the bottom of it by arguing from what they believe to be the reason of the thing; and the result naturally is discordance in opinion. Authorities, and especially in Medicine, may err, and men's experience may mislead them, and reasoning on general facts and principles may bring the reasoner into fallacy. It is impossible, therefore, to expect any united opinion on such a subject. Assuredly I cannot hope by any words of mine to turn Dr. Symonds from what I believe to be the error of his ways regarding change of type. Dr. Symonds rests his opinion mainly on authority, and for this reason expresses surprise that I have taken no notice of Dr. Stokes' address on the subject. But he will find in the Preface to my little volume on "Change of Type" an answer to his objection. I there said: "Professor Stokes, in his eloquent address delivered before the British Medical Association at Leamington, did me the honour to refer in flattering terms to these lectures; but he did not test the truth of the theory by trying the worth of the reasonings which I had employed to show its fallacy. Professor Stokes was contented, as others have been before him, to rest his faith in the theory mainly on the basis of authoritative Medical opinion."

Now I argued that this is not a question which authority can settle, and therefore took up other grounds as a basis of argument, and grounds which seem to me to make reasonable the conclusion that change of type in disease is an error. I cannot take up the argument as based upon authority. I am sure if I were to attempt to follow Dr. Symonds' argument I should only be wearying your readers by a repetition of what I have already written on the subject. When Dr. Symonds asserts that his own experience leads him to believe that men do not bear bleeding now as well as they did formerly, I can only reply that so far as my small experience of bleeding goes at the present day, and so far as my memory serves me of the free bleedings of 25 years ago, I find people bear loss of blood now just as well as they did then. At all events, this much Dr. Symonds will, I am sure, admit—that when Medical men assert, as we often hear them, that people won't bear loss of blood now-a-days, they speak rather from imagination or the fulness of their belief than from any actual knowledge of the fact. Can those who make the assertion produce the clinical facts on which it is founded? Let me note on this score a striking example of the way in which hypothetical statements may be accepted or converted into facts. Dr. Symonds, in his letter, says:—"I am sorry I cannot at this moment recall the name of a gentleman who stated in one of the journals, not long ago, that the inhabitants of a rural district known to him had abandoned their ancient custom of undergoing a periodical bleeding because of the newly-depressing effect of that time-honoured prophylactic measure." The statement was made in the *Medical Times and Gazette* of August 4, 1866, by Dr. F. J. Brown, and I ventured at the time to ask him for a proof of it. His reply will be found in the *Medical Times and Gazette* of August 25. He candidly admitted that no man's *ipse dixit* must be taken in a case of this kind, and therefore "counsels that a painstaking Physician should visit the country districts about Rochester, and obtain the testimony of aged peasants on the subject of annual blood-letting in times past, and of the reason of the desuetude of this practice." Dr. Symonds will see from this that in this particular case, which he almost uses as an illustration, the facts upon which the statement was based are yet to be obtained.

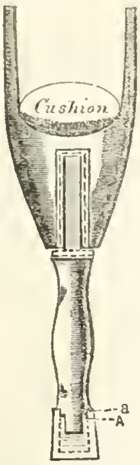
Dr. Symonds in his letter discusses only one argument which I have used—viz., that patients after accidents, etc., lose without injury large quantities of blood. This, he says, "is the only one fact in your essay which seems to me to discredit the opinion held so firmly by a large body of men who have witnessed, as they think, that altered phase of disease which you hold to be imaginary." Dr. Symonds answers this argument by saying that patients who suffer loss of blood under the knife or from hæmorrhoids, etc., are in a very different status of body from those who suffer venesection in fever or phlegmasia. But Dr. Symonds forgets that I instanced the case of phlegmasia, such as when patients suffering from lung diseases, acute tubercular disease, etc., sustain large loss of blood, and at times apparently to their very great benefit, and without any signs of incapacity to bear the loss. Beyond this one point Dr. Symonds' letter is mainly occupied with a very interesting discussion of the effects of venesection in disease, but into this I dare not venture to follow him. I feel much flattered that so highly an accomplished member of our Profession should have done me the honour of considering my essay worthy of his examination; but I fear, notwithstanding his criticisms, that I must still remain unconvinced of what he deems my error.

I am, &c. W. O. Markham.

IMPROVED FORM OF WOODEN LEG.

[To the Editor of the Medical Times and Gazette.]

Sir,—I have made some alterations in the structure of wooden legs which I think may prove beneficial to those who are compelled to wear them. The spike, or upper part of the peg, which fits into the "bucket" part of the leg, is covered with a thin layer of india-rubber (shown by the dotted lines in the sketch), so that the shock may be broken from the knee downwards; the shock is also further broken by a rubber ring, acting as a buffer, at the bottom of the spike. The wood at the bottom of the peg is cut away, so as to form two shoulders. A sort of cup of india-rubber (represented in the sketch by dotted lines) fits on to the bottom of the peg as far as the first shoulder A, to which it is nailed, the bottom of the cup forming the elastic sole. Outside the india-rubber cup is an outer covering of leather, nailed to the second shoulder, B; the outer sole is of leather, as a sole made of india-rubber alone is liable to slip, especially on a damp pavement, and is neither sufficiently strong nor firm to be serviceable.



The advantages gained by these alterations are that the unpleasant stumping noise is done away with, as well as the disagreeable jarring sensation felt by the person wearing the leg, and at the same time you get the advantage of an elastic spring, although the leg always preserves the same length, whether on or off the ground. The alterations above mentioned may be observed in the accompanying sketch, the dotted lines representing those parts of the peg that are covered by india-rubber. These pegs may be obtained at Mr. Spratt's, 2, Brook-street, Hanover-square, or Mr. Matthews', 8, Portugal-street.

I am, &c.
A. C. S.

6, Richmond-terrace, Whitehall, S. W., Nov. 1.

OBITUARY.

G. Y. HUNTER, ESQ.

(From the *Thanet Guardian*, November 3.)

It is this week our painful duty to record the death of George Yeates Hunter, Esq., the revered Mayor of Margate—an event which took place, after a severe illness, at his residence in Upper Marine-terrace, at a quarter to nine yesterday morning, and which has caused the most sincere grief among the burgesses and ratepayers, by whom the deceased gentleman was held in the highest esteem. He was in the 72nd year of his age. He took a prominent part in all local events during the last half-century, and was identified with all public movements which had for their object the advancement of the town and borough and the benefit and amelioration of his neighbours, especially those belonging to the working and lower classes. In the year 1857, he was unanimously elected to discharge the duties of chief magistrate, a position he filled with credit to himself and to the satisfaction of the burgesses until November, 1859. He was again re-elected to the same honourable position in November, 1865, and thus died in his year of office. Of his conduct as a chairman of committees, as the president over that Corporation's deliberations, as a magistrate, and as a gentleman, we cannot speak too highly. He was the theme of praise in all communities—whether Church or Dissent, Liberal or Conservative, rich or poor—all recognised to some extent his valuable services to the borough; and at no period, more than during the last year, has he been more highly prized, or his talents been more appreciated. He was a man of the times, and was ever ready to turn his attention to, and advise on, all subjects which might be uppermost in the public mind, and most greatly requiring his mature judgment. One of the most lasting monuments to his exertions is exhibited in the high-water landing-pier, the first pile of which he drove on May 3, 1853. To him are also traceable the many improvements which have been accomplished in connexion with the pier. He also took an active part in the construction of the newly-erected Seaman's Observatory, the foundation-stone of which was laid by his daughter; the erection of the Trinity Church and Schools also received his cordial support and assistance; and he laid the first stone of the Royal Crescent. He was a liberal in politics, and took great interest in the Reform agitation in 1832. He was the son of Dr. Robert Hunter, of this town, whose practice he succeeded to in the year 1815, and carried on with great success till the period of his decease. As a Medical man, he attained great popularity, and on matters connected with his Profession he was considered no mean authority. He was a Fellow of the Royal College of Surgeons, a Justice of the Peace for the Borough and the Cinque Ports, a visiting Surgeon (indeed, one of the first) to the Royal Sea-bathing Infirmary for many years, and at the time of his death a consulting Surgeon; for many years a parish Doctor, in which capacity he won from the poor golden opinions as a kind-hearted, persevering gentleman—one who was ever ready to minister to their wants, and alleviate their sufferings. In July, 1849, the firm of Hunter and Thornton was established, and he remained connected with it to the time of his death, increasing daily in the confidence of his patients and the respect of his partner, with whom he never had the slightest misunderstanding. In his younger days he was an excellent botanist, and possessed considerable knowledge of natural history. He was a trustee of the Alexandra Philanthropic Home and the Philanthropic Society, in both of which he took a lively interest. He did not, however, take part in the ceremony of laying the foundation-stone of the almshouses connected with the former charity—a circumstance which caused him deep regret, and which was occasioned by serious indisposition. He has left a widow (who was the daughter of Wm. Cobb, Esq., of this town), three sons, and two daughters, to lament his demise. Two of his sons are Medical Practitioners, the remaining one being an officer in the army, serving in the West Indies. His daughters married to Medical men, and, owing to the interest they have taken in movements calculated to benefit their late neighbours, they share the respect and sympathy of the town at large. The flags belonging to the few vessels in the harbour were hoisted half-mast high, and other exhibitions of regret at the loss the town has sustained were evinced.

PRESENTATION OF A MEMORIAL TO SIR THOMAS WATSON, BART., M.D., BY THE FELLOWS OF THE COLLEGE OF PHYSICIANS.

On the 7th instant, in accordance with a resolution passed at a meeting of Fellows of the College on the 29th ultimo, a deputation, consisting of Dr. Alderson, Dr. Burrows, Dr. Tweedie, Dr. Sibson, Dr. Jackson, Dr. Buchanan, and Dr. Markham, waited upon Sir Thomas Watson, at the College of Physicians, to present him with a memorial, signed by 189 Fellows of the College.

Dr. Alderson, in presenting the memorial, said: It is a great satisfaction, Mr. President, to us whom you see around you to have been nominated, at a large meeting of the Fellows, to present to you a memorial requesting you to sit to some celebrated artist for your portrait; the picture to be placed within the College by the side of those of the other distinguished men whose portraits now grace our walls. The memorial bears the signature of nearly every Fellow of the College; and may be considered an heirloom document, to be transmitted to your family as an evidence of the warm feeling of respect and attachment entertained for you by all the Fellows of the College.

Dr. Pitman then read the memorial, as follows:—

"We, the undersigned Fellows, request you will do us the favour to sit for a portrait to be placed within the College walls, as the expression of our regard and esteem, of our high appreciation of your character and learning, and of our grateful sense of the many services you have rendered to our College."

Sir Thomas Watson replied that it would be difficult, if not impossible, for him to express in adequate terms his feelings of gratitude at a memorial thus presented to him by so large a body of men whom he deeply esteemed. More than forty years had he been connected with the College, and five years as its President; and the culminating compliment, the highest which could be paid to him, was the request he had now received from the Fellows. "It is always a matter of pride," said Sir Thomas, "to receive marks of esteem from those whom we esteem—from gentlemen of social position; but especially is it so from members of our own Profession. I hope the deputation will let the Fellows at large know that I consider this mark of their esteem as the greatest honour which could be paid to me. Fame and good repute are oft-times fleeting, and may be soon forgotten; and few are the men of our Profession who carry their names to posterity in connexion with literary labours. So changing ever is Medicine, that neither style nor matter can avail to keep our memory alive; but to be associated thus with the College by our effigies is to be assured of a kind of earthly immortality, of which I may well be proud—and especially proud when the honour is received from the hands of such a distinguished deputation. It is the greatest honour which could be paid to me in my old age. I beg the deputation will themselves receive, and communicate to the Fellows at large, my warmest thanks." In making these remarks the worthy President spoke with marked emotion.

Dr. Burrows then said: Sir Thomas, Dr. Alderson having so completely and appropriately expressed the feelings of the meeting of the Fellows who have deputed us to present their memorial, I have now to call your attention to another resolution passed at the meeting of Fellows. It is the wish of the Fellows to pay you every additional compliment on this occasion, and they express a hope that you will select the artist whom you would prefer to paint your portrait. We feel it is very important that some artist should be selected who would not only give us a good picture, but that it should be one who is familiar with your features and well acquainted with you, and who would transmit to posterity a faithful representation of one who has filled the presidential chair with so much dignity, ability, and urbanity.

In answer to the resolution conveying this request, the President replied that, however much he felt this additional proof of the confidence reposed in him by the Fellows, he should gladly be excused from making the choice. Such choice, indeed, would be difficult and perplexing to him. Far better that the selection should be made by the Fellows themselves. He begged that the Fellows would allow him to forego the request contained in this resolution.

In consequence of the wish of the President not to name an artist, another meeting of the Fellows will be called for the purpose.

BOOKS RECEIVED.

Notes et Réflexions sur les Phlegmasies de la Matrice. Thèse pour le Doctorat en Médecine, présentée et soutenue à la Faculté de Médecine de Paris, par Alexandre Boggs, Docteur en Médecine, etc. Paris: A. Pariset. Pp. 184.

. Dr. Boggs, who is a Member and Licentiate in Midwifery of the Royal College of Surgeons of England, and was formerly Surgeon in the Anglo-Indian Army, after some preliminary observations, proceeds to discuss the different uterine inflammations, adopting as his model Professor Bouillaud's treatise on the heart. Thus, he takes perimetritis, metritis, and endometritis as starting-points, and discusses their varieties. Syphilitic metritis, which has hitherto attracted but little notice, he treats of at length. Dr. Boggs has had considerable experience in the treatment of uterine disease in India, and gives some excellent hints on the modifying effects of climate on disease. At page 45, he becomes almost pathetic on ladies' dress—"*Dans cette affaire, le mari n'a aucune autorité. La crinoline peut-elle être nuisible à la santé? Certainement!*" The author enters minutely into etiology and treatment.

The Journal of Anatomy and Physiology. Conducted by G. M Humphry, M.D., F.R S., Professor of Anatomy in the University of Cambridge; Wm. Turner, M.B, F.R.S.E., Senior Demonstrator of Anatomy in the University of Edinburgh; Alfred Newton, M A., F.L.S., Professor of Zoology and Comparative Anatomy in the University of Cambridge; E. Percival Wright, M.D., F.L.S, Professor of Zoology in the University of Dublin; and (as Editor) J. W. Clark, M.A., Fellow of Trinity College, Cambridge, and Superintendent of the University Museums of Zoology and Comparative Anatomy. No. 1. November, 1866. Macmillan and Co., London and Cambridge. Pp. 188.

. We gladly welcome this addition to periodical Medical literature: a strictly scientific journal was a desideratum. If editors can do anything, the names mentioned above are a guarantee of the kind of matter we may expect. Two articles on the Anatomy of the Eye, one by Huxley on Human Crania, two on Muscles, two by Turner on Gestation in *Arius* and on the Buccal Nerve, along with several others, will give some idea of the nature of original articles contained in this number. For ourselves we wish it every success.

Temperature in Acute Disease. By Thomas Armetriding Compton, M.D., etc. London: John Churchill and Sons. Pp. 22. Diagrams.

. A thesis republished, intended to show that in *all* cases of acute disease the temperature is above its normal range, that the thermometer is a valuable aid to diagnosis, and that a continued high temperature is always suspicious. Illustrated by diagrams. A valuable addition to the literature of this subject.

The Tropical Resident at Home. Letters addressed to Europeans returning from India and the Colonies on Subjects connected with their Health and general Welfare. By E. J. Waring, M.D., etc. London: John Churchill and Sons. 1866. Pp. 242.

. A very elegant volume, containing valuable hints on a variety of subjects, such as the return home, occupation at home, residence, climate, lodgings, clothing by day and night, food, drink, baths of a general Medical nature, and the income required at home. Will doubtless be a favourite among the class it is intended to suit.

Unsittlichkeit und Unmässigkeit. Von Dr. Eduard Reich.
Immorality and Drunkenness. By Dr. E. Reich. Neuwied and Leipsic: Heuser. Pp. 254.

. Another appeal addressed to the German public to put away from among them these vices, showing also the consequences which follow their practice, the opinions being strengthened by the citation of writers of all countries and ages.

Diseases of Women. By Bernutz and Goupil. Translated and edited for the New Sydenham Society by Alfred Meadows, M.D. Lond. 1866. Vol. 1. Pp. 276.

. The first volume issued by the Society for this year. A good translation of a well-known French clinical work. Abridged, chiefly in such cases as are from English sources. A very useful addition to the Practitioner's library.

On Gout and Rheumatism. By Dr. Barclay, St. George's Hospital. London: John Churchill and Sons. Pp. 214.

. A strong reaction against the chemical theory now so popular. Gout dependent on a change of blood-corpuscles. Uric acid deposits a symptom, not the cause. Colchicum the great remedy, though alkalies good. Well worth consideration.

Transactions of the Pathological Society of London. Vol. XVII. 1866. Pp. 482.

. One of the largest volumes, if not itself the largest, yet published by this active body, certainly not less valuable than its predecessors, largely illustrated by beautiful engravings, many of them coloured.

A Handy-book of Ophthalmic Surgery for the Use of Practitioners. By John Z. Laurence, F.R.C.S., M.B., etc., and Robert C. Moon, House-Surgeon of the Ophthalmic Hospital. London: Hardwicke. 1866. Pp. 160.

. This volume is intended to supply the wants of the busy Practitioner, and, as it is founded on the actual experience of an Ophthalmic Hospital, is sure to be valuable. All students of Ophthalmic Surgery would do well to have this book by them, and the student of natural science would find much to interest him in its pages.

Notes on the Prison Dietaries in Scotland. By J. B. Thomson, L.R.C.S.E., Resident Surgeon to the General Prison for Scotland. Part I. Pp. 11.

. An interesting pamphlet, which does not describe prison diet as so very luxurious after all.

Sisterhoods in Asylums. By W. A. F. Browne, F.R.C.S.E., etc., Commissioner in Lunacy, Scotland. London: Adlard. 1866. Pp. 25.

. This, though a pamphlet, is a learned one, and advocates sisterhoods in the Church of England. Not "mere worsted work relieved by religious ceremonies, but real Christian work, which will do great and varied good, while it will give idle hands occupation."

Additional Varieties in Human Myology. By John Wood, F.R.C.S., Demonstrator of Anatomy in King's College, London. From the Proceedings of the Royal Society, June 15, 1865. Pp. 14.

. An interesting description of muscular slips, which men, not having the fear of Quain and Sharpey before their eyes, called "aberrations."

Reports to the Lord Provost and Magistrates on the Cattle Plague. By Dr. Smart.

. With valuable coloured plates.

Lecture Notes for Chemical Students. By Dr. E. Frankland. London: John Van Voorst. Pp. 422.

. Written in accordance with the new notation; likely to save the student much troublesome work in the shape of note-taking.

Ganot's Physics. By Atkinson. London: H. Baillière. Pp. 800.

. One of the best and most useful books on the subject.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen passed their Primary Examinations in Anatomy and Physiology, at a meeting of the Court of Examiners, on November 6, and when eligible will be admitted to the Pass Examination:—

Henry Prescott Roberts, Samuel Burton, and Alexander Richardson Haughey, of the Edinburgh School; John Badcock Harris and Thomas Vincent de Denne, of St. Thomas's Hospital; Joseph William Plaxton and William Waudby, of Hull; Tullius Wm. Ward Fay, of Liverpool; Robert George Fendick, of Bristol; Charles Henry Stanley Stevens, of St George's Hospital; James Peter Byrne, of Dublin; George May, of King's College; Alexander Dyce Davidson, of Aberdeen; Samuel Jackson, of Guy's; Frederick Augustus Alfred Smith, of the London Hospital; John Hickman Hiron, of Birmingham; and Joseph Foster, of University College.

It is stated that only five candidates out of twenty-two failed to acquit themselves to the satisfaction of the Court, and were consequently referred to their studies for three months. The next "Pass" or Surgical and Pathological Examination will take place this day (Saturday).

Naval Appointment.—Dr. Elliott, of Warwick House, Southsea, has received the appointment from the Admiralty of "Surgeon and Agent of Sick and Wounded at Southsea and Langston Harbour," in the vacancy occasioned by the decease of Dr. Sparrow.

Apothecaries' Hall.—On Thursday, November 1, the following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise :—

Thomas Birch Dyer, Guy's Hospital; George Stokell, Guy's Hospital; William Augustus Bonney, Elm House, Brompton; Eli Crew, Tetbury, Gloucestershire; Edward Ireland, Kendal, Westmoreland.

The following gentlemen also on the same day passed their First Examination :—

Octavius Twigge Moleeey, King's College Hospital; Charles Munden, Guy's Hospital; Saltern G. Littlejohn, St. Thomas's Hospital; Augustus Constable Maybury, St. Thomas's Hospital; Richard Wilson, St. George's Hospital.

At the Competitive Examination, on October 17 and 19, 1866, for the Prizes in Materia Medica and Pharmaceutical Chemistry annually given by the Society of Apothecaries, the successful candidates were :—

First.—Albert Henry Baines, Guy's Hospital (a Gold Medal).

Second.—James Goodridge Anderson, St. Mary's Hospital (a Silver Medal and a Book).

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Bankart, J., M.B., F.R.C.S.E., has been appointed Surgeon to the Metropolitan Free Hospital, Devonshire-square, E.C.

Crucknell, H. H., M.B., M.R.C.P.L., has been elected Physician to the Royal Infirmary for Diseases of the Chest, City-road, E.C.

Davis, John, M.R.C.S.E., has been elected President of the Sunderland Medical Society for the ensuing year.

Dixon, W. H., M.D., has been re-elected Librarian of the Sunderland Medical Society for the ensuing year.

Elliston, G. S., M.R.C.S.E., has been appointed House-Surgeon and Secretary to the East Suffolk Hospital, Ipswich.

Evans, George, M.R.C.S.E., Senior Surgeon to the Marylebone Dispensary, has been elected Surgeon to the Hospital for Diseases of the Throat.

Fenn, E. L., M.B., L.R.C.P., has been appointed House-Physician to King's College Hospital.

Husband, H. Aubrey, M.B., M.C. Edin., M.R.C.S. Lond., to be Assistant Medical Officer to the City of London Lunatic Asylum, Stour, near Dartford, Kent.

Littlewood, J., M.R.C.S.E., has been appointed Surgeon to the General Hospital, Nottingham.

Yeld, H. J., M.D., has been re-elected Treasurer and Secretary of the Sunderland Medical Society for the ensuing year.

BIRTHS.

Barker.—On November 6, at Ivy Lodge, Hornsey-road, the wife of A. J. Barker, M.D., prematurely, of a daughter, stillborn.

Couch.—On October 25, at Bodmin, Cornwall, the wife of T. Q. Couch, M.R.C.S.E., L.S.A., of a daughter.

Currey.—On November 3, at Lismore, Ireland, the wife of Dr. Currey of a son, stillborn.

Dickson.—On November 5, at Trinity-square, Tower-hill, the wife of W. Dickson, M.D., R.N., of a daughter.

Pritchett.—On October 24, at Rastrick, Yorkshire, the wife of Henry Pritchett, M.R.C.S.E., of a son.

Roe.—On November 6, at the Royal Naval Hospital, Plymouth, the wife of T. A. Roe, M.D., Surgeon-Superintendent, British Hospital, Callao, of a son.

Scott.—On October 21, at Musselburgh, N.B., the wife of T. R. Scott, M.D., of a son.

Warden.—On October 31, at 272, Hagley-road, Edgbaston, Birmingham, the wife of C. Warden, M.D., of a son.

Westmacott.—On November 1, at 19, St. Mary's-terrace, Maida-hill, the wife of J. G. Westmacott, M.D., of a son.

MARRIAGES.

Becker—Kirby.—On October 25, at the Parish Church, Chepstow, Monmouthshire, H. F. V. J. Becker, M.D., of Carthilian House, The Lizard, Cornwall, to Mary Julia, daughter of the late John Kirby, Esq., of Talgarth, Monmouthshire.

Collins—Bull.—On November 3, at Epsom, John H. Collins, F.R.C.S.E., District Surgeon, East India Railway, to Mary Ann, second daughter of the late D. Bull, Esq., of Marston, Beds.

Livingston—Steel.—On November 1, at Glasgow, John Livingston, M.D., of Greenlaw-place, Glasgow, to Isabella, youngest daughter of the late John Steel, Esq., of Glasgow.

Stuart—Hedger.—On November 6, at St. Mark's Church, Woolston, Hants, John Stuart, Assistant-Surgeon 78th Regiment, to Sarah Frances Frashard, eldest daughter of P. Hedger, Esq., of Woolston. No cards.

Young—Jay.—On November 1, at Worley Church, Salop, H. J. Young, M.D., of Bridgnorth, to Ellen Martha, daughter of the late Thomas Jay, Esq., of Daneford, Bridgnorth.

DEATHS.

Arnison, G., L.R.C.P. Edin., at Stanhope, Durham, on October 27, aged 62.

Asple, Ambrose, M.R.C.S.E., of Iron Market, Newcastle-under-Lyne, on October 26, aged 75.

Burrell, W. H., M.D., Deputy-Inspector-General of Hospitals, at Beacon-hill House, Exmouth, Devon, on October 31, aged 71.

Gould, Dr. Augustus, a Physician in the highest repute at Boston, and well-known in this country as an able naturalist, died in the 62nd year of his age, on September 15, after ten hours' illness, from cholera. His work on the Mollusca of the United States Exploring Expedition is now in the press.

Hunter, G. Y., M.D., F.R.C.S.E., J.P. and Mayor of Margate, at Margate, on November 2, in the 72nd year of his age.

Leslie, A., Surgeon R.N., at Cowley House, near Exeter, on October 31, in his 90th year.

Thompson, John, M.D. Aberdeen, of Whitehaven, on October 28, aged 45.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATION.

Kirkby Moorside Union.—Dr. Chapman has resigned the Union; area 58,631; population 5739; Salary £48 per annum. Also the Workhouse, salary £9 per annum.

APPOINTMENTS.

Bridgwater Union.—Richard Axford, M.R.C.S.E., L.S.A., to the Workhouse.

Colchester Union.—George Brown, M.D. Glas., L.F.P. and S. Glas., L.S.A., to the Second District.

Llandilofawr Union.—Evan Lloyd, M.R.C.S.E., L.S.A., to the South District.

Poole Union.—Alfred Crabb, L.R.C.P. Edin., M.R.C.S.E., L.S.A., to the Fourth District.

Steyning Union.—Francis M. Maury, M.R.C.S. Edin., L.S.A., to the Second District.

Tiverton Union.—Nathaniel B. Grigg, M.R.C.S.E., to the Hockworthy District.

Honour to Medicine.—The following Imperial recognition of our Profession will be read with great pleasure in this country, where Dr. Conneau is so well known. It appears from the *Evénement* that nearly every profession but that of Medicine was represented in the French Senate. This anomaly has so astonished the Emperor, that instructions have been given that his Majesty's Physician Dr. Conneau is to be promoted forthwith to a seat in the Luxembourg.

The College Medal.—It appears from the last "Calendar" of the College of Surgeons, that the honorary gold medal of that institution has only been conferred on its members four times—viz., to Mr. James Wilson, in 1800; to Mr. James Parkinson, in 1822; to Mr. Joseph Swan, in 1825; and to Mr. George Bennett, in 1834.

Presentation to Dr. Cotton.—The members of a Jewish Society, the United Brethren, on Wednesday, October 31, presented to Dr. Cotton, of Clarges-street, Piccadilly, a silver and gilt vase, in testimony of their respect and esteem for his general kindness and attention as their Physician for the last ten years.

Death of Lady Holland.—Many persons will regret to hear of the death of Sydney Smith's favourite daughter Saba, Lady Holland. She married in 1834, as his second wife, Sir Henry Holland, M.D., D.C.L., F.R.S., the eminent Physician, Physician in Ordinary to the Queen since 1852, and has had issue two daughters by him. Lady Holland was author of the well-known biography of her father, the witty canon of St. Paul's, and possessed no slight share of his humour.

How Climate is altered.—Some observations on this subject, in so far as climate is affected by drainage, appeared in a recent number of the *Journal of the Scottish Meteorological Society*. From these it would appear that whilst drainage has in all cases a tendency to raise the temperature of the country, it has also a great influence in as far as equalisation is concerned, seeing that during winter—there being less water in the ground in drained than in undrained land—the soil is more rapidly cooled, but is again very much more rapidly warmed on the return of warm weather. Soaking with rain and snow again affects drained land much less than undrained, so that altogether the difference between the two is in many cases quite as great as if the land had been transported 150 miles southwards.

Hereditary Longevity.—Lord Brougham says that he has talked with a lady who lived in the reign of Charles II.; that lady was his great-great-aunt, who died at the age of 106, in the year 1789.—*Guardian.*

Professional Prizes.—The Council of the College of Surgeons offer for competition among the members of that institution two Jacksonian Prizes for the present year, on the following subjects—viz., "Ovariotomy, Pathology and Diagnosis of Cases suitable for this Operation, with the best Methods of performing it," and "On Fractures into Joints; their Modes of Union; with the Treatment and Result." The essays must be delivered before Christmas-day. The prizes are of the value of twenty guineas each. The essays for the Collegial Triennial Anatomical Prize of fifty guineas must be sent in before Christmas-day, 1867. The subject is, "The Anatomical Structure of those Parts of the Eyeball which are contained within the Sclerotic and Cornea, with Illustrations drawn from each of the five great divisions of the Vertebrata." The Astley Cooper Prize of £300 for the best essay on Pyæmia will be awarded in 1868; the essays must be sent in on or before December 31, 1867. In the United States there are three prizes open for competition—viz., the Jewett Prize of two hundred dollars, offered by Professor Jewett, of Yale College, for the best hygienic means of preserving the health of armies, whether in the field or in camp, at rest or in motion; essays to be sent in on or before March 1 next. A novelty is the prize of five hundred dollars offered by the American Popular Life Insurance Company of New York, for the best essay on the Physical Signs and other Indications of Longevity; essays to be sent in on or before January 1 next. The third prize is one of a hundred dollars, offered by the President of the Massachusetts Medical Society for the best essay on Expectant Medicine.

St. Bartholomew's Hospital.—At a meeting held in the library of this Hospital on Saturday last, a testimonial was presented to Mr. Godart, the Librarian, consisting of a handsome timepiece and a purse of twenty-five guineas. Mr. Callender made the presentation, and amongst other observations called attention to the antiquity of the library, remarking that it was founded as far back as 1662, and expressed the gratification he felt in conveying to Mr. Godart the kindly feelings which had prompted the subscribers to the testimonial. Mr. Godart expressed his thanks, and his acknowledgments for the very considerate way in which he was always treated, and hoped he should never forfeit the good opinion he had the happiness to gain. Mr. Baker, in a very humorous speech, proposed a vote of thanks to the Honorary Secretaries, Messrs. Ellis and Tayler, which was acknowledged by those gentlemen. Mr. Ellis, on behalf of the subscribers, proposed a vote of thanks to Mr. Callender for presiding, when that gentleman expressed his pleasure, and also that of the other members of the staff, at mixing with the students on such occasions, conducing so much to that kindly feeling which at all times exists between teachers and students at St. Bartholomew's. The inscription on the clock was as follows:—"Presented to Mr. Thos. Godart by the subscribers to the library as a mark of esteem, and in recognition of his valuable services as Librarian for upwards of 14 years. Nov. 3, 1866."

The Gastric Juice.—The principal part of a lecture on digestion in the stomach, by M. Vulpian, at the Musée d'Histoire Naturelle, Paris, was devoted to the gastric juice, in which he referred to the results of the most recent physiological investigations. According to Lehmann, the amount of gastric juice secreted in twenty years by the dog is equal to the tenth of the weight of the whole body; according to M. Lucien Corvisart, the proportion is 50 to 60 grammes per kilogramme. In man, MM. Bidder, in their first experiments, rated this quantity at 100 grammes per kilogramme of the weight of the body, which would give about 6 kilogrammes in twenty-four hours. M. Schmidt, by recent observations made on the gastric juice of a woman having a gastric fistula, calculated that 580 grammes were secreted in an hour, which would give 14 kilogrammes a day, being about one-fourth of the weight of the body. Chemists are not yet perfectly agreed as to the results of the analyses of the gastric juice. The following is given by M. Schmidt as the result of nine analyses of the gastric juice of the dog obtained as pure as possible:—1000 parts contained—water, 973·062; organic matter, 17·127; free hydrochloric acid, 3·030; chloride of potassium, 1·125; chloride of sodium, 2·507; chloride of calcium, 0·624; chlorhydrate of ammonia, 0·468; phosphate of lime, 1·729; phosphate of magnesia, 0·226; phosphate of iron, 0·082. The gastric juice is a nearly colourless limpid fluid, with an acid, saltish taste. According to M. Vulpian, it is permanently acid, in different degrees, a fact established by the experiments of Leuret, Lassaigne, Tiedemann, and Gmelin.—*Revue des Cours Scientifiques*, No. 49 (Nov. 3).

Apothecaries' Hall of Ireland.—At a meeting of the General Council held on November 1, George Wyse, Esq., M.D., was elected Governor in the room of the late Dr. Madden; Henry P. Nolan, Esq., M.D., was elected Deputy-Governor; and Edward J. O'Neill, Esq., was chosen to fill the vacancy in the Court of Directors and Examiners.

Recruiting for the Navy.—In consequence of the large number of applicants for admission to the Royal Navy who have been rejected by the stringency of the existing Medical regulations, the Inspector-General of Hospitals and Fleets has called for a nominal list from the Medical department of the *Fisgard*, at Woolwich-dockyard, of the number rejected, with a statement of the causes. They are as follows:—Muscular debility, weakness of intellect, palpitation, dyspepsia, deformed chest, rupture and tendency thereto, varicocele, impediment of speech, delicate aspect, indifferent eyesight, flat chest, defective feet, cataract in the eye, shallow chest and other distortions of frame, small and emaciated, under and over age, round shouldered, eruption, scars, loss of fingers, chronic enlargement of tonsils, pigeon-breasted, defective nutrition, enlarged glands, &c. As but very few of the applicants were found totally exempt from one or more of the above-named impediments, an amended list has received the sanction of the Lords Commissioners of the Admiralty submitted by the Medical Department.—*Times, November 5.*

Importation of a Live Gorilla.—M. de Quatrefages announced at the last meeting of the Academy of Sciences that Admiral Fleurian has succeeded in bringing over to France a young live gorilla. The little brute has the free range of the house, and is employed in observing as much as it is the object of observation.

Abernethian Society, St. Bartholomew's.—At a special meeting of this Society held on Thursday evening, November 1, for the purpose of electing a Medical President in the room of the late Dr. J. S. Warter, the following resolution, proposed by Dr. Andrew, seconded by Dr. Duckworth, was unanimously agreed to:—"That this Society, in its sorrow for the loss it has sustained by the death of its late Medical President, Dr. Warter, is anxious to place on record its deep sense of his industry and worth, and its belief that the loss is one which will be felt not merely by the Society itself, but by the Profession at large." The following resolution was also passed:—"That the preceding resolution be entered on the minutes of the Society, and that the Secretary be requested to forward a copy of it to the friends of the late Dr. Warter." Dr. Dyce Duckworth was unanimously elected to the vacant office of Medical President. The ordinary business of the evening having been transacted, Mr. W. Morrant Baker introduced the subject of "The Mutual Relations of the Vital and Physical Forces," and treated it in a very able manner. An excellent discussion followed. There was a large attendance of members.

The annual meeting of the Greenock Medical Society was held on November 5, when the following gentlemen were elected office-bearers for Session 1866-7:—*President*, Dr. Mackie; *Vice-President*, Dr. Richmond; *Treasurer*, Dr. Marshall; *Secretary*, Dr. Wallace.

Quekett Microscopical Club.—The ordinary monthly meeting took place in the Library of University College on the 26th inst., Ernest Hart, Esq., President, in the chair. Mr. Highley, F.G.S., read a paper "On Shore Collecting," wherein he described the dress and implements most suited for such explorations, how to search the sands, seaweeds, clefts in rocks, ledges, rock basins, and under boulders, and what animals, microscopic or otherwise, were most likely to be found in each of these several retreats for the ocean's inhabitants. A *conversazione* followed in which many objects of interest were exhibited, amongst which was a new form of microscope of novel construction by Mr. Cole. Nineteen members were proposed, and twenty-eight new members were elected.

Nature of Tuberculosis.—At the meeting of the Academy of Sciences at Paris on October 29, a communication from M. J. A. Villemin was read, in which he reported the results of numerous experiments, which, he considers, establish the fact that phthisis is as much a specific disease as glanders, syphilis, small-pox, typhoid fever, etc. Like these, it attacks only a limited number of zoological species; and the appearances of pseudo-tubercles in some animals M. Villemin imputes to the presence of parasites in their organs. Besides man, there are only the ape, cow, and perhaps the rabbit, which present incontestable examples of tubercular phthisis. M. Villemin has had no opportunities of inoculating apes or cows, but reports the results of his experiments on certain other animals, inoculated from human tubercles. Of twenty-four rabbits treated only two escaped the disease; and two guinea-pigs succumbed after two months. Of four dogs inoculated, one alone, after five months, presented a few tubercles in one lung; and of four cats, one gave a doubtful result, and another had a few granulations in both lungs. According to these experiments it seems difficult to provoke tuberculosis in the carnivora. From four sheep, a goat, a cock, and a wood-pigeon inoculated, no indications of tuberculosis were obtained. This disease has been found to have the habitual effect of producing among rabbits and guinea-pigs abortion or premature death of the young ones, due to the insufficient lacteal secretion of the mother. None of the young ones had tubercles.—*Comptes Rendus*, t. lxiii., No. 18.

Composition of Bony Tissue in Men and Animals.—M. Zalesky has published the results of a series of analyses on this subject, after having taken great care to remove from the bones employed foreign matters, as much as possible, by chemical means. He gives the following, among other conclusions:—1. The proportion between the organic and mineral parts is constant for one species of animal, and varies very little from one species to another—

	Man.	Ox.	Tortoise.	Guinea-pig.
Mineral matter .	65·44	67·98	63·05	65·30
Organic matter .	34·56	30·02	36·95	34·70

2. Except in the carapace of the tortoise, all the bones contained chlorine in a compound insoluble in cold water (chloride of calcium combined with phosphate of lime, as in apatite). 3. The respective proportions of lime, magnesia, phosphoric and carbonic acids, and fluoride and chloride of calcium, contained in the mineral part, were nearly the same in man and in the animals examined. From experiments made on pigeons, some of which had been fed on a diet rich in carbonate of lime, and others on a diet poor in lime but rich in phosphoric acid, the results showed that the relations between the organic and the mineral parts and between the phosphoric acid and the lime had not varied.—*Bulletin de la Société Chimique de Paris*, tome vi., p. 245.

A New Theory of the Skull and Skeleton, propounded by Mr. Harry G. Seeley, of the Woodwardian Museum, Cambridge, appears in the November number of the *Annals of Natural History* in a long epitome of a paper read before the Cambridge Philosophical Society. He refers to the rival theories of Owen and Huxley, to the former of whom the skull is but another name for the first four of the vertebræ, while to the latter it is a complex structure, with three segments forming one organ, a brain case and two segments forming a face, while sets of bones for special senses close up the eyes and ears. Mr. Seeley does not oppose either of these theories, but asserts that the principles of mechanics have not been sufficiently taken into account in considering the progress of ossification and growth. The forces which he especially alludes to are those acting on the animal, such as the media in which it lives (air and water), the air it breathes, and the food it eats; while the mechanical forces acting within the animal are the muscles, vessels, viscera, etc. All these, he says, can only produce alternations of pressure and tension and rest, and are, therefore, the stimulants to growth. This growth is an enlargement in which the particles expand and increase externally. It is resisted by pressure, and takes place when the pressure is removed. Mr. Seeley describes the series of modifications due to the resistance of the atmosphere and other causes, and examines in detail the development of the skeleton in various animals, recent and fossil, from which he deduces the following theory of the vertebra—viz., "that it consists of a centre of ossification, which normally developes three (or more) pairs of epiphyses, any of which may assume the appearance of separate bones, and develope epiphyses themselves." The final conclusion of his theory regarding the skull is "that it is the terminal segment of the body; that the brain case, the termination of the neural system, is a modified vertebra; that the bronchial circle of nasal and palatine bones is a modification of the trachea; and that the lower jaw is a modified rib developed by the mouth. The respiratory circle of bones is the key to the skull." According to Mr. Seeley, all these bones greatly owe their forms to the growth of the organs with which they are connected. This theory will no doubt give rise to much discussion among comparative anatomists.

Metropolitan Poor-law Medical Officers' Association.—A quarterly meeting of this Association was held at the Ship Hotel, Charing-cross, on Tuesday, the 6th inst. Among the ordinary members present we noticed the following:—Dr. Rogers (president), in the chair, Dr. Andrews (vice-president), Mr. Godrich (treasurer), Dr. Dudfield (hon. secretary), and Messrs. Bruce, James, Clarke, Eugene Goddard, J. S. Belcher, M.D., H. M. Simmonds, B. Clarke, Norton, E. Jones, M.D., etc. There were also present several honorary members and other friends of the Association. Dr. Dudfield, hon. secretary, read the quarterly report of the Council. The President then addressed the Association at considerable length upon the various subjects dealt with in the report, and explained the position of affairs in the Strand Union with respect to the proposed appointment of a resident Medical officer. Mr. Benjamin Clarke, Medical officer of the East London Union Workhouse, made a statement with reference to the proceedings of the Board of Guardians of that Union taken with the view of displacing him from the office he had held for many years, and to appoint a resident Medical officer in his room. The report of the Council having been received and adopted upon the motion of Mr. B. Clarke and Dr. Belcher, the following resolutions were moved by Mr. Godrich, seconded by Dr. Andrews, and carried unanimously:—

"1. That this Association would view with deep concern any attempt to displace any Medical officer for other cause than neglect or disability.

"2. That, believing it would be for the good of the Poor-law Medical Service that all Medical appointments should be held for life—whereby alone proper independence can be secured—they earnestly deprecate any interference with the Poor-law Board's Order of May 25, 1857—an order based upon the recommendation of a Select Committee of the House of Commons, and the true intent and meaning of which is, without doubt, to assure life tenure of office by all parochial Medical officers.

"3. That they believe that the appointment of resident Medical officer *only* would be injurious to the interests of the sick poor, whom it is intended to benefit, agreeing as they do with the opinion that the resident Medical officer 'would be likely to lose some of his sense of independence, and become more and more subservient to the views of some leading Guardians;' and that 'hence he might hesitate to discharge some of the duties of his office (as, for example, the ordering of extras and the removal of noisy lunatics) with proper independence.'(a)

"4. For the reasons above stated, this Association trust that the Poor-law Board will maintain in all its integrity their Order of May 25, 1857, the sole safeguard of the Medical officer in the independent discharge of his duty, and, at the same time, the best security for the proper treatment of the sick poor."

It was moved by Mr. Eugene Goddard, seconded by Mr. Norton, and carried unanimously,—

"That, in the opinion of this Association, it would be highly advisable that the Medical officer of each Workhouse should be made an *ex-officio* member of the Board of Guardians, in order that his advice might be always attainable with regard to the questions of Medical management which might occur from time to time."

It was moved by Dr. Dudfield, seconded by Mr. Bruce, and carried unanimously,—

"That a copy of the foregoing resolutions be transmitted to the Poor-law Board."

The subject of "resident Medical assistant" is one of so much importance that your Council think it right to state their views thereon. They heartily concur in the principle, but the scheme can be successfully carried out only under very carefully regulated conditions, so as to secure harmonious co-operation, and to avoid clashing of authority, between the resident and visiting Medical officers. The duties which should devolve upon the resident assistant are sufficiently apparent. He should attend to all cases of emergency in the absence of the Medical officer; prescribe, *ad interim*, both medicines and diet; keep the books, dispense the medicines, etc. In a word, he should occupy the same position as the Resident Medical Officer of a Provincial Hospital, and act under the directions of the Medical officer by whom he should be selected and appointed. His engagement, moreover, should be determined by himself or by the Guardians, upon such notice as may be previously fixed. Guarded by these provisions, there can be no doubt that the appointment of Resident Medical Assistant in certain of the metropolitan workhouses would be a boon equally to the sick and to the Medical officer. The thanks of the Association having been voted to the officers and Council for their services during the past quarter, and to the President for his conduct in the chair, and having been duly acknowledged, the meeting was dissolved.

(a) Dr. E. Smith's "Report on Workhouse Infirmaries, etc.," p. 59.

AN artificial tooth must possess certain qualities apart from size, shape, and colour. A front surface which must closely resemble the enamel or external covering of the natural tooth, and a body having the toughness which allows the vigorous use of the hammer in riveting without fracture, and the use of the blow-pipe in soldering without liability to crack. If the tooth were one homogeneous mass, the requisite amount of vitrefaction necessary to imitate the enamel would render it brittle. Again, a proper amount of translucency must be preserved, or there will be the opaque, clay-coloured tooth, which proclaims its artificial character to the most casual glance; so that a nice calculation is necessary not to sacrifice beauty to strength, or render them frail and valueless in the effort to make them beautiful. There must also be the distinctly marked clear cutting edge of enamel projecting beyond the body of the tooth, and contrasting, as in Nature's work, with the yellow or brown base, and yet this depth of colour in the body and translucency of the point must be so nicely blended that the line of union cannot be determined.—*American Paper.*

THE following are the last week's Cattle Plague Returns.

—	1. Attacked.			Back cases reported in the week ended Oct. 27, 1866.	2. Result of reported Cases from the Commencement of the disease.				
	Week ended Oct. 13.	Week ended Oct. 20.	Week ended Oct. 27.		Attacked.	Killed.	Died.	Recovered.	Unaccounted for.
Great Britain .	11	6	15	0	253723	85013	124303	33413	10994

The Return shows that 15 attacks were reported to have occurred during the week ended October 27, being an increase of 9 on the previous return.

Fresh outbreaks took place in 4 farms or places where cattle are kept; the number of such outbreaks in the previous week being 3. The number of healthy cattle slaughtered, to prevent the disease extending to them, was 34 during the week.

Since the commencement of the disease 51 in every 1000 of the estimated ordinary stock of cattle in Great Britain are returned as having been attacked.

The total number of sheep reported to have been attacked up to the date of this return is 6826. No cases among sheep have been reported during the week.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Bibliographist.—The collection is by no means curious or rare, but eminently practical. Consult the Librarian.

A Fellow.—The only life members now on the Council are, Messrs. William Lawrence (1828), Joseph Swan (1831), and John Flint South (1841).

M. R. C. S.—The erection in Lincoln's-inn-fields to which you allude was intended as the site for a building in which to exhibit the plans for the new law buildings. Happily, the intention was frustrated at a meeting of the trustees on Monday last.

A Surgeon and a Gentleman, Melbourne.—The extraordinary advertisement has been received, and will engage the attention of the Medical Council and the Colleges of Physicians and Surgeons of London. Dr. Thomas has never been a member of the Medical Council, neither has he been a recipient of the prizes enumerated.

Bibliopole, Sheffield.—Mr. Joseph Swan was admitted a member of the College on October 1, 1813, a member of the Council in 1831, and is one of the four honorary gold medalists of the College. In 1822 he carried off the Collegial triennial prize, and in 1825 another was awarded him. In 1817 and 1819 he was awarded the Jacksonian prizes. This distinguished member of our Profession is a life member of the Council.

A. B.—The following is an extract from the Jurors' Reports, International Exhibition, 1862:—

"Dr. J. Marey, Paris, M. (France, 1762), exhibits in Class XVII., and also among the excellent collection of apparatus by M. Bréguet in Class XIII., a very ingenious and well-constructed little instrument, the *sphygmograph*, for delineating on paper the variations in the beat of the arterial pulse. This instrument is adapted by a pointed plate and an elastic band to the radial artery, on which the short arm of a small lever rests. The extremity of the long arm of this acts near the fulcrum of a second light lever, which carries ink in its extremity, and this tracing point rests on a slip of paper, which is carried along in a frame by clockwork. As the motion of the paper is at right angles to that of the tracing point, the two motions combined delineate with remarkable exactness the most minute variations of internal pressure on the elastic arterial tube. A medal was awarded in Class XVII. to Dr. Marey for this ingenious contrivance."

DR. ALTHAUS'S LECTURES.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In your review of my lectures on Epilepsy, Hysteria, and Ataxy, in this week's journal, you remark, "The results of his treatment are described by Dr. Althaus as highly satisfactory, but what that treatment is he does not say." Will you kindly allow me to state, in explanation, that the lecture published is one on the *prognosis*, and not on the treatment, of epilepsy; and that my experience in the *treatment* of that disease shall be fully given to the Profession in due course of time?

I am, &c.
JULIUS ALTHAUS, M.D.
18, Bryanstone-street, Portman-square, W., Nov. 3.

THE YOUNGEST SURGEON EXTRAORDINARY.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Can any of your correspondents tell me who has been the youngest Surgeon Extraordinary? I have always thought that John Hunter has been so, but I find that my father was several years younger when he received that honour. John Hunter was born in 1776; made Surgeon Extraordinary to King George II. in 1828. My father was born in 1793, and made Surgeon Extraordinary to King William IV. in 1831. Apologising for taking up your valuable space, I am, &c.

H. L. MAYSMOR, M.D., F.R.C.S.E.
33, Mornington-road, N.W., November 5.

HYSTERIA IN THE MALE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Since the subject of hysteria, as it bears upon Surgical diagnosis and treatment, is just now before your readers, perhaps you will insert the following case, in which that pathological Puck tormented not a sensitive young lady, but a stalwart butcher, of temperate habits and well regulated mind:—

About three years ago, he began to feel irritation about the rectum, and gradually became unable to pass fæces larger than his little finger. I examined him last March, and found a stricture five inches from the anus, which resisted all endeavours, by means of bougies, at dilatation. Whilst under treatment, he was attacked with violent fits of dyspnœa and dysphagia, and laboured under such extreme nervousness and excitability, that, after having tried opium, chloroform, steel, and antispasmodics in vain, I opened the larynx, and kept a canula in it for several days. The dyspnœa ceased, but from that date he was unable to swallow at a time more than a few mouthfuls of fluid, which he described as passing slowly and perceptibly through a narrow passage in the lower part of the gullet. Notwithstanding that this condition continued for five months, and that he was unable to walk more than a few yards, his body did not waste much, and his face betrayed none of the signs of organic disease, but only excessive timidity.

His own mind, and that of his friends, was resigned to a speedy dissolution, and he went to his native village to die. Whilst there one evening, he felt something give way in the throat; to his surprise a large morsel of food went down. Next day he walked a mile or two, and, a week after, was looking out for a situation. The stricture of the rectum remains, but the hysteria has fled.

I am, &c.
St. Paul's Cray, October 31. S. WORDSWORTH POOLE, M.D.

ARMY MEDICAL REFORM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—It is believed that the Horse Guards and War Office authorities have at present under their consideration a new warrant for the amelioration of still existing grievances in the Medical Department of the Army, and it is sincerely to be hoped that, among other alterations and improvements, the following reforms will receive well-merited consideration:—

1. The abolition of the terms "Assistant" Surgeon and "Deputy" Inspector-General of Hospitals.
2. The establishment of a general Medical staff.
3. The abolition of confidential reports by Surgeons on their juniors; or, if this be deemed indispensably requisite, that reports abroad be made to the local administrative Medical Officer, instead of, as at present, to the Director-General. There are, I believe, very few gentlemen in the department who would take an unfair advantage of their juniors, but it must be admitted that the present iniquitous system gives the opportunity of "a stab in the dark," if they are disposed to avail themselves of it. I know an instance in point, where two young and highly zealous Medical Officers were the victims of most untruthful reports. Very serious notice was taken by the Director-General, and they were both severely reprimanded. Neither of them was conscious of having at any time neglected their duties, and they were determined to have fair play. The termination of the affair was an official and entire withdrawal of the charges on the part of the Surgeon. You will hardly credit it, but that Surgeon is still in the position in which he can again furnish, if so disposed, confidential information for the benefit of the head of the department. Inspectors of Hospitals invariably visit every station once a year—sometimes oftener—and this gives them the opportunity of investigating any charges which might be contained in the confidential reports, and affords the advantage to all parties of personal interview. Had this course been pursued in the instance related by me, I know that the two deserving Medical Officers would have escaped "registration in the head-quarter black book." That same individual belongs to the type of Surgeons (a goodly number of whom, I am inclined to think, are to be found among the two senior grades of executive Medical Officers) who act towards their Assistant-Surgeons as if they were something more than "inferiors" in the military sense, and supervise in a manner which is extremely painful, not only to men of ten years' standing in the service, but any man who takes a real interest in his Profession. If Assistant-Surgeons are ordered to walk round the wards, carrying inkstands and writing down prescriptions dictated by the Surgeon, it can scarcely be wondered at that men become disgusted with a service in which both Professional etiquette and the etiquette of everyday life are entirely ignored. If you deem this letter worthy of publication, will you kindly assign it space in your valuable and influential journal?

UNITY.

Subcutaneous Injection of Morphia in Neuralgia.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In a notice that appears in your journal of November 3 on the injection of morphia in a case of neuralgia of the arm, under the care of Dr. J. W. Ogle, he is said to have stated that he knew a Medical friend who, for neuralgia of the feet, had used the subcutaneous injection of morphia daily for several weeks. As I fancy I am the friend he alludes to, perhaps a brief report of my own case may not be uninteresting to some of your readers.

Neuralgia of both legs and ankles attacked me very severely last December from having caught cold from being obliged to go out one night while I was in the desquamative stage of scarlet fever. The pain began every evening at sunset, increasing in severity as night came on, and continued till morning, when it left me, and I fell asleep for a short time. It was most intense agony—I don't know what else to call it. For nearly three weeks I tried every remedy proposed, and large doses of opium at night, forty drops of the liq. opii sed. at a time; but nothing had the least effect in relieving me—in fact, the opium seemed to aggravate it. The pain began to get more frequent. I hardly passed an hour out of the twenty-four without it; but, what was worse than all, I dreaded sitting down to eat. Taking food or stimulants always brought the pain on, or, if it was present, aggravated it. All the remedies failing, Dr. Dudfield one night injected one-third of a grain of morphia into my arm. I shall never forget the relief. In ten minutes all pain had vanished, and I slept the whole night. It was the first long sleep that I had had for three weeks. For the six days following I suffered very little. The injection was repeated each night; but at the end of this time the pain returned as bad as ever. For the next three months my life was a misery, as far as the days were concerned. I was never free from suffering, but my nights were calm and quiet; for I took my injection regularly as soon as I was in bed. My neuralgia now began considerably to abate, so I partly ceased the injections; and now as I write, eleven months from the first attack, I may pronounce myself cured of the intense pain. I still have the attacks occasionally, if the weather gets damp or I get fatigued, but nothing like what they used to be; the pain now is a mere atom to the torture I used to suffer. I ought to mention that all my organs and secretions kept perfectly normal throughout. Now, as regards the number of injections and the dose and action of the morphia, I never counted them; but I may state that I have had quite 150 injections, and if I put them down at 200 I know I should not be wrong, or that I had taken 100 grains of the drug I began with one-third of a grain for a dose, slowly increased it up to two-thirds, continued this for some time, and as my pain diminished I diminished the dose, so that now I find one-sixth is sufficient. The effects usually lasted from six to twelve or eighteen hours, according to the intensity of the pain. The morphia never had the least ill effects on me. On the contrary, it has always acted as a powerful tonic besides relieving pain. The tonic effects have been much more marked latterly, making me feel brisk and active in every way. Often, when I have been weary and fatigued from being up at night, a dose of the morphia would keep off the pain and make me feel braced up and fit for any exertion. During the last four months the injections have been attended with one inconvenience; that is, if I take them at night they always keep me awake, so I now adopt the plan of taking the dose in the daytime, and find it does me much more good. For some time I injected it myself into either arm. Finding this inconvenient, as I had only one hand free, and had to make my teeth act as the other, I operated on my leg instead. I cannot say that placing the morphia nearer the seat of pain increased its good effect; it acted much the same in any site.

In conclusion, I would mention two important facts:—1st. That tolerance of the drug was never established in my case. 2nd. The advice of many kind friends, both ladies and gentlemen, was unnecessary when, in urging me to give up the injection, they said that the morphia would lower me, that I should not be able to give it up, or that I should die like some opium-eater.

I am, &c. Arthur Roberts.

COMMUNICATIONS have been received from—

Dr. Orton; Dr. Poole; Mr. David Joseph; A. C. S.; Mr. Hutchins; Mr. Cæsar; Mr. Winterbotham; Mr. Lundy; Dr. Althaus; Mr. Coombs; Dr. Maysmor; Dr. Casey; Mr. J. W Orton; Mr. Arthur Roberts; Dr. Dudfield; Mr. Robert Ellis; Dr. John Murray; Dr. Hughlings Jackson; Dr. E. L. Dixon; Dr. Ballard; Mr. E. Bellamy; Dr. W. D. Moore; Mr. F. H. Marsh; Mr. Spencer Wells; Dr. W. O. Markham; Mr. J. Chatto.

BOOKS RECEIVED—

Ellis's Dissections, Parts 22 and 23—The Journal of Anatomy and Physiology, No. 1—Waring's Tropical Resident—Compton's Temperature in Acute Disease—Report of the Tewkesbury Rural Hospital—Transactions of the Pathological Society of London, Vol. XVII.—Camps on Cholera—American Journal of the Medical Sciences, No. 104

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 3, 1866.

BIRTHS.

Births of Boys, 1135; Girls, 1141; Total, 2276.

Average of 10 corresponding weeks, 1856-65, 1843·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	743	689	1432
Average of the ten years 1856-65	614·2	582·2	1196·4
Average corrected to increased population ..	..	..	1316
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	1	3	11	..	3	2	4	3
North ..	618,210	9	4	8	2	10	10	5	8
Central	378,058	3	3	3	1	4	5	5	11
East ..	571,158	5	4	12	2	9	10	7	13
South ..	773,175	7	15	11	4	13	14	7	38
Total ..	2,803,989	25	29	45	9	39	41	28	73

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29 843 in.
Mean temperature	49·2
Highest point of thermometer	59·2
Lowest point of thermometer	33·7
Mean dew-point temperature	45 8
General direction of wind	S.W.
Whole amount of rain in the week	0·20

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 3, 1866, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending Nov. 3.	Deaths.		Temperature of Air (Fahr.)			Rain Fall.	
				Corrected Average Weekly Number.*	Registered during the week ending Nov. 3.	Highest during the Week.	Lowest during the Week.	Weekly Mean of the Mean Daily Values.	In Inches.	In Tons per Acre.
London (Metropolis)	3067536	39 3	2276	1400	1432	59 2	33·7	49·2	0·20	20
Bristol (City) . .	163680	34 9	116	73	‡66	58·7	35·3	49 4	0·08	8
Birmingham (Boro')	335798	42·9	220	163	129	59·2	37·2	47·4	0·21	21
Liverpool (Borough)	484337	94·8	403	281	341	59 4	46·4	52·2	0·41	41
Manchester (City) .	358855	80·0	256	203	‡259	63·0	35·0	48·5	0 78	79
Salford (Borough) .	112904	21 8	94	57	57	62 4	35·1	49·2	0·74	75
Sheffield (Borough) .	218257	9·6	193	115	125	58·4	38 5	47·9	0 55	56
Leeds (Borough) .	228187	10·6	139	116	136	62·8	37·5	49·4	0·86	87
Hull (Borough) .	105233	29·5	78	49	41	..	..	..	..	..
Nwcastl-on-Tyne, do.	122277	22 9	94	65	90	57·0	40·0	48 5	0·75	76
Edinburgh (City) .	175128	39·6	140	84	120	56·7	38 0	47·7	1·00	101
Glasgow (City). .	432265	85·4	354	252	229	55·6	31·7	47·7	1·07	108
Dublin (City and some suburbs) .	318437	32·7	138	†156	230	57·7	31·4	48·3	0·66	67
Total of 13 large Towns . . .	6122894	34·4	4501	3014	3255	63·0	31·4	48·6	0·61	62
					Week ending Oct. 27.	Week ending			Oct. 27.	
Vienna (City) . .	(1863) 560000	..	..	..	..	..	..	§ ..	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·843 in. The barometrical pressure decreased from 30·26 in. on Monday to 29 55 in. on Saturday.

The direction of the wind was S.W.

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* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 49 1°.

APPOINTMENTS FOR THE WEEK.

November 10. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p m.

12. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

Epidemiological Society, 8 p.m. Dr. Jenner, F.R.S., Address, Opening the Session.

Medical Society of London, 8 p.m. Dr. Victor de Méric, "On Some of the Sequelæ of Syphilis."

13. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p m.; St. Peter's Hospital for Stone, 3 p.m.

Royal Medical and Chirurgical Society, 8½ p.m. Mr. Spencer Wells, "Ovariotomy twice successfully performed on the same Patient." Mr. Solly, "Case of Fracture of the Ribs, with peculiar Tympanitic Resonance."

14. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St Thomas's, 1½ p.m.

Hunterian Society (Council, 7½ p.m.), 8 p.m. Dr. Hughlings Jackson, "Case of Abscess of the Brain."

15. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

16. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.

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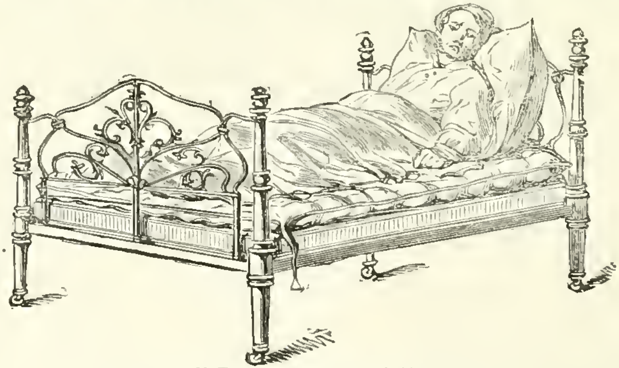

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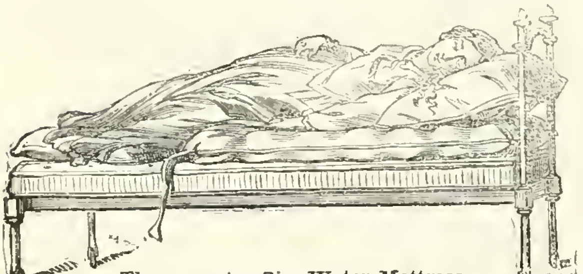

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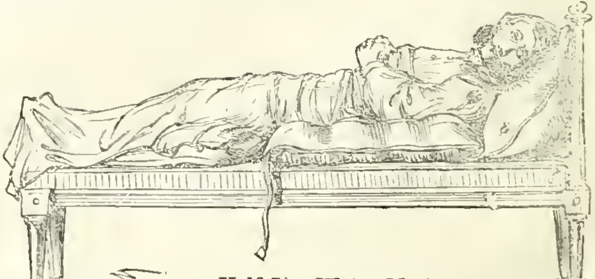

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ORIGINAL LECTURES.

ON THE RATIONAL TREATMENT OF DEFORMITIES.

By RICHARD BARWELL, F.R.C.S.,
Assistant-Surgeon, Charing-cross Hospital.

No especial name was attached to that branch of Surgery which professes to make the crooked straight until 1741, when Andry published his work on the subject, and conferred upon it the barbarous title of "Orthopédie." With him deviation from normal form is the one defect, restoration of shape the sole object of his treatment. He says of bent limbs and spines, "The same means must be taken to straighten them as are adopted for straightening the crooked stem of a young tree"—viz. fastening it to a straight piece of wood—and he recommends for deformed feet "splints of strong cardboard or of wood, or little plates of iron." Strange as it may seem, this same method with a few modifications, hardly improvements, is still enforced by the professors of the speciality so barbarously named. The straight piece of wood and the little metal splint are constantly in use, and when, as in their very nature they must, these fail, free—extremely free—use of the knife is added. Nor is it astonishing that orthopædism should still adhere to its pristine rudeness, seeing that it preserves the same faulty basis—viz. that deviations of form only are to be treated.

Now the truth is, that since deformity consists of two parts—loss of form and loss of power—any theory of treatment which should ignore the one or the other must be false, and especially must any practice be faulty which would cause a limb abnormally powerless to be further lamed by cutting its tendons and condemning it to enforced rest. Although by such treatment we may occasionally find a limb squeezed for a time into some approach to form, yet it is, as a rule, so powerless that irons have to be constantly worn: it is in a more hopeless condition for rational treatment than it was before, and very often the deformity is reproduced or an opposite one developed.

We must first show that the theory of tendon-cutting and of spasmodic contraction of certain muscles is false. The necessary condition of active muscular contraction is alternation with relaxation, and the more violent the contraction the more rapid must be this change from the one state to the other, or death is the result. Thus it never does, and never can happen, that an active muscular contraction, be it convulsive or otherwise, is sufficiently violent, and at the same time sufficiently continuous, to result in a distortion. The most terrible convulsive diseases attended with the most powerful and the most lasting spasms are never sufficient to produce a distortion. Let it be here distinctly understood that by the word distortion I expressly mean to exclude cases of mere malposture—cases in which either by the will of the individual, by misapplied mechanisms, or by other means, a limb, having been kept too long in a certain position, refuses to entirely abrogate the posture. Thus cases of excessive splintage, of fixed position from joint disease, of extended foot (simulating equinus) from retraction of the hip or knee, of squinting from hypermetropic condition of the eye, are all excluded from the category of distortions properly so called, and fall into the genus malpostures.(a)

The distinction between the two conditions is this:—In malpostures there is nothing morbid in the position itself; its fixity only is abnormal. A distortion, on the other hand, is a position of parts either entirely abnormal or exaggerating beyond all natural limits some natural posture. Thus a certain amount of flexion of the tarsus is normal; its exaggeration far beyond the natural amount constitutes *pes equinus*. A little rotation inwards and adduction of the front of the foot is natural to the young infant; a considerable increase of that position is *pes varus*, and so on. The slightest knowledge of dynamic anatomy will clearly show to the unbiassed mind how impossible it is that any muscle should, while its opposers remain active, keep up so constant, so violent a strain upon a limb as to produce such gross and persistent exaggerations as either equinus or varus. And here I must be allowed to point out a strange fact: it seems never to have occurred to the admirers of the remarkable doctrine of continuous spasmodic action that a muscle in such a state would, if its tendon were cut, drag the ends asunder like a taut cable parting in a gale of wind, and there would never be any possibility of bringing them together any more. Indeed, the absence of such phenomenon is surely sufficient proof that there is no convulsive retraction. But it is extremely noteworthy that the very individuals who insist on this supposed condition direct, in the description of tenotomy, that the limb should be forcibly dragged in the opposite direction in order to make the tendon tight enough to be cut.

On the other hand, distortion following upon paralysis is of daily occurrence, and takes place before our eyes. There are two ordinary modes of production which scarcely vary:—One, that the patient, when between 1 and 4 years old, was put to bed quite well, the next morning had lost the use of one or more limbs, that the power in certain directions gradually returned, but with it distortion was developed. The other history relates that loss of power came on slowly, that it was much more observable in certain directions than in others, and that at a certain period deformity also commenced and kept even pace with the paralysis.(b) These metamorphoses—*i.e.* the very distortions themselves—are produced by a condition of muscular tissue which is utterly ignored by orthopædism—viz. tonic contraction. The set of muscles which still remain healthy draw the limb over from the side of the disease, not by virtue of any active and temporary contraction, be it natural, convulsive, or spastic,(c) but simply by its constant, never-ceasing tension on the limb, produced by elastic or tonic contraction of the muscles unantagonised by the same force on the other side. The primary malady lies, then, on the side *from* which the distortion is directed. The pathology is perfectly analogous to distortions produced by morbid muscular conditions of the face. When, for instance, a Surgeon finds the face drawn on one side, he diagnoses paralysis of the side *from* which the features are drawn, and (unless there were suspicion of malingering) would never think of assuming that the displacement of feature was produced by an active or "spastic" contraction of the muscles towards which the parts incline. Indeed, so well known, as far as the face is concerned, is this pathological fact, that the Surgeon who would treat the side towards which the features are displaced, would justly be thought very ignorant of pathology.

Although, as we have just seen, distortion, properly so called, cannot be produced by fixity of position alone, yet when that circumstance is combined with rapidity of growth, the two together may cause a slighter form of distortion. The fixity of posture, be it from improper swaddling, from long-continued splintage, from some neglect, etc., is in its results upon the opposite muscles precisely similar to paralysis. The muscles on one side are restrained from action, wherefore those on the other side harden themselves to the position maintained, and when the restraint is removed they will not yield the length required to allow action on the other side. This state is simply one of assumed or enforced posture; but if with those conditions rapid growth be combined, the muscles of one side will increase in length, and the other will remain stationary; the limb may thus be dragged completely aside, and thus an absolute change of shape—a true distortion—be produced.

These, then, are the causes of clubfoot whenever we can trace them, and we have no right whatever to assume that when we cannot follow its production—viz. in utero—the same distortion should be due to diametrically opposite causes. As in infant, so also in fœtal life, can we find no possible evidence of such a pathological condition as persistent spasm or "spastic" contraction. It may be that posture is somewhat more frequently productive of congenital than of non-congenital varus, simply because growth is then so much more rapid. We must, however, consider that such deficiency of the liquor amnii as would allow the fœtal limbs to rest against the uterine walls is incompatible with continued gestation; hence a limb, to be distorted by enforced posture, must press against some other part of the fœtal body. Occasionally, though very rarely, this may occur, and the popular idea of its prevalence is chiefly due to a plate of Cruveilhier(d) representing a sentimental fœtus leaning his pensive chin upon his turned-in toes. But distortions perfectly identical, as Wernher has observed, are found(c) in the very young fœtus whose small limbs cannot reach the chin—indeed in the acephalous with no chin—and thus it is impossible to assign cases so similar, so nearly identical, to so varying a cause as position in utero.

(a) Dislocations from joint disease are, as will be seen by our definition, distortions, but these occur only after alteration in the joint surface, and then as a sudden event.

(b) Both these conditions may commence, although more rarely, in middle life.

(c) The term convulsive was applied to these cases by the French tenotomist, M. Guérin. The word spastic was invented by that able Physician, Dr. Little.

(d) "Anatomie Pathologique."

We thus come back to the only condition which can possibly give rise to clubfoot—viz. want of power on the side from which the limb is drawn; but while, in viable life, paralysis, partial or entire, is, save in a few very exceptional cases, the cause of such want of power, other and probably more frequent conditions produce that condition in the fœtus. Professor Weber has clearly shown, in his well-known paper(f) on the development of muscles, that all the muscles of animal life are formed as appendages of the nerves and nervous centres commanding them. Now, although the course of formation of these parts is normally regular, yet sometimes disorder prevails; and, with the light thus shed on the subject, it is easy to see how, in the development of a nervous motor centre, delay of a few days behind another knot of grey matter, which ought to be formed simultaneously, will, indeed must, produce distortion. The same guide will now enable us to understand why congenital absence of nervous matter is accompanied by paralysis, therefore by clubfoot. Such developmental deficiency can have, however, no possible connexion with spasm, as the worshippers of the tenotome have tried to show.

So baseless, then, is the theory of tendon-cutting; now let us examine its practice. There is one tendon in the foot, the tendo Achillis, lying isolated, and merely surrounded by loose tissues, whose section is always followed by reunion with comparatively slight impairment of function; all the others are utterly destroyed every time they are cut, or a certain proportion of the cases.(g)

Thus the anterior tibial remains ununited once out of three times, the posterior tibial and flexor longus digitorum become either united to the bone or to the sheath, or are not united at all—in either way so as utterly to destroy the action of the muscle on the foot—in every case of its section. We have no record concerning the behaviour of the peronei tendons under these circumstances; but as they are placed precisely similar to the two last named, there is no reason to suppose that their destruction on section could be avoided.

Thus, on reviewing the whole prevalent treatment of clubfoot by the cutting of tendons, we cannot but come to the inevitable conclusion that its theory is false and its practice injurious.

ORIGINAL COMMUNICATIONS.

CASES OF POSTURAL TREATMENT IN PROLAPSE OF THE FUNIS.

By ROBERT DYCE, M.D., F.R.S. Edin.,
Professor of Midwifery, University of Aberdeen.

As the two following cases were so eminently successful in this but too fatal complication of labour to the child by this method of treatment, I send them for publication.

The first case was conducted by Dr. Thomas Milne, then a student attending my class in this University, and which most opportunely took place shortly after treating of this method. He reports as follows:—

"Mrs. W., aged 27, second pregnancy; a healthy, rather stout, but well-made woman. When I first saw her she had been in labour for three hours. The membranes had ruptured some time before. The os uteri was fully dilated. The head presented naturally, and was partially through the brim, and hanging in the vagina, and projecting beyond the external parts, was a loop of the funis; it was pulsating feebly, which ceased during every pain. The pains were short, and recurring about every ten or twelve minutes. I endeavoured to push up the cord in the interval of the pain, with the patient lying in the usual obstetric position, but failed; when remembering what you recently, in the course of lectures, had been describing of the success attending the 'postural method' as proposed by Dr. Thomas, of New York, I at once placed the patient on her elbows and knees, with the head and shoulders lower than the pelvis. I now pressed the head of the child a little up, and then steadily endeavoured to push up the cord; it passed away most readily, but during the next pain it came down as before. I again, in the interval of pain, put it up, but the next pain brought it down. The third time I passed my whole hand into the vagina, and carried the cord beyond the head; when the pain came on, I could only feel it with the tip of my finger, and when the pain left the funis had slipped beyond my reach, and did not again return. The patient was kept in the same position until the child's head was fairly in the cavity of the pelvis and nearly touching the perinæum. I then allowed her to take the usual position, and in about two hours the child was born alive, though rather feeble. Both mother and child have since done well."

The second case of funis presentation was further complicated with placenta prævia.

Mrs. M., during her fifth pregnancy, in the latter months had three several sudden discharges of blood from the vagina—the first time during the night, the second time when dressing in the morning, and the third time also in the morning the day before her confinement; on all occasions the discharge stopped suddenly, and proceeded from no accident or cause on her part. The symptoms were suspicious of placental presentation, but as she wanted a good many weeks from her full time by her own calculation, and more especially as the loss of blood had produced no particular constitutional disturbance, I risked the uncertainty by not making any examination. When summoned on the night of her confinement (twelve hours after the last flooding), I was fully prepared for the announcement that the flooding had returned, but on inquiry I was rejoiced to learn that the waters and not blood had come off—in fact, there was not a stain upon her linen—and that the liquor amnii had been discharged. On now making an examination, I was met by the funis, not merely a loop, but a mass which the hand could scarcely grasp. She had then no pain, but she had had during the evening some weak and distant indications of uterine action. The funis was very tense, and pulsated strongly; the head could be felt through the os, which was open to the size of half-a-crown, and very dilatable. The external parts were also relaxed. I endeavoured to return the funis while she lay on her left side, but as fast as one portion passed up, another came down. Determining to try the "postural method," she was placed on her knees and elbows, the pillows being removed, when, with the slightest possible pressure, the whole mass of funis passed at once into the uterus. I observed also on this, as on the subsequent attempts, that there was no tenseness of the funis, as if the present position had removed some cause of pressure or obstruction, but when in the ordinary obstetric position the cord was tense and resilient when touched. Finding that on withdrawing my hand prolapse immediately took place, I determined to induce pain, hoping that the descent of the head would prevent its return. I gave her at intervals of ten minutes three several doses of a full teaspoonful of Battley's liquor secalis. Strong pains followed the last dose. The postural treatment was then resumed, and the funis as readily replaced in the interval of pain as before, with the exception of a small knuckle, which seemed adhering near the cervix. The next pain brought it partially down, but on a third attempt, my hand being entirely within the vagina, the funis was passed beyond the head, which was now descending, and retained there with great ease. In another pain it slipped beyond my reach, and gave no further trouble; but still the little knuckle-like portion remained, and which I now discovered to be the placental extremity of the cord and the mass of placenta itself attached closely to the cervix. The patient was now allowed to take the ordinary position, and the child was born in fifteen minutes, strong and healthy.

This plan of treatment was originally proposed by Dr. Gaillard Thomas, of New York, in a paper published in the *New York Medical Journal* for March, 1858, and, although several years have elapsed since that time, the method proposed does not seem either sufficiently known, or, if known, is not appreciated, by the Profession. It seems very clear from the numerous methods proposed to remedy this complication, that no one of them can be depended upon for saving the child, as even in the ablest hands the mortality is fearfully great. Churchill states that the mortality is greater than in any other order of practicable labour, more than half of the children in which the funis was prolapsed being lost. Collins lost 73 out of 97 cases, Clark 49 out of 66. I might extend this catalogue, but the fact is so universally admitted, whatever plan is adopted, that it will be unnecessary. Any suggestion, therefore, that holds out a prospect of greater success than has hitherto been attained is deserving of more attention from the Profession. The few published cases scarcely warrant a comparison being made between the result of the postural treatment and the numerous old methods. I feel, however, assured that when it shall come to be more generally known and recognised by the Profession, the rate of mortality will be very materially lessened; besides this, the facility with which it may be accomplished is greatly in its favour, while the entire absence of all danger either to mother or child is a matter of supreme importance. Dr. Thomas's rules are few and simple, and are applicable equally to cases where the membranes are entire as well as where they have been ruptured.

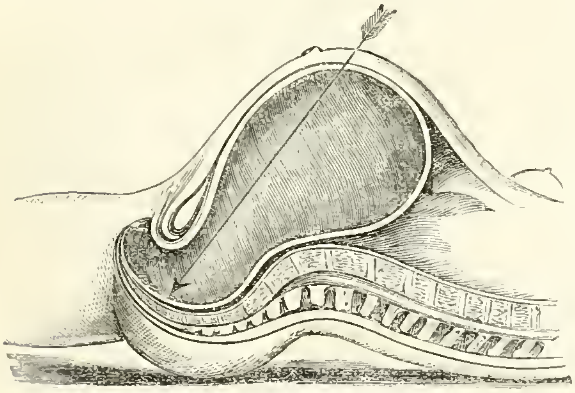
(c) Wernher, "Handbuch der Chirurgie," vol. iii. p. 589.
(f) Müller's Archiv, 1851, p. 547.
(g) In my work, "On the Cure of Clubfoot without Cutting Tendons, gave tables proving these facts; here results only will be mentioned.

First, if the membranes are entire and the cord detected, he at once places the woman in position, and trusts to this for its return into the uterus, and uses no manual assistance.

Secondly, if the waters have escaped and left the funis below the head, he places the woman in position and pushes it up with the hand, then induces pain either by friction, or better by ergot, and if the presenting part should so occupy the pelvis as to prevent its return by the hand, he uses a gum elastic catheter and tape as a *porte-cordon;* and I would thirdly suggest, from the experience of the two reported cases, that the whole hand should be introduced into the vagina, and if the head interferes push it up and carry the cord beyond the head, having previously induced pain by ergot.

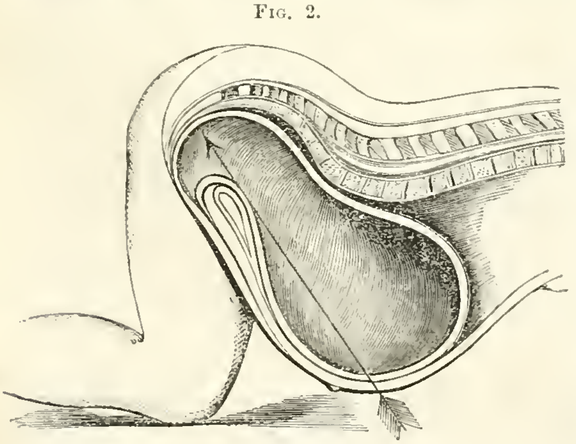
He believes the causes of the persistence of this accident whatever may have first produced it) to be mainly the slippery nature of the cord, and, secondly, the inclined plane offered by the uterus by which to roll out of its cavity; and his principle of treatment is to invert this plane, thus turning not only this plane, but the lubricity of the cord to our advantage. This he found could be readily accomplished by placing the woman on her knees and elbows with the head down upon the bed, thus inverting the uterine axis. The accompanying plate, which is copied from Dr. Thomas's paper, shows the principle of the practice better than by words.

Fig. 1.



In Fig. 1 the arrow represents the direction of the uterine axis, which is forwards and downwards, the woman being on her back.

Fig. 2.



In Fig. 2 this axis is represented inverted by the change of position.

Another American author, Dr. Brandies, of Louisville, who has published three successful cases, doubts the success of this method when the waters have entirely escaped, and the uterus firmly contracted around the child; but the cases I have now detailed disprove this.

Dr. Alexander Simpson, of Glasgow, three years ago, also published a very interesting and complicated case where this practice was equally successful. There can be no doubt, therefore, of its practicability as well as perfect success in saving the child's life. Should any difficulty occur in replacing the cord, whether arising from passive or active contraction of the uterus, I would strongly recommend the use of chloroform, which would greatly facilitate the operation by inducing perfect relaxation of the whole uterus.

ON THE

OCCURRENCE OF CASEIN IN URINE.

By WILLIAM DANIEL MOORE, M.D. Dub. et Cantab., M.R.I.A.

Dr. J. Franz Simon, in his "Animal Chemistry," remarks that "casein has never yet, so far as I know, been observed as a single extraneous constituent of the urine, as albumen sometimes seems to occur, but has always been found in combination with fat, and in all probability also with sugar, forming milky urine."(a)

It is not very uncommon to meet with cases of albuminous urine in which the albumen seems occasionally to assume a caseous character, but I have just now met with an instance in which the replacement of albumen by casein occurred so suddenly and so completely that I think it well to place the fact on record. The urine, though containing a few oil globules, had none of the external characters of fatty or milky urine.

The urine, which I have had, during the last four months, occasional opportunities of examining, was usually rather turbid, very slightly acid, contained but a small proportion of urea, and deposited a small amount of whitish sediment, in which were seen under the microscope, with some variations from time to time, fat globules, numerous blood-corpuscles, epithelial and waxy tube-casts, and vibriones. Except on one occasion (October 27) the urine contained so much albumen that on the application of heat and the addition of dilute nitric acid it became very nearly completely solid. On the occasion referred to the quantity of albumen was about half the usual amount. The specific gravity fell gradually from 1·014 on the 29th June, and 1·017 on the 6th July, to 1·0085 on the 13th of October. On the day last mentioned I have it noted as being still very highly albuminous, and containing also casein. On the 27th, when I next examined the urine of the same patient, it was acid, its specific gravity was 1·0105; it contained no casein; the albumen was, as above stated, considerably diminished; the urine deposited blood-corpuscles, waxy casts, and spermatozoa.

Nov. 1.—The urine was, for the first time, slightly alkaline; its specific gravity was 1·012; and it was again *very highly albuminous, completely solidifying on the application of heat and the addition of a few drops of dilute nitric acid.*

2nd.—On examining a specimen brought to me to-day, I found that a most remarkable change had taken place since yesterday. The urine was still slightly alkaline; its specific gravity was 1·015. *It no longer coagulated on the application of heat and addition of dilute nitric acid,* separately or combined, though it was by either turned milky, and then passed milky through a double filter. *On adding a few drops of acetic acid to the clear urine* (after subsidence it became perfectly clear), *and then heating the fluid, coagulation was produced, and the filtrate subsequently obtained was clear* and nearly colourless. The urine, when submitted to evaporation, *covered itself rapidly from time to time with a caseous pellicle;* that is, as quickly as one membrane-like pellicle was removed, another was produced. The reactions of this day, which I have italicised, are evidently not those of albumen, but they are precisely those of casein. This specimen contained, like most of the others, very little urea. On standing, it deposited very numerous blood corpuscles, some mucus and oil globules, and a few spermatozoa. No tube-casts were seen under the microscope. As it was evident, from the large number of blood-corpuscles contained in the deposit, that much blood was present in the urine, while no albumen, but much casein, was found in the latter, it would appear as if the albumen of the blood itself had, in the short space of twenty-four hours, undergone an extensive caseous modification.

(a) "Animal Chemistry," &c., translated and edited by George E. Day, M.A. and L.M. Cantab. London: Sydenham Society. 1846. Vol. ii. p. 190.

P.S.—Since the above was written I have had two opportunities of examining specimens of urine from the same patient. Both specimens were very highly albuminous, and in neither was any evidence of the presence of casein discoverable. The first, received November 10, was slightly alkaline, specific gravity 1·012, and contained but little urea. On standing, a slight whitish deposit took place, which, under the microscope, exhibited numerous blood and mucus corpuscles, a few oil-globules, and some compound inflammatory globules. The second, at present under examination, is slightly acid and yields a larger proportion of urea than the previous specimen did. Its specific gravity is 1·014.

Dublin.

STRIPED MUSCLE.

By C. MACNAMARA, M.D.,
Surgeon to the Calcutta Ophthalmic Hospital.

During the past ten years I have been working more or less steadily with one of Ross's eighth and one-sixteenth of an inch glass, but within the last six months with a Powell and Lealand's one-fiftieth of an inch, magnifying about 2800 diameters, and with it the observations I have now to detail have been made. Of the various kinds of muscular tissues the mylohyoid of the chameleon affords probably the most beautiful specimens. Dr. Beale's little favourite, the *Hyla arborea*, is not, I fancy, to be had in India; the *Hyla versicolor* may, however, be procured, but does not, according to my experience, afford such perfect specimens as the chameleon. Dr. Cameron, of Monghyr, kindly sent me down six of these curious creatures some time since. They have one after the other been killed and injected with Beale's blue solution, and the subsequent steps he describes in preparing tissues for examination under the higher powers of the microscope have been strictly attended to. (*Vide* Dr. Beale's book, "How to Work with the Microscope." Third edition. Page 204.) I will confine my remarks to the striped muscle of the vertebrata. It is composed of one or more bundles of fibres, the whole being enclosed in connective tissue known as the sheath of the muscle. Numerous septa dip into the substance of the muscle from this sheath, so as to divide it into compartments of an irregular shape and size. Each of these is filled by a bundle of muscular fibres, the vessels and nerves ramify in the connective tissue of the septa, and are thus brought into immediate contact with the muscular fibres.

If a bundle of muscular fibres is carefully examined under a low power, it will be found to consist of numerous fibres called "ultimate fibres of muscle." Each ultimate fibre runs continuously from one end of the fibre to the other end, and is attached at either extremity to a fibrous structure which usually assumes the form of a tendon; consequently the length of the ultimate fibre depends upon the length of the muscle, in the case of the sartorius being perhaps upwards of two feet, and in the stapedius a few lines in length. The diameter of the ultimate fibre varies according to the degree of development of its contractile element, as I shall presently explain. After a muscle has been kept in glycerine for a time, we may easily isolate a bundle of these muscular fibres; the tissues being gently torn apart, a few ultimate fibres may be examined under a fiftieth of an inch glass.

Each ultimate muscular fibre will be found to be encased in a sheath of homogeneous tissue called the sarcolemma, which is very apt to be thrown into perpendicular elevations and depressions, so that it is a common occurrence to see the ultimate fibre streaked by dark lines running in the direction of the length of the fibre, produced by the wrinkled surface of the sarcolemma. We may also notice elongated masses of germinal matter (coloured by the carmine we have used in making the preparation) scattered at pretty regular intervals throughout the sarcolemma. They are elongated in the direction of the length of the muscle, and are situated either above or below, or it may be on either side of the fibre in the substance of the sarcolemma itself. No doubt it is from these comparatively large masses of germinal matter that not only the sarcolemma, but the contractile tissue within it, is formed.

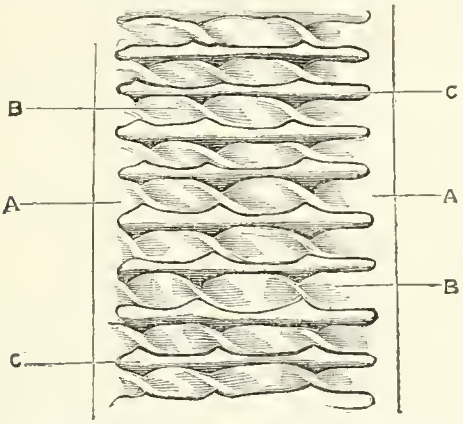
With regard to the arrangements of the contents of the sarcolemma—that is, the essential and characteristic element of the striped muscle—I may compare it to a ladder of contractile tissue, the steps or horizontal bars of the ladder being, however, spiral bands, whereas its side pieces or perpendicular supports are flat bands running continuously from one end of the muscle to the other end. The horizontal bars connect these perpendicular ones, but, as above stated, are curled upon themselves like a spiral spring.

As to the contractile tissue, it appears to me to be a homogeneous substance, its property being to contract in obedience to the nervous force set in motion either by a voluntary or a reflex stimulus. I believe the unstriped muscle affords us one of the least complicated examples of this contractile tissue to be found in the human subject, and I hold that the crystalline lens is equally muscle, and probably the most complex arrangement of contractile tissue to be met with. By this I mean that I have every reason to suppose the lens is capable of altering the curvature of its anterior surface independently of the ciliary muscle. I conceive the bands of which it is composed are constructed of contractile tissue arranged in a peculiar manner, that they may fulfil a special purpose; but whatever form the contractile tissue may take, its properties are the same, the disposition of its elements being adapted to the mechanical purposes for which it is required. Each primitive fibre of muscle, therefore, is formed of two parallel bands of this contractile tissue, which run continuously from one end of the muscle to the other end, and these parallel bands are united by cross bands, which, however, are continuous with the side bands, so that, to carry our simile a step further, we must liken this arrangement, not to an ordinary ladder—each step or bar being a separate piece of wood—but suppose that the ladder has been carved out of a solid mass, the spaces between the bars having been scooped out of the plank from which we imagine the ladder to have been made. Each one of these cross bars or steps is arranged as a spiral band. Enclose the whole of this in a layer of sarcolemma, and we have a primitive fibre; take a bundle of these and bind them round in connective tissue, and we have a bundle of muscular fibre; and of a collection of these, again, the bulk of the muscle is composed.

This arrangement of the contractile element of muscle is so beautiful, and appears to me so admirably adapted for the purpose for which it is intended, that having got the idea into my head I feared lest my imagination might have filled up the picture, and I, therefore, have taken the precaution, before committing myself to the expression of these views, to get Dr. Francis, Principal of the Medical College, to examine my specimens. He has kindly afforded me all the aid in his power, getting me not only normal but morbid specimens of muscle, and has satisfied himself that the description I have above given is in accordance with the appearance of the parts. It was necessary to take precautions of this kind, for, as Mr. Bowman justly observes, there is no more troublesome or complicated object to examine than striped muscle. I have purposely avoided entering into a description of the appearance caused by the shadows which these spiral bands cast, having simply described the arrangement which I believe to exist, and which, to my mind, affords a remarkable proof of the wonderful adaptation of the parts to the purposes for which they were intended.

The apparent object of this disposition of the contractile element in muscular fibre is to allow of the contraction of the muscle in length without any great augmentation in its bulk, the spaces between the horizontal bars allowing of this, and at the same time the spiral arrangement of the cross bands allows of their elongation and contraction upon themselves without any stretching or pulling of the delicate substance of which they are composed. It must be remembered with what marvellous rapidity these changes may take place—as, for example, in the muscular fibre of a pianist performing an elaborate piece of music. The arrangement I have described also explains the fact stated by Mr. Bowman that "a muscle in action becomes shorter and thicker, and it is well ascertained by experiment often repeated that these changes in its relative dimensions are accurately proportioned to one another. *The whole organ neither gains nor loses in bulk.*" But it may be said, surely the arm of the blacksmith does increase in size as the muscles contract. Undoubtedly this is the case; but from constant hard work the contractile tissue of his biceps, for instance, becomes hypertrophied, and, consequently, more than fills up the spaces between the bars in contracting, and hence it bulges outwards in all directions.

That there are open spaces between the horizontal bands appears to me certain from the appearance of the parts, and from the fact that the contractile tissue—and, in fact, all the structures of the body—may be stained with carmine, but these interspaces never show the slightest appearance of any colour, their hue in many specimens being exactly similar to that of the field of the microscope where no tissue intervenes between it and the lamp used for illuminating the object. What, then, is the meaning of the perpendicular and horizontal lines noticed in a specimen of muscular fibre when examined by a quarter or twelfth of an inch glass? The perpendicular lines may be produced either from the line of union of two primitive fibres or from the creasing of the sarcolemma or the fibrous case, which encloses a bundle of fibres, but an isolated primitive fibre, when examined under a high power, presents no appearance of longitudinal striation, provided its fibrous case and sarcolemma have been destroyed or rendered too transparent to be seen. The dark cross lines are caused by the shadows cast upon the open spaces, or by the approximation of two horizontal bars; under a high power, these dark spaces may be resolved into two dark lines bordering the horizontal bands and an inter-space of a very much lighter colour, which is often, as I have above stated, of the same hue as the field of the microscope.



A A, Longitudinal bands; B B, Transverse spiral bands (both coloured by carmine); C C, Interspaces with dark border from shade cast by transverse bands.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

NOTES ON THE TREATMENT OF FRACTURES AT THE NORTH STAFFORDSHIRE INFIRMARY.

By C. ORTON, Esq., Newcastle-under-Lyne.

The treatment of fractures is a subject of great interest and value, not only that one may learn the best methods for the prevention of lameness, but also for self-interest; for where damages are so often sought to be recovered for the maltreatment of broken limbs, it is important to be well up in the subject, and to be able to refer to many opinions.

The following plans were those adopted at the North Staffordshire Infirmary:—

Fractures of the Femur.

Shaft.—Placing the thigh on a double inclined plane with short splint anteriorly if necessary. With Liston's long splint, making extension either on ankle or on knee, with a strip of calico running on either side of the leg and forming a loop at sole of foot.

Counter-extension on Perineum.—I have never used weights to procure extension, but as the plan seems to have some advantages, I shall take the earliest opportunity of trying it. I can, however, speak most favourably of the plan with Liston's splint and extension on ankle. I have met with the best results; many cases, indeed, have left the Hospital without any shortening whatever; only one patient, of whom I will make mention hereafter, had shortening to more than half an inch. I grant that the perineum, ankle, and more especially the back of the tendo Achillis, may become chafed and sore, but with a well-padded perineal band and plenty of cotton wool around the ankle there is little risk; in fact, when it did occur, I blamed myself, not the system. I only recollect the perineum becoming sore in one case, but after the first week or ten days I do not attach so much importance to counter-extension. I am much in favour of bandaging the whole limb and doing it well, as it gives great relief to the patient, especially where there is spasm of the limb. Bandages can be applied to remain on several weeks. I use three from six to eight yards in length—one for the foot and ankle, which need only be disturbed once, or twice at most; one for the leg and knee, changed when dirty; one for the thigh, the last turns of which are passed round the body and thigh and stitched to those turns that pass round the thigh alone. The removal of this third bandage depends on the subsidence of the swelling and restlessness of the patient, but often remains on a fortnight.

Fractures in the vicinity of the knee-joint, or where the soft parts are injured, and compound fractures, are treated by means of the double inclined plane.

Starch or gum and chalk bandages were usually applied at the end of a month or eight weeks, according to the severity of the accident and age of the patient.

I will mention one case of fracture of the femur, interesting only from the amount of trouble and anxiety it occasioned. A very powerful man was admitted, subject to very violent epileptic fits, from which he was seldom free for more than a few days at a time. Neither Liston's nor McIntyre's splints were of any service, as during the seizures he tore off or effectually disturbed the appliances. The only plan that succeeded was to encase the limb in many layers of gum and chalk bandage, and outside of all a thick crust of plaster of Paris and gum, upon which his fingers could make only such impressions as could be easily mended. Firm union took place after three months, and the shortening of the limb was a little over one inch and a half.

Fractures of the Leg,

of both bones, treated by—1. Side splints of pasteboard, wood, or metal; 2. Salter's apparatus; 3. McIntyre's splint.

To the last-named splint I give my decided preference. It is easily applied, and is very comfortable. The foot can be placed at any angle, which can be changed occasionally without disturbing any strap or bandage, or altering the position of the limb. The thigh, knee, ankle, and foot are secured firmly to the splint, leaving the injured parts open to inspection and the application of topical measures. There is generally no need of interfering with the leg until pretty firm union has taken place, when a gum and chalk bandage can be applied, and the patient allowed to get up.

I have found Salter's apparatus most serviceable when the patient is unable (in private unwilling) to keep the recumbent posture.

Side splints I have used in a great number of cases with the best results, but they are more troublesome and infinitely less comfortable than McIntyre's, and the bones are more liable to get displaced.

I have never encased a fracture immediately on admission; few indeed of the cases would admit of it, owing to the great majority of the cases of the fractures being direct, the soft parts therefore being more or less injured, and swelling often great. If, after the leg is encased, it should become painfully swollen or the bandage loose, I slit it up and reapply it with an additional bandage lightly or more tightly, as circumstances require. The felt splints have been tried by Mr. Spanton, but the McIntyre is still, I believe, principally adopted.

Fracture of the Fibula.

Lay the leg on its outer side on a pillow, strap it to it for a few days, and when the condition of the soft parts allows of it encase it.

Compound Fractures of the Leg.

Salter's or McIntyre's splint used.

THE LONDON HOSPITAL.

STRANGULATED INGUINAL HERNIA — OPERATION ON SEVENTH DAY—RECOVERY.

(Under the care of Mr. COUPER.)

The following case of strangulated hernia is of interest on account of an intimate vascular connexion between the sac and its contents, which appears to have been mainly instrumental in maintaining the vitality of the protruded intestine during six days of tight strangulation. From the softness and colour of the lymph there is reason to suppose that the adhesion followed the strangulation, and the probability of this is increased by the patient's positive statement that the rupture was reducible up to the commencement of the present attack. The case thus serves to illustrate the rapidity with which new blood-vessels are developed. The extent and intimacy of the union made it difficult to distinguish the sac from the contained intestine, and to avoid wounding the latter.

G. T., a tall and powerful labourer, aged 22, was brought to the London Hospital in a state of collapse, on Tuesday, July 10. He had had a small reducible inguinal rupture of the right side for many years. No truss had been worn, but the contents of the sac were generally returned into the abdomen at night, and came down when the patient rose. Six days before admission, while at work, he felt some pain in the rupture, and was unable to reduce it as usual. The pain steadily increased. He vomited repeatedly—nearly every time he ate or drank during six days. His nights were sleepless, and he had constant pain, aggravated at intervals by cramp. The bowels had been moved shortly before the attack, but not since, and the matters vomited by him in the Hospital had the smell, colour, and other physical qualities of liquid fæces. His flagging pulse, brown dry tongue, the sunken expression of his countenance, and his general aspect of extreme exhaustion tallied with the history given by him. The rupture was less in size than a hen's egg, and had not reached the scrotum. No impulse was communicated to it when the patient coughed. It was very tense, and very tender to the touch. Taking into account the duration of the strangulation, Mr. Couper deemed taxis imprudent, as involving the risk of returning a piece of gangrenous or ruptured intestine into the cavity of the peritoneum. For the same reason he determined, contrary to custom, to lay open the sac, in order that the contained gut might not be disturbed until its condition had been ascertained. He remarked that gangrene of the gut within the sac was occasionally announced by infiltration of the skin and connective tissue over the protrusion, which gave it a peculiar brawny feel. The absence of that sign, however, in the case before him afforded no certainty that the gut had not perished. On the other hand, the smallness of the rupture and the tightness and duration of the strangulation were grounds for fearing that the intestine was greatly damaged. Complete exploration was therefore thought advisable.

Chloroform having been administered, the usual preliminary dissection exposed the sac fully. In order to make sure that the sac had been reached, the operator tried to pinch up a fold of it between the finger and thumb, but failed to separate it from its contents. The whole felt as a continuous mass would, and although its surface had the ordinary look of a hernial sac, some doubt now arose as to its real nature. The finger carried along it into the inguinal canal did not reach the abdomen, but was directed outside the peritoneum. It was plain that the doubt could not be solved without further dissection—a procedure not unattended with risk in the event of the protrusion proving to be gut denuded of peritoneum. The surface was slowly and cautiously divided, the manœuvre being facilitated by pressing the sides of the mass, so as to augment its tension and cause the fibres to separate in succession as they were divided. When a few layers had been cut, a hole appeared, from which a drop or two of reddish serum issued. Through this a grooved director was insinuated between the sac and its contents, breaking down some soft adhesions in its course. The sac was now freely opened, and found united at all points by lymph to a knuckle of thick fleshy and strongly-inflamed small intestine. The lymph, although recent, contained numerous blood-vessels, and oozed freely both on the surface of the gut and on the inner surface of the sac, when separation had been effected by the finger. Simple exposure to the air soon checked this oozing, and the gut was then returned to the abdomen. The return, however, was not effected until a tight annular stricture had been divided. This stricture was sharp and rigid, and the intestine was deeply indented by it; and, indeed, it was hardly conceivable that the gut could, at the end of six days, have wholly escaped gangrene but for the extent of its vascular connexion with the fundus of the sac. It showed no sign of death. Its whole surface was bright red, and coarsely granular from irregular laceration of the lymph.

The administration of two grains of opium at the close of the operation did not prevent two copious evacuations from the bowels a few hours after. A bag of ice large enough to cover the front of the abdomen was applied with the view of allaying the peritonitis which was present at the time of the operation.

At the end of twenty-four hours the pulse was much less cordy, and the patient had been refreshed by a long sleep, the first for many nights, but there was considerable tympanitis of the belly. Warm fomentations were substituted for the ice; the tympanitis subsided quickly; the pulse fell, and became soft and full; the tongue gradually cleaned; the appetite returned; and the pinched and exhausted aspect disappeared.

Convalescence was rapid. On August 14 the wound had cicatrised, and a truss was worn without discomfort. The patient left the Hospital well on August 17.

STRANGULATED INGUINAL HERNIA IN A MAN 81 YEARS OLD—REDUCTION BY TAXIS. STRANGULATED CONGENITAL HERNIA—REDUCTION BY TAXIS.

(Under the care of Mr. COUPER.)

In the week during which this patient was admitted two additional cases of strangulated inguino-scrotal hernia came under Mr. Couper's care at the Hospital. Both ruptures were reduced by taxis. One was in a man, aged 81, after forty-eight hours' strangulation; the other was a hernia into the tunica vaginalis testis which, according to the patient's account, had made its first appearance in early youth. A truss had been worn which only partly retained the protrusion. During a fit of coughing on the morning of his admission he felt the protrusion swell below the truss. He was then seized with pain in the rupture, and vomited several times. After six or seven hours' strangulation Mr. Greenaway reduced a portion of the rupture by taxis. When seen by Mr. Couper the upper part of the swelling was soft, and could be emptied into the belly with a gurgling sound; it also received an expansive impulse when the patient coughed, but the impulse was confined to it. When the hands were placed respectively on the upper and lower extremities of the rupture, pressure made by one hand communicated no impulse to the other, and a slightly indented spot was at length found below the middle of the rupture, at which impulse coming in either direction was arrested. The part below this spot was more tense than that above, and the testicle could be felt in it. This indented spot corresponded to the unclosed canal of the tunica vaginalis. By steady prolonged pressure the lower was made to empty itself into the upper division of the rupture, and the gurgle which accompanied the ascent indicated the presence of intestine within the tunica vaginalis. Apparently both divisions of the sac could be completely emptied into the abdomen, and no adhesion of bowel to the testis or tunica vaginalis could be detected. In two days the man was able to leave the Hospital.

ST. BARTHOLOMEW'S HOSPITAL, CHATHAM.

FRACTURED SPINE (?)—RECOVERY.

(From notes by Dr. ATKINSON.)

THIS case is an exceedingly doubtful one; we can hardly imagine that a fracture of the spine could be unattended with either loss of sensation or paralysis. It appears, however, to be one of those cases where absolute fracture has just been escaped, but the injury, nevertheless, very severe. If fracture or dislocation really did occur, the case is one of great interest.

William G., aged 42, a railway porter, residing at Strood, was admitted into St. Bartholomew's Hospital, Chatham, June 9, 1865, with severe injury to the spine. The back was greatly bent, and, on examination, showed an angular prominence about the lower dorsal vertebræ. The pelvis was capable of being twisted in the opposite direction to the trunk, though it caused him excruciating pain. He complained of great tightness about the umbilicus, and pricking about the feet. There was no loss of sensation, however, nor any paralysis. The urine passed was strongly ammoniacal.

The accident, he said, was caused by his head coming in contact with an arch whilst driving, and being precipitated from his seat into the van below.

On admission he was ordered a scruple of pulv. rhei c. hyd. stat., three leeches to the injured spot, and beef-tea diet. He was also to be kept strictly on his back.

20th.—The bowels not being moved, he was ordered an enema of turpentine, also two more leeches.

26th.—Going on well. The back, however, beginning to get raw, he was propped up on one side with sand-bags, and these were ordered to be changed from side to side daily. The urine has ceased to be ammoniacal, but he still complains of tightness about the umbilicus. No paralysis.

July 17.—Going on well. Ordered middle diet, without porter, and half-a-pint of milk.

August 7.—Discharged cured. No angular prominence could be detected on examination, though there was some thickening perceptible about the part.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 17.

◆

THE CHOLERA EPIDEMIC.

The Lernæan Hydra was not more tenacious of life than is the present cholera epidemic in London. Stamped out in one place by vigilant and uncompromising sanitary regulations, it speedily breaks out anew in some other locality where bad hygienic conditions specially invite its appearance, and thus its presence seems indefinitely prolonged. In a former article on this subject we gave the figures showing the weekly progress both of cholera and diarrhœa in London during three epidemics, and we cannot more forcibly illustrate the marked difference in the course of the twin diseases this year than by repeating the comparative results and extending them down to the latest date.

Weeks of the year.	Cholera and diarrhœa.		
	1849.	1854.	1866.
22nd* . . .	25	24	21
23rd . . .	42	32	25
24th . . .	78	32	23
25th . . .	66	39	44
26th . . .	154	25	73
27th . . .	198	33	116
28th . . .	428	51	182
29th . . .	809	84	567
30th . . .	1007	217	1251
31st . . .	1105	541	1407
32nd . . .	996	839	1045
33rd . . .	1418	921	649
34th . . .	1512	1061	394
35th . . .	1897	1530	326
36th . . .	2298	2326	289
37th . . .	1962	1781	292
38th . . .	1077	1474	248
39th . . .	597	919	244
40th . . .	423	509	251
41st . . .	201	351	254
42nd . . .	92	241	199
43rd . . .	67	112	144
44th . . .	42	64	101
45th . . .	31	58	100

The above facts, taken from the official returns, show that last week nearly twice as many deaths were returned from cholera and diarrhœa combined as in the corresponding week of 1854, and more than three times as many as in the corresponding week of 1849, although this year a much longer time has elapsed since the epidemic attained its maximum than in the two former years. The distribution of the deaths over the several groups of districts during the last five weeks has proceeded thus:—

	Population estimated to middle of 1866.	Cholera and diarrhœa in week ending				
		Oct. 13.	Oct. 20.	Oct. 27.	Nov. 3.	Nov. 10.
London .	3,037,991	251	199	144	101	100
Districts:—						
West .	511,257	38	19	11	7	8
North .	686,022	41	48	22	13	12
Central .	359,219	41	35	18	16	13
East .	607,915	82	45	33	20	23
South .	873,548	49	52	60	45	44

Nearly half the deaths in the last three weeks have occurred in the South districts, the decline of the epidemic which seemed fairly to have set in having been arrested by a severe outbreak in the town and suburbs of Woolwich. On October 25 Dr. Finch, the Medical Officer of Health for Charlton, thus wrote to the Registrar-General:—

"During the last twenty-four hours a choleraic wave has passed over our parish, and several have been suddenly stricken with the disease, and up to this time seven cases have proved fatal, the duration of the attacks varying from eight to sixteen hours. All these cases have occurred in the marsh districts, in the lower parts of the parish adjoining Woolwich Dockyard. In this neighbourhood there are streets of small houses, built on the marsh land below the level of high-water mark, and also much below the level of the high road. The houses are simply placed on the soil without any basement whatever, and are surrounded by tidal ditches, and from the heavy rainfall of late the water is in many of them up to the level of the floor boards. Our authorities have endeavoured, but without avail, to rectify this state of things. Until the metropolitan main sewer was constructed there was no means whatever of draining any of these houses, and the sewage simply found its way into the adjoining tidal ditches. Now, however, the drainage of the district is being expeditiously carried out by he Board of Works, and as fast as a line of sewer is completed a connexion is made into the main sewer with each house, and the drain cut off from the tidal ditch; but it must be many months before this can be completed, and until then we can only trust in a merciful Providence, for the sanitary means at our command can be of little avail. In the upper parts of the parish and the surrounding neighbourhoods there has been no case of cholera; they are unusually healthy, and are quite free from diarrhœa."

On the 31st, Dr. Finch reported that the disease was rapidly subsiding, and referring to the reason for the suddenness and intensity of the outbreak, he expressed his opinion that it could not "certainly be charged to the water supply," which he believed was good and furnished abundantly for domestic and other purposes to every house by the Kent Water Company. He added, "Since the first alarm of cholera in the metropolis, about three months ago, the supply has been turned on twice a day during the week, and also once on Sunday." In this matter, however, Dr. Finch appears to be at issue with Mr. Grant, C.E., the Assistant-Engineer to the Metropolitan Board of Works, who, in his report on the locality of the outbreak, speaks of parts of Charlton as being without water-tanks or cisterns of any kind, and the closets rarely supplied with water. Mr. Grant's description of the neighbourhood is worth quoting, if but to add another instance to the accumulated evidence in favour of the preventibility of epidemics by sanitary measures.

"Lower or New Charlton, situate between the lower Woolwich-road and the river Thames, comprises about 300 small houses, built upon a peaty quaggy marsh six feet below high-water mark, and bounded on the west side by a wide, stagnant, and foul ditch, which has formed the outlet for a considerable part of the drainage of West-street, and separates the part built upon from the richly-manured market gardens and marsh lands of East Greenwich. The soil, originally most unsuitable for being built upon, has been made much worse by the cesspools and privy pits made for house drainage, and which, when overcharged, are emptied into pits sunk in the little gardens adjoining the houses. In some cases there are sunk tanks for rain-water close to the privies.

"The Local Board has recently laid several lines of pipe sewers and drains for the drainage of these houses into the main outfall sewer; and, in connexion with this work, closet-pans have been fixed in some of these privies, some cesspools have been filled up, and others are about to be. In few, if any, cases, I believe, has water been laid on to these closet-pans, and all those I saw were foul with human excrement.

"In addition to the foregoing, the northern half of West-street, and also of East-street, are 'unmade,' a mass of mud, ruts, and stagnant waters.

"Between East-street and West-street and elsewhere are a number of piggeries. With few exceptions, there are no water-tanks or cisterns of any kind. Water is supplied for about one hour daily by a stand-pipe, from which the women fill any barrel, tub, or pan they may possess; the barrels being often green, mouldy, and leaky.

"The houses are built so that the floors are level with the surface, and are consequently damp and cold. Few, if any, of the houses, though very small, are occupied entirely by one family; two or more being the rule.

"A few recently-built houses in North-street are much superior to the rest, and possess good wrought-iron tanks or cisterns with water laid on to the closet-pans.

"The foregoing may be briefly summarised thus:—

"The site low, subsoil naturally wet, spongy, and bad, made worse by cesspools and by having been made the depository for the foul matter taken out of these; bounded on the west by a wide stagnant and foul ditch which has hitherto taken the overflow of some of the cesspools. The drainage and the water supply are both most imperfect; the small and wretched houses are overcrowded with a population in poor circumstances."

Mr. Grant says that the pumps connected with the main outfall sewer passing through the district have been at work for more than a year and a half, and therefore the branch sewers, which have to be made by the Local Boards, might have been completed long ago but for the interposition of notices and infinite delays before cesspools can be abolished, water laid on, and branch drains made.

"Local Boards," he says, "are powerless in such cases, as at Lower Charlton, where the most wretchedly-built houses are erected in rows upon low-lying marshy ground surcharged with moisture and vegetable matter."

Under such circumstances most people will agree with Mr. Grant that the wonder is the locality should ever be free from epidemic disease; at any rate, the proximity of the great sewer, which has been alleged as a cause for the outbreak, fades into insignificance by the side of the foul air, bad drainage, insufficient water supply, and overcrowding, which are the characteristics of this Tapleyan paradise.

Dr. Farr's account of a personal visit to Woolwich and Charlton confirms the description given by Mr. Grant of the want of a proper supply of water for closet use, as well as of the absence of storage cisterns generally. The Engineer of the Kent Water Company disputes the fact of water having been discontinued to waterclosets on account of non-payment of rates, as had been stated; and he implies that, as the water-rate "always includes the closet," such places are really supplied. The express testimony of impartial witnesses is quite the other way, and the public will judge whose story is most likely to be true.

That the inhabitants of the district should be workmen employed in the Dockyard or the Arsenal is a matter which calls for attention from the Government whose servants these people are. Married or single men, whether earning good or indifferent wages, paid out of the public exchequer, ought to be able to obtain healthy houses, within reasonable distance of their work, and it is not creditable that they should have been reduced to "abject straits" in this respect. If it pays "speculating builders" to run up houses on land "entirely unfit for sites," because dwellings for workmen are indispensable, one would naturally ask whether the Government would have sustained any loss had measures been taken by it to erect houses on suitable sites for the artisans in its own employ.

In any case, the circumstances attending this, the latest eruption of cholera within the metropolitan boundary, are pregnant with lessons such as take, apparently, a great while thoroughly to appreciate; but the end of it all *must* be such an awakening of the national perception as will give unlimited power into the hands of the sanitarians of the future.

ABSOLON *v.* STATHAM.

By long usage the specialty of dentistry has become separated from legitimate Medicine by a tolerably clear demarcation. In fact it forms a profession by itself, affiliated, truly, by the dental licence to the College in Lincoln's Inn-fields, but not possessing any right of membership in that College, nor deriving, as far as we know, any legal protection from it. Yet the more highly educated members of the dental profession have always been met on terms of Professional equality by members of the Medical body. Many of the leading dentists have received the education and possess the diplomas of Surgeons, and are *bonâ fide* members of the Faculty of Medicine. The dental licentiates of the College of Surgeons and members of the Odontological Society, although they practise an art rather than a science, and as professors of that art are clearly separated from Physicians and Surgeons, yet receive, and we trust always will receive, from the Medical Practitioner the right hand of Professional brotherhood. On these grounds the case of Absolon *v.* Statham is one of great interest to the Medical reader. But its interest becomes paramount from the gravity of the questions it involves—questions of vital importance to all members of the Medical staffs of the public institutions of this country.

It is clear that it will no longer be safe for any Physician or Surgeon to practise his Profession in the out-patient rooms and wards of our Hospitals if every case in which his efforts for his patient do not succeed, or terminate unfortunately, is to furnish the basis of a legalised attempt to extort money from his pocket and to ruin his Professional reputation. As the law at present stands, these proceedings can only be stopped by a strong expression of public opinion, and we have lately had occasion to notice that from various causes—the chief being, we believe, the indiscriminate benevolence and self-sacrifice of the Profession itself—the public are most ready to impute evil motives to Medical men, and to endorse all charges, however unfounded, which ignorance or cupidity may bring against them. The only remedy which seems at present applicable is a combination on the part of the Profession to protect its members against legalised attempts of the kind under consideration, and we heartily wish that such a combination were entered into either by means of the existing machinery of our Corporate Bodies, or of the British Medical Association, or by a new Medical Defence Society. A short sketch of the facts adduced at the trial of Absolon *v.* Statham will furnish another to the long array of existing proofs of the necessity of the course we recommend.

The defendant, Mr. Statham, is a dental licentiate of the College of Surgeons, and Surgeon-Dentist to the Great Northern Hospital; the plaintiff, Mrs. Absolon, is a seamstress, and was a gratuitous patient of that Hospital, and under Mr. Statham's care. She stated at the trial that she earned a guinea a week by dress-making prior to the operation which was the ground of the action, but there was no sufficient evidence adduced of the fact, and from the testimony of Mr. Gant, whose patient she had been at the Royal Free Hospital, her capability of continued work would appear doubtful. She had been married at sixteen, and separated from her husband for sixteen years. In August, 1864, she saw Mr. Gant at the Royal Free Hospital; he describes her as being then in a state of extreme nervous excitability—starting at the slightest sound, wincing at the slightest touch. So far from the operation performed by Mr. Statham having caused her state, Mr. Gant's testimony clearly proved that before she had seen Mr. Statham she was suffering from aggravated hysteria; and he asserted his belief that in some respects she was better at the time of the trial than she was when he saw her. After seeing Mr. Gant, she applied at the Great Northern Hospital, and saw the then acting House-Surgeon, Mr. Byers. She told him she was suffering great pain in her face; and he, on finding a number of decayed stumps of teeth, recommended her to see Mr. Statham. This she accordingly did. Mr. Statham applied some anodyne to the gums, and recommended extraction of the stumps as the only radical cure. She objected, and he suggested that she should have chloroform administered to her. She said that fourteen years before she had taken chloroform, but had been told by the Medical man who had administered it, a Mr. Kelly, that she must not take it again on account of its effect on her. Mr. Statham told her she had better consult Mr. Kelly. She said no; that she was not in the habit of seeing him, and that she would be content to take the advice of Mr. Statham and Mr. Byers. She afterwards saw Mr. Byers on the subject of taking chloroform, and he very properly advised that she should be examined by one of the Physicians of the Hospital as to her fitness. Mr. Byers expressly asserts that she asked him to administer it. The next day she went to the Hospital; was examined by Dr. Crucknell, who said that she might take chloroform; of her own accord walked upstairs into the operating-room, took off her bonnet, had chloroform administered to her by Mr. Byers in the presence of the sister in charge of the Hospital and a nurse, and underwent the operation of the removal of six stumps. The operation lasted about twenty minutes. She was then put to bed until the evening, when she was sent home in a cab. Three weeks afterwards she called on Mr. Statham, and giving an account of various nervous symptoms, from which she believed herself to be suffering, ascribed them to having had chloroform administered to her against her will, and threatened him with an action. Mr. Statham in the first instance referred her to his solicitor; but subsequently, very unwisely—whether he were actuated by pure compassion for the woman's apparent incapacity, or by fear of the anxiety and expense of a trial—he offered to contribute to her support until she could resume work. This he did to the amount of about £20, and in addition got her admitted as a patient in several Hospitals and other charitable institutions.

The imprudence of thus contributing to her support was visited on Mr. Statham two years after the occurrence by the present action. It alone gave any colour to the prosecution. For ourselves, we believe that the prime motive which actuated Mr. Statham was charity; but, whatever the motive, it put a powerful engine of attack into the hands of Mr. Montagu Chambers, who, as usual in actions of this kind against members of the Medical Profession, held a brief against the defendant. The charge brought by the plaintiff was that the defendant had assaulted her, and administered chloroform to her, and extracted six teeth without her leave and licence. She stated that Mr. Statham had seized her by the throat, and that, in consequence of this violence, she had suffered in her throat ever since, and that the effect of the chloroform had been to deprive her of the use of her legs. A more preposterous charge was never invented. The assault and violence were certainly out of the question, considering that she of her own accord had taken off her bonnet and walked into the operating-room for the express purpose of having chloroform administered and the operation performed. As to the subsequent effects of the chloroform on her power of locomotion, they were not produced when the plaintiff called on Mr. Statham, three weeks after the operation, to threaten him with an action. In vain, however, did the judge, Mr. Justice Blackburn, sum up entirely in favour of the defendant; in vain did Drs. Richardson, Hyde Salter, Anstie, and Sansom assure the jury that by no possibility could the present state of the woman be traced to the administration of chloroform two years before. A minority of the common jury, influenced by the unscrupulous tirade of Mr. Montagu Chambers, remained unconvinced, and as a result they were discharged without returning a verdict.

It would be quite a work of supererogation did we, in a Medical journal, point out to our readers the impossibility of such an agent as chloroform producing effects such as those ascribed to it by the prosecution. The plain facts of the case were, that the woman had been in a state of aggravated hysteria before the operation, which has continued down to the present time, and that all her symptoms are referable to pre-existing disease. But, in its aspect as a Medical trial, we have no hesitation in saying that a more unjustifiable and cruel attack upon Professional character has never been made. Mr. Statham will, we are certain, receive the sympathy of the whole dental and Medical Professions. He is saddled with all the expenses of his defence, and may yet have to run the gauntlet of another trial, should the woman's case appear a sufficiently promising speculation to attorneys of a certain stamp. As we have said in the former part of this article, it is high time that those to whom is intrusted the treatment of disease should band together for mutual defence, if their best directed and most disinterested exercise of Professional skill is legally allowed to expose them to ruinous law-suits and the most damaging Professional imputations.

NEW INVESTIGATION OF CANCER.

At the last meeting of the Pathological Society, Mr. Hulke made a suggestion of great importance. A similar one, the President stated, had been made by Mr. Holmes during the previous Session. The work the Society has to get through has increased so greatly that there is little time for discussion on particular specimens, and thus one of the great aims of the meetings—the mutual criticism and help of able men—is, in some degree, frustrated. There is, indeed, a fear that, with increasing labours the Society's business—instead of being the cultivation of Pathology as a fundamental part of Medical Science—may degenerate into the holding of meetings for the exhibition of particular specimens of morbid anatomy, as if the specimen were personal property of the exhibitor. Mr. Hulke's proposal, that a committee should be appointed to report on all specimens of cancerous tumours will, we think, if nothing more comes of it, at least economise the time of the Society. We trust it will lead to results of great importance in other ways. It is a step toward the higher organization of the scientific members of this Society into a scientific body.

Now, there are no satisfactory definitions of Cancer, and, as Mr. Hulke remarked, some members describe the tumours they bring forward from a Clinical, some from a Pathological, and others from a Surgical point of view. In this way, whilst Cancer is used as if it were a definition, as a word having a clear and recognised meaning, the term is made to include many things which really differ very widely. Some members speak of cells "characteristic" of cancer, others of tumours as being, so to speak, malignant in intention. The narrowing effects of the division of cancerous diseases into surgical and medical cases have long been a subject of comment by Dr. Wilks. Mr. Hulke's suggestion, if we rightly understood it, is that each cancerous tumour—we may perhaps say every new growth—brought before the Society, should, with a history of the patient's case, be submitted to a committee, whose task it will be to define what the general character of the mass really is anatomically, to state what its elements are microscopically, and to determine what is its intention clinically, so far as this last can be determined by the evidence supplied when the tumour was removed, and by facts obtained some time later.

Much has been said and written about cancer *cells*, and comparatively little attention, it is believed, has been paid to cancerous tumours as *organs* containing other things than masses of cells. No one would, when examining a piece of diseased brain, forget that it contained, besides nerve fibres and cells—its peculiar elements—other essential, although subordinate, constituents, as connective tissue and blood-vessels. In the most random growths there is some sort of organization, however rudimentary. We want an account of the whole of their disreputable life. A tumour is the result of the determination of a certain *part of the body* to mere growth, irrespective of Function. A certain tissue, or part, begins to grow heedlessly, and in disregard of the social duty of orderly subordination to the rest of the organism; yet even these illegitimate products have, doubtless, some kind of laws.

In all Medical studies we seem to require more work after the positive method of investigation. We should work at disease and diseased conditions as they are departures from healthy states of tissues and organs, and not as they approach nosological standards, which at the best are but arbitrary. And we should certainly consider, not only if a given new growth approaches any arbitrary idea of "genuine" cancer, but how far and in what way the new formation is a departure from healthy states of tissues and parts.

Now that such men as Hulke, Cayley, and Wilson Fox (appointed as a provisional committee) are at work, it is almost a matter of satisfaction that they can set about their task with no encumbering definitions. They have not so much to determine whether a given specimen is a cancer or not, as to declare what sort of tissue, in relation to healthy animal tissues, it is made of, and how such abnormal ways of growing interfere with functions of special organs, and with the general health of the body. In such a scheme of work, examination of the simplest abnormal products—even things so trifling as warts—becomes of importance. The inquiry, to be fully carried out, is not limited to any class of morbid human tissues, but to healthy and diseased tissues of other organisms in various stages of their developments. Indeed, the most simple irregular structures, as well as the most malignant growths, in members of the animal kingdom ought to receive a large share of the attention of Pathologists. Work, however, on so large a scale as the last remarks imply can, perhaps, scarcely be expected of a committee.

Now it has been often remarked that "committees do not work;" and, as regards this very Society, it has been said that a committee appointed for a particular investigation—Diseases of the Supra-Renal Capsules—did not succeed in getting much done. We hope, however, for better results from the Committee on Cancer. Its object is continuous work, and not the mere determining of the balance of evidence on some one much disputed question. Besides, it is only doing on a large and systematic scale what has long been partially done without any particular system. If a few energetic and able men can be found to undertake, for the love of such work, the task of examining the various tumours brought before the Society, we have no doubt that much good will come of their labours. Committees are often formed of men who, while they are eminent enough, sufficiently skilful, and sometimes very industrious, have neither much time to work on new subjects, nor opportunities to do together the little work they have time for. The geographical distribution of members of a Society becomes in London a matter of great consequence when the organisation of a committee is thought of. There is to be considered not merely a community of tastes in the choice of members for the sort of work wanted, but the possibilities of the committee being able easily to meet so as to be able to work, or at least to report as a unit. We trust Mr. Hulke's valuable suggestion will be well received by the Council to whom it has been referred. In the meantime, enough work for a fortnight was asked of Mr. Hulke, Dr. Cayley, and Dr. Wilson Fox, until the whole of Mr. Hulke's scheme—of which we believe his brief suggestion on Tuesday week was but an outline—has been laid before the Council.

THE PHILOSOPHY OF FOOD.

No. II.

In continuation of what we have already said on this subject, we may direct attention to the researches of Professor Donders, of Utrecht,(a) but it must be remarked that although but recently made known in this country, they were published in 1864. The conclusions to which he was therefore able to attain are scarcely so satisfactory as those we have already discussed, but we think it worth our while to make known the views of this distinguished physiologist, even although they may add but little to the actual stock of our knowledge.

To begin, then, with the foundation for a rational theory of nutrition, we find that in 1838 Mulder declared that the albuminous compounds contained in plants and animals had an identical chemical constitution. Hence it was speedily assumed that as vegetables contained both azotised and unazotised substances, they were the great preparers of the nitrogenous substances chiefly found in animal tissues. By these, therefore, it was supposed that the bodily structure of graminivorous animals was alone maintained, while they in their turn afforded a diet far richer in nitrogen to man and other animals. Liebig's doctrines, which are now so well known, went further than this, however, distinctly limiting the *rôle* of each of these two great groups of alimentary substances—viz., the so-called *flesh-formers* and the *heat-producers*—and it is with him and his followers (*e.g.*, Bischoff and Voit) that the present controversy is raging. As an example of the radical school now in opposition, we might cite M. Traube, who has founded opinions exactly the reverse of those of Liebig on the observations of Bischoff and Voit, two of Liebig's followers; while a Dutchman has gone so far as to maintain that animal food, if not injurious, is at least quite superfluous, so far as mankind is concerned.

Donders next proceeds to point out the bearing which the doctrine of the "Conservation of Energy" (first discovered by Mayer, in so far at least as it applies to animal mechanics) has upon the phenomena of life. Three factors have to be considered—the food taken into, the products of it excreted from, the body, and the difference between these in so far as their heat-producing powers are concerned, which is the amount of heat developed in the body, *plus* that portion of the heat which appears as actual work. This is the outline of the inquiry, but not by any means the whole of it; the sketch, as we have already pointed out, has been finished, but when the whole picture may be is a very different question. He also discusses the direct and the indirect production of heat within the body—the former produced by the immediate oxidation of combustible material, with no other result than that of raising the bodily temperature; the latter the consequence, we shall say, of muscular contraction. According to Liebig's theory, the former of these was the more important source, and it was supposed that the hydrocarbons contained in the food were entirely devoted to this purpose. What gave the first great blow to this opinion was the discovery of the fact that the blood is rather cooled than heated in the lungs although it was by no means proved that no heat is developed there. But when we consider that chemical change is continually going on in the body, and that either heat or electro-chemical or mechanical work must follow, we see that a considerable amount of heat must be produced by this change, to say nothing of that which must arise from the friction of one part against another when in motion. Donders next sets about the consideration of the nature and origin of muscular work; but, to properly understand this subject, it is necessary first of all to know what is meant by the term work, and we should say that the best idea of this may be got in the lifting of a weight from off the ground. But the weight must be moved. A man might pull at a body the whole day without disturbing it; if so, no work, in this its technical sense, would be done. So, again, one might hold a weight extended for a considerable period, and a feeling of weariness would be the result; still no work would be done, for could not a piece of wood or iron do the same thing, with the great advantage of never getting tired? From the notion of work the idea of motion is inseparable; but it must also be remembered that, although no motion is produced by supporting a weight, still that chemical change is going on in the muscle, and as the energy thus produced does not appear as work, it must be converted into heat. Hence Béclard calls that from which no motion is produced *statical action*, the other he distinguishes as *dynamical;* and this distinction must be continually borne in mind.

(a) "On the Constituents of Food, and their Relation to Muscular Work and Animal Heat." By F. C. Donders. Utrecht. Translated by W. D. Moore, M.D., Examiner in Materia Medica and Medical Jurisprudence, Queen's University, Ireland. Reprinted from the *Dublin Quarterly Journal of Medical Science*, February and May, 1866.

The exact changes which take place in a muscle, when set in motion by a nerve stimulus, have been tolerably well made out, but a rough outline will here suffice. The first step is that the muscle assumes a state similar to that of an elastic band on the stretch—*i.e.*, one ready for contraction, which will take place or not according to the weight to be moved, the extent of the motion being also dependent on this weight. Assuming, therefore, that no motion takes place, that no work is done, the whole of the energy must appear as heat, and should a certain amount be done, that potential energy which remains after the work has been performed—*i.e.*, when the contraction and the weight are exactly equal (and there is always a certain amount over)—will assume the same state. These facts serve to show what has been proved in another manner —viz., that the whole of the bodily energy cannot appear as work, but that in all cases a certain proportion (four-fifths, says Helmholtz) appears as heat.

Donders has also investigated the relations between the production of heat and of mechanical work in order to ascertain whether the albuminous substances contained in an ordinary diet are sufficient for the production of the former; but as we have already laid the results of more recent investigations(b) as to this before our readers, we shall at once pass on to the discussion of the metamorphoses of the nitrogenous tissues.

Most, in fact we might say all, physiologists admit that the greater part of the nitrogen excreted from the body passes out by the kidneys, a small proportion also with the fæces; but it would seem to be still a moot-point whether any escapes by the lungs and skin. Regnault and Reiset's direct experiments would seem to indicate that a certain small proportion escapes in this way; indirect experiments carefully performed favour the other view (Ranke and Thiry); but Donders is inclined to accept the former result instead of the latter.

The observations of Dr. Verloren on insects are also brought forward. This gentleman has observed that bees, when in the larval condition, enclosed in a cell without the possibility of making much exertion, are fed entirely on pollen, a highly nitrogenised substance, but that, when in the condition of mature insects, and undergoing very great exertion, they feed solely on honey—that is to say, on sugar. Further, during their immature life insects excrete a large quantity of urine, and respire only to a very slight extent—that is to say, much urea and little carbonic acid escape from the body, of which he cites as an example the chrysalis of the *Sphinx Ligustri.* Whilst, again, the butterfly, feeding only on honey, may be almost looked upon as an animated lung. Donders does not, however, altogether agree with the conclusions of Verloren.

As to chemical changes in muscle, two or three things worthy of note occur. Probably the most important of these is the increased quantity of creatin and creatinin found in the muscles after exertion of any kind, showing unmistakably that the albuminous matter of the part does undergo a change while acting. So, also, it would appear that lactic acid is produced, and that the accumulation of these within a muscle gives rise to the fatigue which follows prolonged or violent exertion. In the one case, however, the fatigue lasts much longer than in the other, for after greatly prolonged work there must be a greater accumulation than after violent exertion (as supporting a heavy weight) lasting only a short time. In the one case the accumulation is in the muscle, in the latter probably only in the vessels, whose contents are retarded by the contracted fibres. Ranke has shown that this fatigue may be removed by getting rid of the offending substances, whilst the same feeling may be abnormally superinduced by injecting the extract of fatigued muscles, or even lactic acid alone, into a part.

Donders goes on to apply his theory to practice; but, as we have previously insisted, experience is the better guide, and until we have thoroughly succeeded in tracing every constituent of food in its transit through the body, we are not justified in dogmatising, on any theory, as to the superior value of any article of diet. Donders, however, points out one or two very important considerations. The first of these is—that in the food of man too much regard should not be had as to what is required for muscular action, but rather to mental capacity, seeing that human labour is valuable rather as a skilled than as a powerful engine, its greatest value being its universal adaptability. Hence the difference between the diet of the day labourer and the man of business—the one cannot live upon what is best suited to the other's wants. This is still further borne out by what we know as to those nations who live mostly on vegetables; although their bodily development be tolerably good, their mental is rarely in correspondence. Still we must, we think, writing two years after Donders' paper has appeared, and knowing what advances have been made in physiology since that time, take a more advanced stand-point than he is willing to do; for, says he, "they who actually perform work also use albumen, and in general consume more in proportion to the severity of the labour," whilst we, taking everything into consideration, must say that the hydrocarbons seem to be of more importance than the albuminous compounds in such a case. Such is an outline of Donders' published opinions.

Should any of our readers like more information as to the doctrines of the "Conservation of Force," they will find the subject fully discussed in Helmholtz's lectures published in the *Medical Times and Gazette*, vol. i., 1864.

THE WEEK.

CHANGES AT THE LONDON HOSPITAL.

We are always happy to chronicle Hospital changes when the change comes by the resignation of a senior who has for many years filled his post with ability and feels justified in retiring from the hard work the Physicianship to a large Hospital involves. Dr. Fraser, the Senior Physician to the London Hospital, has just resigned. By this resignation the students have lost an able teacher, and the staff a generous colleague. It is to be hoped, however, that Dr. Fraser's name will still be associated with this Hospital by a continuation of his important and instructive clinical memoirs in the volume of Reports the staff annually issues. A little while ago Dr. Parker—unfortunately from ill-health—resigned his post. By these vacancies Dr. Andrew Clark and Dr. Ramskill have been received on the Physicians' staff, and by this infusion of new blood the clinical teaching at this school will still be vigorously conducted.

(b) See "Philosophy of Food," *Medical Times and Gazette*, Oct. 27, 1866.

At this Hospital there is a fourth Assistant-Physician, whose duty it is to act for his colleagues, who have regular duty, when they cannot attend. Dr. Morell Mackenzie was elected to this rather irksome post only a few months ago; he now, luckily, gets regular duty. We understand that the new Assistant-Physician will in all probability be Dr. H. G. Sutton. This gentleman is already one of the pathologists to the Hospital, and his application, we believe, is not opposed. Another gentleman is in the field, but only with an ulterior view to the next vacancy. It is rumoured that when the Alexandra wing is really opened—it was only temporarily occupied during the cholera season—the staff will be increased. This seems very desirable at an Hospital so large as the London.

THE HUNTERIAN SOCIETY.

The Hunterian is one of the most prosperous of our minor Medical societies. Its meetings are well attended, and the papers read are often of great interest; but it is one of the laws of the Society that the discussions shall not be reported in the journals. This resolution is, we suppose, intended to encourage freedom in the expression of opinion, but the rule results in the doings of the Society being comparatively little known. Its dignified name, however, at once attracts attention, and it is considered no slight honour to give the annual Hunterian Oration before the Society. Its title, we may remark in passing, has led to a wrong and ludicrous classification; it has been spoken of in a foreign publication as a "Society of Hunters."

There is one point in connexion with this Society which deserves especial notice just now. One of the metropolitan railway companies requires the Society's room in Bloomfield-street, and thus the Council have had to look out for fresh quarters. This apparent misfortune has led to their having by far the best room for their gatherings of any Medical society in the metropolis. The proprietors of the London Institution in Finsbury-circus have been induced to allow the Hunterian Society to hold its meetings in the large lecture-hall of that building. The only fault of the room is that it is too big, and that the Fellows, even when there is a large muster, will occupy but a fragment of the space in the centre of a large amphitheatre; however, the room is comfortable, and its acoustic qualities seem to be remarkably good. The Fellows are to be congratulated on having secured a place of meeting at once comfortable and splendid.

We would venture to suggest to the Society that they might well institute *short* courses of lectures on a plan similar to that of the Medical Society of London. The room they meet in is well calculated for this purpose.

The Council was occupied at its last meeting with matter of special interest. A proposition was brought forward in support of the application of the brother of the late Dr. Snow for Government aid for the Doctor's sisters. The points dwelt on by this Society in the memorial were the valuable and well-known researches of Dr. Snow on Cholera and on Chloroform, and his extreme unselfishness in working at these subjects. We heartily wish the application may be successful, but we fear, judging by the treatment of Mr. Snider, that the Government, if we take their pecuniary standard as a test, will rate the services of our dead philosopher at a very low rate. It seems almost an established law that the greatest benefactors of the race should be either persecuted or neglected. If Dr. Snow had invented a new variety of lucifer matches and had kept his secret to himself, he might have died rich. He added much to our knowledge of the laws of health, and died poor. George Eliot says—"The same society has had a gibbet for the murderer and a gibbet for the martyr; an execrating hiss for a dastardly act, and as loud a hiss for many a word of truthfulness or just insight—a mixed condition of things which is the sign not of hopeless confusion, but of struggling order." However, although animal vigour still reigns instead of intellectual power, it is a matter comparatively satisfactory that scientific workers are not now-a-days burnt or imprisoned. They are generally merely allowed to starve; nay, in return for a life of unselfish labour, the richest Government the world has ever seen gives a pension varying from £25 to £50, or even £70. Although the giving of these ridiculous pittances renders the general meanness of our free Government only more visible, it is probably a real although rudimentary charity, which will expand as the age becomes more rational.

THE ARMY MEDICAL DEPARTMENT.

It would appear that the authorities regard Ireland as their recruiting ground for maintaining the above service. It is not a little curious to observe the ingenious devices—shall we say dodges?—which are had recourse to. Take the *Irish Times* of the 10th instant for example. It contains a leader on the Department which might have emanated from Whitehall-yard. The causes of dissatisfaction are enumerated, and the article in question concludes by a reference to the late Committee and the recommendations contained in their report, as if those recommendations had already been, or were certain of being, carried out. Now, as far as the army is concerned, *nothing whatever has been done*, and, what is more, nothing will be done so long as candidates are forthcoming. Readers of this journal will know what the latest proceedings of the authorities have been. They care as little for the honour of our Profession as they do for the rights of its individual members. We invite the attention of our readers to the following extract from the *Pall-mall Gazette*. It has been going the round of the papers, and is, of course, admirably calculated to elevate our standing as a Profession!

> "We have accounts from the Army Medical Training School at Netley which are rather unpleasant than surprising. The continued unpopularity of the military service with the Medical Profession, while it has led to the dearth of intelligent candidates and ludicrous displays at examination which we lately noticed, has not apparently otherwise improved the tone and character of the candidates for the right of 'treating' her Majesty's officers and soldiers. For some few years it has been hardly possible to obtain any English students, and not many Scotch. The Irish schools have been swept freely. The present batch of students at Netley exhibits this peculiarity of national distribution in common with others of the last few sessions, but it seems to have a greater variety of *mauvais sujets* than usual. Two of these Medical gentlemen have lately been expelled for drunkenness and one publicly reprimanded. The recent snubbing of the Medical officers of the Guards has not increased the popularity of the service. The Medical journals have constantly protested against the injustice of sweeping away the claims afforded by distinguished service, and it will be necessary to take some decided steps to restore the prestige of the public Medical services. A committee was appointed last year, which included Lord Paulet, Captain Galton, and other representatives of the War Office, to consider the position and remuneration of Medical officers, and the causes which impeded the supply of efficient Medical men for the army. That committee made a number of recommendations, none of which have yet been carried into effect by the Commander-in-Chief. To secure efficiency in the Medical department, even at a considerable increase of pay, would be the most economical reform yet attempted, as the preventible disasters in the Crimea, the preventible mortality in India, and the recent histories of sacrifices to preventible disease at Hong Kong and Bermuda, sufficiently prove."

TEWKESBURY VILLAGE HOSPITAL.

We are glad to see that the Village Hospital at Tewkesbury is going on so favourably in every way; the balance-sheet showed, when examined at the second annual meeting, £160 odd to their credit. We wish some of our London Hospitals were in as good a financial position.

FROM ABROAD.—STORMY OPENING OF THE PARIS FACULTY.

THE Paris Faculty of Medicine has commenced its winter Session with the following staff of Professors :—MM. Gavarret, Medical Physics ; Racle (as substitute for Andral), Pathology and General Therapeutics ; Jarjavy, Anatomy ; Wurtz, Medical Chemistry ; Denonvilliers, Operations and Apparatus ; Monneret, Medical Pathology ; Richet, Surgical Pathology ; Robin, Histology ; Bouillaud, Bucquoy (as substitute for Guillot) and Fournier (as substitute for Grisolle), Clinical Medicine ; Houel (as substitute for Jobert), Laugier, Velpeau, and Nélaton, Clinical Surgery ; and Depaul, Clinical Midwifery. There are also to be delivered certain supplementary courses of lectures by MM. Roger, Diseases of Children ; Lasègue, Mental and Nervous Diseases ; Hardy, Diseases of the Skin ; and Foucher, Diseases of the Eye.

As we have already stated, five Professors have resigned—viz., MM. Andral, born in 1797 ; Cruveilhier, born in 1791 ; Trousseau, born in 1801 ; Jobert, born in 1800 ; and Piorry, born in 1794. M. Trousseau gives the following account of his resignation :—

> "When, well nigh thirty years ago, I was nominated a Professor, and went to call upon Orfila, who was one of my judges (the *concours* then existing in full activity), he said to me : 'Will you have the courage to do what I have decided upon doing ? I am one of the most popular of the Professors of the Faculty, and in all probability shall continue to be so for a good while yet, but as soon as I reach my 65th year, without waiting until the public ceases to follow me, I shall retire.' 'I will engage to do the same,' I replied, 'and you may rely upon it I shall not attain caducity in my chair.' I have kept my word ; for, having just attained my 65th year, I have sent in my resignation. Let younger men come on, and if we all acted thus our Faculty, though deprived of that grand institution the *concours*, would recover its former splendour. The labour of practice is already oppressive for more than sexagenarian shoulders ; that of teaching is impossible."

The Minister of Public Instruction has announced his intention of immediately filling up the vacant chairs, and requests all candidates to at once send in a statement of claims and qualifications, with an account of the work they have done and of the books they have published. Permutation of chairs, a practice much decried by the French Medical reformers, will be put into force ; and it is said that M. Monneret will in this way exchange his chair of internal pathology for that of clinical Medicine, and M. Gosselin will take that of clinical Surgery in place of his chair of external pathology, which will be given to M. Broca.

In place of the "Introductory Lecture" in use with ourselves, the French Faculty is opened by a short address by the Dean, and an oration upon some departed member of the Faculty. Professor Wurtz, who succeeded M. Tardieu as Dean, does not seem to be likely to have a more quiet time of it than his predecessor, judging by the conduct of the students upon this opening day. The annoyance some of our own lecturers have been subjected to by the exuberant spirits of lads in possession of liberty they know not how worthily to employ must have been trifling as compared with what must have been produced at Paris. The scene has been described as a perfect bear-garden—hideous noises, party cries, and thundering choruses taking the place of the respectful decorum which the presence of illustrious and beloved Professors was once wont to inspire. Nor do there seem to have been any tangible grounds for the demonstration beyond a general sense of dissatisfaction with things as they are, and a desire to see the *concours* re-established. In his address the Dean stated that it had been determined to give additional impulse to the culture and application of the biological sciences by the establishment of a practical school of physiology in which the various experiments will be repeated before all the pupils in succession, those of them who show aptitude to be appointed demonstrators. This in all probability will give rise to a great extension of the practice of vivisection which is even now so recklessly pursued in France. The Minister has, moreover, allotted 13,000 francs for the development of the practical study of chemistry, physics, and natural history, on which subjects gratuitous courses of lectures with practical instruction will be delivered by *agrégés*. Professor Jarjavy delivered an oration or *éloge* on Malgaigne ; but notwithstanding the great popularity enjoyed by this celebrated Professor during his lifetime, his eulogist could scarcely get any hearing, the same disturbance and vociferations which had accompanied the address of the Dean rendering him also nearly inaudible. His discourse sinned by its inordinate length and attempting to occupy the attention of an impatient auditory with bibliographical details. It was also a trifle too eulogistic. Malgaigne was indeed a remarkable man, of untiring industry and great capacity for work, and endowed with an eloquence the bitterness of which rendered him a redoubtable antagonist ; but although his works on Operative Medicine, Surgical Anatomy, and Fractures and Dislocations have become classical, he never made any way as a practical Surgeon.

CHOLERA LITERATURE.

THE *Medical Record* of New York for August 1 contains a very fair summary by Dr. A. Clark of the various proceedings which have been recommended on more or less good authority in the treatment of cholera.

A very excellent pamphlet upon cholera has reached us from Canada, put forth by the Department of Agriculture and Statistics, dated Outaouais, March, 1866, with the view of warning and instruction to the population of the province. Authoritative manifestoes of this kind are more likely to carry weight and receive attention than the sometimes not very wise or very consistent, and certainly not very exhaustive, recommendations of some of our local boards, who seem afraid to advise too much lest their own shortcomings should be brought under too prominent notice.

Dr. Nelson, the President of the Medical Board for the district of Montreal, sends us a book on Asiatic cholera, which contains, amongst other things, some remarkable observations made by him and others on the *internal* cold in patients suffering from cholera. He has, it appears, been present on various occasions when the Cæsarean section has been performed on pregnant Roman Catholic women, who have urged it upon their Medical attendants on religious grounds, and on these occasions has passed his hand into the cavity of the living abdomen. In every case he tells us that the viscera felt quite cold. Dr. Beaubien, of Montreal, it seems, has performed this operation three times, but in each case the fœtus was dead. However, whatever others may have done in this way, Dr. Beaubien never operated, we are told, upon women *actually alive*, but on those who had "just expired or were about to expire." Dr. Nelson tells us also that Madame Tavarnier, a celebrated midwife at Montreal, has noted the temperature of the vagina, and told him that she found it lower than that of the atmosphere at the time, during some of the hot days of July and August.

MEDICAL CHIEF MAGISTRATE.—Mr. Thomas Sankey Cooper, F.R.C.S., has been elected Mayor of Canterbury.

THE first evening meeting for the season of the Metropolitan Medical Officers of Health will be held at the Scottish Corporation Hall, Fleet-street, on Saturday, the 17th, at half-past seven. The President, Dr. Druitt, will deliver a short address "On the Position and Duties of Medical Officers of Health, as affected by the Epidemic of Cholera in the Present Year, and by Recent Legislation." The 35th clause of the new Sanitary Act, which confers on local authorities most wholesome powers with reference to the dwellings of the poor, subject to the sanction of the Home Secretary, will be considered.

ANDERSON'S UNIVERSITY, GLASGOW.

The Introductory Lecture was delivered on November 5 by Dr. M'Call Anderson, Lecturer on the Practice of Medicine in Anderson's University, Physician to the Dispensary for Skin Diseases, etc., Glasgow.

Dr. Anderson said: Mr. President and Gentlemen,—In entering upon the duties of Lecturer on Practice of Medicine, my feelings of satisfaction are intimately blended with a deep sense of responsibility—a responsibility which is greatly enhanced from the fact that, as years roll on, the science of Medicine is pressing forward with giant strides, while so radical has been the change, or, if you are so minded, so great has been the improvement in its practice, that the seniors of our Profession, those who have lived to see the change, are still revolving in their own minds and disputing one with another whether this is due to a change of type in disease, or to a more intimate knowledge of pathology, and to a more rational system of treatment. And when I bear in mind that the resignation of my friend, Dr. Cowan, was a source of the deepest regret to those who had the privilege of profiting by his instructions, and that the lectures of Dr. Andrew Anderson, whom he succeeded, were described by one of the greatest of our Medical authorities—himself a distinguished teacher of Medicine—as models "of what every public instructor should aim at"—I say, when I bear all this in mind, I feel that it would ill become me were I lightly to estimate the nature of the task which lies before me. But I trust that if I always discharge the duties of this chair to the best of my ability, I shall not be altogether unsuccessful in my endeavours to inculcate the great principles of Medicine, and to teach you the first elements of its practice.

It is but a short time since we were startled by a leading article in the *Times*—that Medical science has been at a standstill during the present century, the text of which sweeping announcement being the fact that we have been unable to discover a specific for cholera.

But let us pause for a moment to inquire whether Medical science has really been so backward while other sciences have been advancing; whether the present generation of Medical men have been so unsuccessful in their endeavours to mitigate suffering, and to cure the ills which flesh is heir to.

Need I refer, as proof to the contrary, to the glorious discovery of vaccination which has covered the name of Jenner with imperishable renown, by means of which millions of our fellow-creatures have been spared the ravages of a fearful disease, and thousands upon thousands of lives have been preserved, and which, if properly enforced by legislative enactment, would entirely eradicate the scourge of small-pox? Or is it necessary for me to dwell upon the discovery that a plentiful supply of lime-juice and fresh vegetables is certain to cure, and, what is far better, to prevent the occurrence of scurvy—that disease which used to be the scourge of our sailors—and if this fact, which our Profession has put into the hands of their fellow-creatures, were universally acted upon, which, to their shame be it said, it is not, it would enable us ere long to banish the name of scurvy from our nosological tables?

And what shall I say of chloroform, that subtle fluid which creeps upon the senses, annihilates pain, and produces complete insensibility, during which the most fearful operations may be performed while the patient calmly sleeps? Or of the still more recent discovery, for which we are indebted to Dr. Benjamin Richardson, a former student in Anderson's University, that, by the projection of ether spray against the surface, the sensibility may be temporarily destroyed, and operations performed, the steps of which may be witnessed by the patient without experiencing the slightest uneasiness? This method of producing anæsthesia is in its infancy as yet, and it is impossible to say to what extent its benefits may be extended; but this may safely be affirmed of it, that it renders unnecessary, and therefore improper, the use of chloroform for many minor operations, during the performance of which by far the greatest number of deaths from chloroform have occurred.

Have you ever had rheumatic fever? is one of the most important questions put by insurance companies to their applicants. The reason for this is abundantly obvious. The poison of rheumatic fever does not unfortunately expend itself entirely upon the joints, but, circulating with the blood, is too apt to irritate the coverings of the heart, to produce inflammation of these structures, and to lay the foundation of chronic, irremediable, and, too often, fatal cardiac affection. Till within recent years almost every second case of rheumatic fever was complicated with inflammation of the heart; but, acting upon the supposition that the poison in the blood, whatever it be, induces an acid condition of the secretions and of the system generally, an alkaline treatment is now pretty generally adopted, and with such success that the articular affection rapidly subsides, and the heart invariably escapes, if the treatment has been fully carried out for forty-eight hours, without its being implicated. To Dr. Herbert Davies we are indebted for another new method of treatment, consisting of the free application of blisters around the affected joints, and which promises to yield equally, some say still more, astonishing results. Who that is conversant with the suffering entailed upon the subjects of chronic disease of the heart, and with the frequency with which it consigns its victims to an early grave, can deny that these new methods of treatment are of incalculable importance, and are creditable alike to the Physicians who proposed them, and to the Profession which has approved and adopted them?

There is a disease called ozæna, which commences with chronic inflammation of the mucous lining of the nostrils and adjacent sinuses, in which, owing to the irregularities and intricacies of the affected surface, the effete matter is in great part retained, acts as an irritant, produces ulceration, destruction of the cartilages and bones, leads to great deformity of the features, and gives rise to an insupportable fœtor which is not only loathsome to the patient, but intolerable to those around him. Till lately the means at our command were generally insufficient to eradicate the disease, for the simple reason that we had no means of reaching the whole of the diseased surface with local applications. This desideratum has now been supplied, for we are put in possession of an instrument—which I shall take the opportunity of showing you during the course of the session—one founded upon the discovery of Weber and Halle—that when one side of the nasal cavity is entirely filled through one nostril with fluid by hydrostatic pressure, while the patient is breathing through the mouth, the soft palate rises and separates the cavity of the mouth from that of the nose, and the fluid, in some persons in part through the frontal sinuses, but chiefly round the posterior edge of the septum, flows into and out of the other nostril, after having come in contact with every part of the nostril of entrance and the greater part of the nostril of exit. By means of this instrument we can not only scour the whole nasal tract and wash away every particle of effete matter, but also make use of deodorising, astringent, caustic, stimulant, mercurial, and styptic solutions, and thus, if we are consulted in time, remove all fœtor, prevent all deformity—nay, effect rapid and permanent cures, and restore to comfort and happiness the subjects of a loathsome and distressing disease.

It is only in recent years that the investigation of diseases of the skin has been pursued with that care and attention which their importance truly deserves, and that an attempt has been made to place their diagnosis and treatment upon a scientific basis. Hence our knowledge of these complaints has, since the days of Willan, been advancing with rapid strides. One illustration will suffice. The disease called favus or honeycomb ringworm is described by Willan as a pustular affection, and ranked accordingly in the class "pustulæ," while the treatment recommended is altogether useless for the eradication of the complaint. But the microscope has revealed to us that an erroneous opinion as to its pathology lay at the root of want of success in its treatment; for we now know that suppuration forms no essential feature of the complaint, that the cup-shaped crusts by which it is characterised are composed almost exclusively of a veritable fungous growth, that this plant-like structure grows between the fibres of the hair, and penetrates to their roots, and that the only treatment which can be successful, with all deference to those distinguished investigators who hold an opposite opinion, must include the extraction, entire, of all the hair at the affected parts. Here science and art have gone hand in hand, and the result is the cure of a contagious, disfiguring, and hitherto incurable complaint.

One of the most frequent of aural complaints is chronic catarrh of the middle ear, accompanied by obstruction of the Eustachian tubes—a disease which occasionally disappears spontaneously as its exciting causes are removed, or as the general health improves, but which too frequently ends in permanent and hopeless deafness, and which has hitherto been very imperfectly treated by the Profession at large. It is true that, in many cases, Eustachian catheterism is capable of effecting a cure, but the use of this instrument is feared by the nervous, and is often intolerable to children. It also requires great skill to perform the operation with success, and is therefore beyond the reach of the many. This obstacle to success has now, thanks to the scientific discovery of Politzer, of Vienna, been fairly overcome, for he has put us in possession of an instrument (which I hope to have the opportunity, here or elsewhere, of showing you) which yields the most amazing results—an instrument which is admirably simple in its application, and which is often the source of amusement rather than of dread even to the youngest children. The essence of this operation consists in blowing air through one nostril at the same moment as the patient swallows a mouthful of water. The muscles brought into play in the act of swallowing raise the soft palate, thus separating completely the cavity of the nose from the cavity of the mouth, at the same time as they open widely the faucial orifices of the Eustachian tubes. The air blown through the nostril being thus unable to penetrate into the cavity of the mouth, and the orifices of the Eustachian tubes being open, rushes up the tubes and removes the obstructions which exist. Thus science has won another victory, and the key to the cure of an obstinate and dreaded malady has been discovered.

The taint of syphilis—that subtle and impalpable poison which courses through the veins of so many of our fellow-creatures, and which, more than any other, has deteriorated the human race—has, during the present century, been carefully investigated by Ricord and other observers, and with such success that we are now in possession of very accurate information with regard to its pathology, and are guided by certain fixed laws in carrying out the principles of its treatment. But while we have for some time been well acquainted with the phenomena of syphilis in the adult, as well as in the infant, it is only within the last few years that the labours of other investigators, and especially of Jonathan Hutchinson, have proved that in the young adult a peculiar and striking deformity of the teeth, a special form of inflammation of the eyes, the development of nodes on the superficial bones, and certain deformities of the physiognomy, constitute proof positive that the syphilitic taint has been transmitted from one or other or both parents to their unfortunate offspring—a painful illustration of the fact that the sins of the fathers are visited upon their children. The value of this discovery cannot be overrated, for we are thus taught that certain morbid states, formerly referred to the strumous diathesis, are directly related to the syphilitic, while the practical lesson which flows therefrom lies in the substitution of anti-syphilitic for anti-strumous remedies, and in the more rational and satisfactory treatment of these affections.

And even as regards cholera, have no tangible results been obtained? Has it not been proved that the spread of cholera is regulated in great measure by human intercourse; that impure water, bad food, want of ventilation, exposure to the emanations from decaying animal and vegetable matter, excesses of all kinds, and the incautious use of purgatives in time of epidemics, are too often instrumental in calling forth attacks of the disease, while the careful avoidance of such things is useful in preventing its attacks; that confinement to bed, the application of heat, and the administration of full opiates are, in most cases, sufficient to check the disease, if treated in its diarrhœal stage; and even when collapse has set in, has a more rational system of treatment not been inaugurated from a recognition of the fact that this state is due, not only to exhaustion, and to the thickened condition of the blood from the loss of its serum, but also to the poison in the system and to the arrest of the capillary circulation; and is it not probable that we owe our comparative immunity from cholera at this very time to the sanitary arrangements which have been made under the able superintendence of Dr. Gairdner?

But, gentlemen, is it necessary for me to multiply illustrations further in order to prove what must be obvious to any one who has paid due attention to the subject—the incorrectness and the ungenerous nature of the attack to which I have referred? and the practical lesson which we may gather therefrom is, that it is incumbent upon all persons, and more especially upon those who occupy responsible positions, to refrain from expressing opinions upon subjects of which they are comparatively ignorant.

I feel convinced, from what I have heard of the character of the students who are attracted to this School of Medicine, their intelligence, earnestness, and indomitable perseverance, that the time is not far distant when some of you, like so many of your predecessors, putting your shoulders to the wheel, shall still further extend the bounds of practical Medicine, and that one and all of you will do what in you lies to maintain the character which our Profession has so long and so justly merited for self-sacrificing devotion to the cause of suffering humanity.

While in one sense, gentlemen, I may be regarded as your teacher, and you may be looked upon as my pupils, in another, I may safely consider you as my teachers and myself as your pupil, for I trust you will ever keep alive in me that ardent desire to increase and consolidate my own information, without which there can be no real advancement, so as to enable me to impart more accurate and reliable instruction, and thus we shall, I hope, realise the fact that we are mutually interested in one another's improvement, and that we shall work together cordially and harmoniously for the benefit of all.

You have entered upon the study of a laborious profession, one in which you will meet with much sunshine and many shades, and I sincerely trust that the latter may cross your path at such rare intervals as to serve but to intensify the brilliancy of the former. You will be disappointed to find that disease is governed by but few fixed and unalterable laws; that the dogmas which you receive from your teachers are subject to numerous, and often inexplicable, exceptions; and that remedies, the effects of which you may have studied, and which, in some cases, yield admirable results, are altogether inoperative in others which seem to present analogous features. You will occasionally meet with persons who are so far unmindful of their own self-respect as to estimate lightly, nay, even to depreciate, the most painstaking and persevering efforts on *their* behalf, or for the benefit of those who are near and dear to them; and sometimes you will find that the most disinterested exertions are misconstrued, and that the mainsprings of your noblest aspirations are ascribed to the lowest and most grovelling of motives. Such are the thorns which strew the path of every man, and of none more frequently than that of the Physician. At such times, and on such occasions, you may perhaps despond—nay, even regret the choice of a profession which you have made; but this is transitory in its duration, and gives place to a deep feeling of satisfaction in contemplation of all that is noble in our Profession. You will find, moreover, that human nature is only exceptionally so base as is here depicted, and that, in general, your labours are appreciated, and your efforts rewarded by the knowledge that you have earned the love and gratitude of those with whom you have to do.

In the eye of the world some professions are more honourable than others, and we should be proud to feel that ours is one of the most honourable of all; but let us not trust too confidently to this, remembering always that "it is the man who dignifies the situation, and not the situation the man." There is a common belief, particularly amongst the young and inexperienced, that many men are born endowed with great talents, and many without any real talent at all, and that just in proportion to their abilities so, in general, may their future success in life be gauged. But, without denying that there is some foundation for the belief, it may safely be affirmed that comparatively few men are possessed of great natural abilities, while real genius is a rare gift indeed; and if you scan the lives and study the histories of the most eminent men, you will find that the key to their success, in almost every case, is to be found in their habits of industry and in their indomitable perseverance. Do not, therefore, trust too much to natural endowments, nor, on the other hand, be dispirited by a feeling of intellectual inferiority to those with whom you may associate, and be assured that while there is truth in the saying that "whatever is worth doing is worth doing well," there is almost equal truth in the proverb—"Perseverantia vincit omnia."

"Labour is life! 'tis the still water faileth;
Idleness ever despaireth, bewaileth;
Keep the watch wound, for the dark night assaileth;
Flowers droop and die in the stillness of noon.
Labour is glory! the flying cloud lightens;
Only the waving wing changes and brightens;
Idle hearts only the dark future frightens;
Play the sweet keys, wouldst thou keep them in tune."

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.—The monthly meetings were resumed on Monday evening, 5th inst., when a paper was read, sent by Dr. McQuillen, of Philadelphia, U.S., "On the Interglobular Spaces." Also a paper sent by Dr. Short, of Madras, "On the Dentistry of India."

NOTES OF A VOYAGE TO AND FROM AUSTRALIA.

(From a Correspondent.)

The voyage to and from Australia as a means of prevention or cure in chest diseases has as yet hardly received the amount of attention which it deserves, especially from those of us who may unite the functions of patient and Doctor in our own selves.

For a Medical man, a long voyage has this advantage—that if he goes as Surgeon to a ship he avoids the expense that a winter anywhere ashore would entail, and secures at the same time rest, change, and a certain amount of remuneration. I hope, therefore, that some notes of my own experience of a voyage to Melbourne and back may prove of interest. I propose, then, to give a brief account of the journey out and home, of my six weeks' stay in Victoria, and to add some hints as to what should and should not be done in order to secure benefit from such a journey.

Being advised not to pass last winter in England, I accepted an offer of the post of Surgeon to the *Royal Standard*, an iron auxiliary screw steamer, 1500 tons register, belonging to the Liverpool White-Star Line. Her passengers numbered rather more than three hundred, the crew, including engineers, firemen, and stewards—eighty. One division of the ship was set apart for the accommodation of eighty "single females," emigrants, whose passage money is partly paid by the Colonial Government. With the exception of a saloon passenger, who was in the third stage of phthisis; another in the intermediate department, who was suffering from the same disease, though not so far advanced in it; and a young man who was epileptic, the passengers were in good health at starting. We steamed out of the Mersey about 8 a.m. on November 25, with fine weather and a light head wind, which by the afternoon had freshened to a gale, and carried away one of our jibs and a topsail. Before evening all the vessels we saw were running for shelter to Holyhead, and by midnight we were contending with the onset of one of the fiercest storms of last winter. At last fairly baffled by it, we turned to seek refuge, and at noon next day anchored safely at Holyhead. Here we lay till the evening of Friday, December 2, when we ventured out, and after three days of head wind, fog, and stormy sea, landed our pilot at Queenstown on the afternoon of Dec. 5, when our voyage was supposed to begin. For the next ten days we had variable weather, at times very stormy, till, on the morning of the 15th, we sighted Madeira, and exchanged the stormy weather for a calm sea and bright, warm summer air. Next day we passed the Canary Islands, seeing distinctly the long, low outline of Palma, and somewhat doubtfully the Peak of Teneriffe among the clouds beyond. We entered the northern portion of the Tropics on the 19th, and the next day sighted St. Antonio, one of the Cape de Verdes—the last glimpse of land before we reached Australia. The heat gradually increased, and by the 24th had become decidedly oppressive. In one of the coolest cabins, and during the evening, the thermometer usually stood at 84°, so that our Christmas, which was celebrated on the 26th (25th being Sunday), was somewhat of a contrast to that at home. The whole of our passage through the Tropics was calm, with very occasionally a heavy shower. January 4, 1865, we passed the southern limits of the Tropics. On the 5th one of the saloon passengers, before mentioned as suffering from phthisis, died, and his body was committed to the deep the same day. By the 7th we had reached lat. 30 south, and began to find the atmosphere much cooler, and we had some days of rain. It was quite a relief from the monotony of sea and sky, that now birds began to accompany us, for hitherto, excepting a few flying fish and an occasional whale, there had been scarcely anything to look at. On the 10th we changed our course from a south-easterly one to nearly due east. 22nd.—The widow of the gentleman who died on the 6th was confined: mother and child both did well. From the 22nd to February 1 we ran an easterly course, inclining gradually to the south, and on February 1 reached our most southerly point, lat. 48.25, in long. 80 W. During this course the weather was variable, the temperature cool. On the 2nd we had a shower of hail. In another week we began to calculate upon soon being in, but the want of wind kept us behind, till at last, to our delight, on the evening of the 18th, we anchored safely within Port Philip Heads. Next morning we were boarded by the Officer of Health; and as we had been completely free from any infectious disease we were allowed to proceed. We anchored in Hobson's Bay about noon, and next morning we were laid alongside the railway pier at Sandridge.

Now, with regard to the Medical aspects of the voyage. As a whole the health of the ship was remarkable, and the improvement in condition, especially among the Government emigrants, most striking. I well remember the boatswain, after a long and admiring gaze at some of these stalwart young ladies—turning to me with the air of a man who finds a great fact flashing upon him, and saying, "I say, Doctor, don't you think three of them would weigh a ton?" We had, of course, the usual amount of sea-sickness, for which, I regret to say, I cannot propose any new remedy or avow my faith in any old one. Chloroform with magnesia, or with hydrochloric acid, or with quinine, each appeared to suit at times. Brandy-and-water did not seem to me to be of much use. When myself a victim for a few hours I found a little cold tea without milk or sugar refreshing. Small doses of "bitters" appeared to do good in some cases, and larger doses of champagne did good in others.

The change of diet and diminution of exercise gave rise, especially during the early part of the voyage, to many complaints of constipation, and several passengers suffered from boils, none of which assumed any serious proportions. After we were fairly in the tropical heat there were in both voyages many cases of prickly heat, more among children than adults. Two forms presented themselves—one the ordinary lichen tropicus, with little vesicles surrounded with trifling redness, the other a rash exactly like that of scarlet fever. The first case of this which I saw was that of a little girl between three and four years of age, and I must say that I was made seriously uncomfortable by it. The child was hot and feverish, but there were no throat symptoms, and in a few hours she complained of a feeling of irritation, saying that the "quitoes" were biting her. The only difference I could detect between this rash and that of scarlet fever was, that on drawing the finger along the reddened skin the white mark left by it faded much more rapidly than a similar mark does in the latter disease. A little aperient medicine was given, and in about twenty-four hours from the appearance of the rash it had taken its departure. The other form was just as easily treated; but one little boy, whose parents had foolishly let him keep on wearing flannel at night, had so irritated the vesicles that when he was first shown to me his back was covered with superficial sores and scabs of all shapes and sizes. A little spermaceti ointment soon set all this to rights again.

The case of phthisis which we lost was a sad illustration of the disastrous effect of a remedy used at the wrong time. When the patient came on board his aspect told almost as distinctly as did the stethoscope that his lungs were hopelessly disorganised. There were extensive cavities on both sides. At first he certainly did improve slightly, but from the beginning of the tropical heat he grew thinner and weaker day by day, till he sank from sheer exhaustion. The heat, in fact, killed him; for the time when his system could adapt itself to any great change had gone by. With regard to the other case of phthisis, an engineer, about 25 or 26 years of age, who was in the "intermediate," I cannot speak with certainty as to his state on embarkation, as at first his symptoms were not urgent. Towards the end of the voyage he grew seriously worse, and by that time a cavity had formed on one side. He landed in Melbourne, was sent at once to the Hospital, and died there in about three weeks. Here, again, a serious blunder had been committed. It does not occur to many Medical men that in sending a patient for a long voyage in the "steerage" of a vessel he is thereby restricted to a diet from which fresh meat, vegetables, and milk are excluded. The salt meat, preserved meat, "soup, and bouilli," with which these passengers are supplied do very well for those who are strong to begin with; but are eminently unsuited to an invalid. There was no difficulty in supplying as much porter, wine, and brandy, preserved milk, meat soup, arrowroot, and sago as I thought fit; but as at sea the supply of fresh meat and fresh milk must be limited, the amount at the disposal of the Doctor for his patients is necessarily still more restricted. It must be remembered also that the accommodation for the steerage passengers is only suited for those whose health and strength enable them to "rough it" in every sense of the word.

With regard to the effect of the outward voyage on my own health, I should state that, at the time of leaving Liverpool, I was troubled with a cough which had annoyed me since the autumn of 1863, and which had been aggravated by an attack of bronchitis in March, 1864. The cough, at the time I speak of, was mainly restricted to the morning, and accompanied by only trifling expectoration. My breathing was easily hurried, and three or four times I had brought up a small amount of blood,—once, perhaps, as much as a drachm or two, the other times a few drops only. During the voyage my cough gave me scarcely any trouble, the expectoration was very slight, and my breathing power, if anything, rather improved; so that I felt when in Melbourne as if I were fully equal to the work I had been used to do at home, and found myself able to take any reasonable amount of exercise without more than natural fatigue, though my breathing still was easily hurried. My weight, I am sorry to say, I cannot speak of accurately, as I found that the scales in which I had been weighed on board were utterly unreliable. Looking back carefully, I think that the outward voyage did me good.

(To be continued.)

METROPOLITAN WORKHOUSE INFIRMARIES.

LETTER FROM DR. EDWARD SMITH TO THE POOR-LAW BOARD.

16, Queen Anne-street, August 7, 1866.

MY LORDS AND GENTLEMEN,—I have been absent from town during much of the discussion which has taken place upon the reports of Mr. Farnall and myself on the state of the metropolitan Workhouses, and have not heretofore had an opportunity to make myself fully acquainted with it. The discussion upon my own report shows that misapprehension has existed on several important points, and as the subject is one of great general interest I venture to offer a short explanation to the Board.

1st. As to the fact that we presented separate reports:

It was an understanding at the time of our appointment to this duty that each should present a separate report, and since the inquiry involved Medical knowledge, and only one of us was a Medical man, it could not with propriety have been otherwise. It did not arise from any divergence of opinion as to the facts presented during the inquiry.

2nd. As to the proposed Hospital scheme:

A reference to our instructions would show that no scheme was presented for our consideration, but our instructions were to "suggest such alterations as may appear to you advisable in the present system, and the arrangement of each Workhouse." At that period no new scheme had been considered by the Poor-law Board, and none therefore had been presented to us. Hence, having regard to my obligations as an officer of the Board charged with a special duty, I limited both my inquiry and my report to the instructions which I had received. I did not, therefore, as has been stated, report against or reject the proposed scheme for the erection of new Hospitals, but, on the contrary, kept myself quite free to consider it and advise upon it should it be referred to me in my official capacity. Up to this moment I have not committed myself to any scheme whatever, for in reference to the extension of the present Workhouses I have distinctly stated that it was impossible for me to judge with regard to many of them whether the additional space which would be required could be obtained.

But because my report did not refer to the proposed scheme it has been distinctly asserted that I was against it. I think it right to state that at the very earliest period of the formation of the Association I advised Mr. Hart as to the most suitable organisation for such institutions—viz., that of our excellent lunatic asylums—and pointed out to him the most efficient way of making their views known to the Poor-law Board. Further than this I could not go; neither, having regard to my official position, could I connect myself with that or any other scheme until it had been matured, and duly considered by the Poor-law Board.

3rd. As to the required cubical space:

It has been assumed that because I recommended 500 cubic feet of space as a minimum quantity, such will be the ordinary space allotted to each inmate. This is quite incorrect. Having regard to the great diversity in width and height of rooms which actually exists in Workhouses, and to the nature of my instructions above mentioned, I did not feel justified in fixing upon any definite cubical space, and to meet the requirements thought it best to combine other conditions with it. Thus my recommendations include three elements:—

1. A minimum of 500 cubical feet.
2. A minimum space of 3 feet between each bed, and of 6 feet across the bed.
3. A minimum floor space of 54 to 60 feet.

In reference to new wards for ordinary cases I have recommended that they be 10 to 12 feet in height, and 20 feet in width, and that 60 feet of floor space be allotted to each bed. Hence the minimum cubical space will be from 600 to 720 feet. When a ward is 30 feet in width, as is sometimes found, the space would be increased to 900 or 1080 cubical feet.

But since half of all the cases are not confined to their beds, but during some parts of the day move into the adjoining wards, corridors, or yards, the actual cubical space is practically increased, and is much above the minimum.

As to the data upon which the estimation of the minimum has been founded, I venture to affirm that no scientific man can successfully combat them. Dr. Angus Smith is the highest authority in this kind of inquiry, whether in this or other countries. These inquiries were made by the direction of the Poor-law Board, and although the results are not mine I dare not for a moment hesitate to entirely adopt them.

4th. As to the comparison of Workhouses with Hospitals:

There is an assumption that because both are for the treatment of the sick, data applicable to the one should be applicable to the other. This is an error.

Most of the recent Hospital data have been derived from military Hospitals, and chiefly from those established during the Crimean war, and in climates hotter than our own. But in Workhouses there are scarcely any Surgical cases of any kind; much less are there such serious ones as arise from war.

When the data have been derived from civil Hospitals, they have embraced all classes of diseases, both Medical and Surgical, but in Workhouses, besides the exclusion of Surgical cases, there is practically also the exclusion of fever, small-pox, and venereal cases, and in general of the serious acute cases, which constitute nearly all the patients in a general Hospital.

Further, in military Hospitals there are no women, and the men are nearly all in the prime of life, whilst in the London Workhouses two-thirds are women, and nearly all the adults are aged. Dr. Parkes, in a critique upon my report, cites experiments made in military Hospitals, and on men, and thence makes deductions as he supposes applicable to Workhouses. But whilst he knows that the chief source of vitiation of the atmosphere is from the respiration, he also knows that women respire much less than men, and old men much less than younger men; and having regard to the relative numbers and ages of the inmates, I do not doubt that in health two inmates of a Workhouse would not vitiate the air more than one of a military Hospital, and in disease, having reference also to the nature of the diseases above mentioned, three times more space is required in military Hospitals than in Workhouses.

But a conclusive fact has been altogether omitted in the discussion. Miss Nightingale, and not that eminent philanthropist alone, has pointed out the excessive mortality which occurs in Hospitals with their large cubical space over that found in private dwellings, whilst with thirty years' experience in Workhouses under the present poor-law no fever nor any other evidence of disease arising from deficient air can be shown to exist. In Hospitals there may be great reason for improvement, and particularly in the supply of air as well as space, whilst in Workhouses it is incumbent upon those who seek changes to at least point out definite evils which have resulted from the existing regulations.

I have the honour to be,
My Lords and Gentlemen,
Your most obedient servant,
To the Poor-law Board. EDWARD SMITH.

THE HOSPICE DU ST. GOTHARD.—From the last report of this excellent institution, it seems that for the year ending October, 1866, 8391 poor travellers of all nations were received into the establishment, and provided with 22,980 rations of provisions, and in many cases with shoes or stockings. Among these were 63 ill or half dead with cold, and requiring special care. The total expenses were 8818 francs, and the receipts 8507 francs.

PRESENTATION TO THE

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND OF A STATUE OF THE LATE SIR HENRY MARSH, BART., M.D.

On Friday, November 9, the very interesting ceremony of presenting to the College of Physicians in Ireland a statue in white marble of the late Sir Henry Marsh, Bart., the work of Mr. Foley, R.A., took place in the Hall of the College. Soon after Sir Henry's death a subscription was set on foot to erect a lasting memorial of his public and private worth, and it was determined that none more fitting could be found than a statue to be intrusted to the care of the College of which he had been for so many years a most distinguished ornament. The statue, which presents an excellent likeness of the late Baronet, is draped in full academic costume, and is an admirable specimen of the work of the distinguished artist already named. On the day appointed a deputation from the subscribers, composed of Lord James Butler, Sir Richard Griffith, Bart., General O'Neil, Mr. Lendrick, Mr. Wybrants, Mr. Thornhill, Sir W. Wilde, and Mr. Stanford, was received in the Hall of the College by the President, Vice-President, and Fellows assembled in full academic costume. The proceedings were opened by Dr. Banks, King's Professor of Medicine in the School of Physic, who, in an eloquent address, reviewed the leading features of the life and character of "the genial and hospitable gentleman, the true-hearted friend, and the great Physician," to honour whose memory they were then assembled, and to whom he had himself "been attached from boyhood by the closest ties of friendship and affection." Dr. Banks concluded by formally presenting, in the name of the subscribers, the statue to the College, remarking that it was a subject of much gratification that the presidential chair should at this time be occupied by one who, like Sir Henry Marsh, has ever laboured to maintain the honour and dignity of the Profession, and to elevate the social and scientific position of Medicine in this country.

The President, Dr. Stokes, replied as follows :—

Dr. Banks, my Lord, and Gentlemen of the Deputation,—It is now my grateful task to offer, on the part of the King and Queen's College of Physicians in Ireland, our thanks for the noble gift you have made to us. In choosing as the proper site for this memorial statue, the hall of that College of which he who is gone was so long an honoured member, you have typified his devotion to Medicine and to this institution, of which he was more than once the head, and always the ornament. Ireland does not want for representative men. She can proudly point out many such in arts, in arms, in science and in literature, in poesy and in oratory; and among the leading men in Irish Medicine, Marsh can fitly claim a place. You may rest assured that his statue will be affectionately and carefully preserved by us, and, we trust, by those who will succeed us, not alone on account of its surpassing merit as a work of art, but in memory of an earnest and successful worker in science, the great Physician, the true friend, and the thorough Irish gentleman. Sir Henry Marsh was one of that noble band of men whose labours marked the intellectual uprising of this country af er the lapse of nearly a quarter of a century, which followed 1800. It was the time of Brinkley, of Lloyd, of Hamilton, of MacCullagh, and of Butler, of Apjohn, of Robinson, of Kane, of Petrie, of Todd, of O'Donovan, and O'Curry, of Anster, of Carleton, of Griffin, of Mangan, of Ferguson, and of M'Carthy; and in Medicine, of Cheyne, Colles, Carmichael, and Cusack, of Graves, Corrigan, Adams, Jacob, Smith, Beatty, Wilde, Montgomery, and many more. It was at this period the University received its great impulse, in consequence of the reforms introduced by Provost Lloyd; when the Royal Irish Academy showed signs of a new and vigorous life, in the creation of its Museum by our great countryman, Petrie; when the Zoological and other scientific bodies were founded; when new schools of Medicine and Surgery sprung up; when the Dublin *Journal of Medicine* was established; when the *University Magazine* first appeared; and when the great project of the topographical survey of Ireland was organised by Sir Thomas Larcom. It was, in brief, a time when the mind of the country seemed to wake up to a consciousness of its power, and saw the work that was before it. It must be gratifying to this College to see this noble hall, in which we are now assembled, becoming, as it were, the Irish Medical Walhalla, where will be preserved the memorials, which, though dead, yet speak, of those true soldiers of Medicine whose works live after them, and whose ways were worthy. We have the bust of Graves, of that great and philosophic teacher, who founded and built up the fame of the Irish School of Clinical Medicine. We have the bust, in clay, of Sir Dominic Corrigan, to whose exertions we are indebted for the building in which we are assembled. It is from the hand of the master who fashioned this figure, and we are promised soon a more ambitious and finished work. We have the portraits of Dun, of Percival, of Cheyne, of Brooke and Mills, of Barry, of Corrigan, and of Mayne; and so we are following in the steps of the Royal College of Physicians in England, on whose walls hang so many noble portraits of the noble fathers of British Medicine. Like many other places, Dublin is deficient in monuments of this kind; and even where members of our Profession have conferred lasting benefits by founding great institutions for the purposes of charity and science, we miss their monuments. In our great Lying-in Hospital there is a plaster cast of the founder, with the inscription "Miseris solamen instituit." Why should not his statue adorn his hall? So again, at Steevens' Hospital, a simple tablet records the name of the founder and the pious work of his sister; and, to come to ourselves, we have not even a portrait of Stearne, our founder in the reign of Charles II., and whose history has been so ably worked out by one of our Fellows, the learned Dr. Belcher. But, indeed, few members of our Profession have been honoured by statues. The statue of Dr. Lucas in the Corporation Hall was erected from political considerations in the last century. Those of John Hunter and the late Dr. Robert Bentley Todd are, like that of Marsh, fitly placed in the scene of their labours, and the only public statue to a Physician in these countries is that of Jenner. This was lately removed from Trafalgar-square to a more obscure position. How slowly do our barbaric traditions depart from us! But in time mankind will learn that to save is more excellent than to destroy; and that the great Physician, as well as the great soldier, if he has done his duty, is equally entitled to honour. The art of the sculptor has various objects, and, consequently, in its execution the artist is guided by different principles. His work may be intended as a part of a great architectural whole, as in the case of the statues over the portico of the Bank, and the admirable symbolic heads of the river deities of Ireland which adorn the arches and windows of the Custom House, or as in the marvellous arrangement of figures of saints and angels with which the pointed doorways of some great cathedrals are decorated. Or it may be for a public statue, in which the figure, if not colossal, is more or less idealised, the accuracy of the likeness, though important, being made subsidiary to the general effect. Or the statue may be intended as a portrait of one whom his children and children's children, his friends, his fellows, and their successors wish to keep in the lasting marble, ever before them.

> "As when a painter, poring on a face,
> Divinely through all hindrance finds the man
> Behind it, and so paints him, that his face,
> The shape and colour of a mind and life,
> Lives for his children, ever at its best
> And fullest."

This statue, as well as that of Goldsmith, both from the chisel of Mr. Foley, are admirable examples of the latter class. To the observations of Dr. Banks on the merits of the work it would be superfluous to add anything. There are few, if any, works of art, even those of the best Greek period, to which that kind of criticism which consists in fault-finding may not have room to apply. But, as a great writer has remarked, we should not seek to detect deficiencies and imperfections in works of art, until we have learned to recognise and discover their beauties. This power of seeing and feeling the beautiful and the true is so rarely met with, that the term "criticism" is commonly held to mean depreciation. Those who follow this method are always vain, often ignorant, or imbued, as Winckleman has it, with excess of caution. They appear to have determined to admire nothing, because they believe admiration to be an expression of ignorance, forgetting what Plato says, that admiration is the sentiment of a thinking mind, and one of the avenues which lead to philosophy. I have but to add, that the situation of the statue was chosen by Mr. Foley, and that the pedestal, also designed by him, has been gratefully furnished by the College.

Lord James Butler said he had been requested to propose a vote of thanks to the subscribers and Committee, through whose exertions they had been enabled to raise the memorial, presented that day to the King and Queen's College of Physicians, to the late Sir Henry Marsh. Sir Henry's character had been so fully dwelt upon by Dr. Banks that it was quite unnecessary that he should then refer to it. His fame was known everywhere, and it was such as not to be readily exceeded. Of his fame as a Physician, it did not so much become him to speak; but he might say, having had the honour of knowing him for many years, that it was only exceeded by his hospitality and generosity. He spoke from circumstances within his own knowledge of his extreme kindliness of heart, in which he could not have been excelled by any. They were indebted to the Committee for having brought their labours to so successful an issue. They were indebted to them also for the selection of the artist who, in sending that statue to decorate their hall, had sent from his chisel another admirable specimen of art which made it their pride that he (the artist) should belong to us. In conclusion he had only to add that in the statue they would all recognise the features of him they had so well known, and which proved how well the Committee had carried out the wishes of the subscribers.

General O'Neil said: I feel it a high honour to be called on to second this motion, and I have the utmost pleasure in doing so.

The resolution was carried with enthusiasm.

Sir Dominic Corrigan, Bart., Chairman of the Committee, returned thanks for the compliment paid them, and in conclusion moved that the President should leave the chair, which was accordingly taken by the Vice-President, Dr. Moore.

Dr. M'Clintock moved a vote of thanks to the President for his conduct in the chair.

Sir Richard Griffith, Bart., seconded the resolution, which passed unanimously.

The meeting then broke up.

REVIEWS.

Acholic Diseases, comprising Jaundice, Diarrhœa, Dysentery, and Cholera; with a Preliminary Dissertation on Bile, the Bilious Function, and the Action of Cholagogues. By Alexander Charles Macleod, L.K.Q.C.P.I., Member of the Coll. of Physicians of London, Surgeon-Major on Her Majesty's Madras Establishment. London: John Churchill and Sons. 1866. Pp. 230.

We are afraid we can do little good to the author of this book by reviewing it at any length, since we entirely dissent from his method of argument—if, indeed, he has himself any clear notion of what he considers the proper method of substantiating a novel doctrine. Thus, in one place in his introduction, he tells us that in all scientific research "we should be guided ever by those acknowledged rules of inductive reasoning that have their foundation in immutable truth," that he proposes "to lay before the Profession the results of upwards of twenty years' experience and attentive observation of cholera and kindred diseases of India;" and then, in another place, he propounds the doctrine that "no theory, properly so termed, can be expected to stand the test of absolute analysis, or can be founded wholly on *facts*." "Theory, indeed, has its perfect synonym in 'speculation.'" We think Dr. Macleod does not distinguish very accurately between "theory" and "hypothesis," and we think he is particularly unfortunate in his illustration of the proposition that "a theory may be even manifestly untrue and yet of great practical value," by adducing the "atomic theory" in the science of chemistry. Is the atomic theory *manifestly untrue?* Speaking of facts again as the basis of theory, he says, "These last are not nearly such stubborn things as is popularly supposed, but accommodate themselves with a marvellous pliancy to foregone conclusions."

Well, then, suppose, with our author, we for once throw overboard "facts," and then see how Dr. Macleod gets on without them. We need not go far into his book to see the working of the new philosophy. At page 21 there is a section upon *enteric secretion of bile.* The question he puts in italics is this—"*Have the intestines any faculty of supplying, either from their own proper mucous lining or through the secreting glands with which they are furnished, or from both, bile, or a fluid resembling bile in its sensible properties, and therefore in its use in the economy?*" We will not stop to criticise his "therefore," but proceed with our quotation. "When the function of the kidney is suppressed, we know that a vicarious excretion is substituted. If the essential principles of urine can thus be formed independently of the kidney, may not those of bile independently of the liver—if not bile itself, something resembling or akin to it? Consider once more the relations subsisting. The liver inactive on the one hand; the intestines on the other; between them, isolated, and in a manner penned in, a distinct circulation, the portal, teeming with the elements of bile. Will not all our knowledge of nature's method of working under like circumstances, all analogy, indicate a probability that the intestines will take on a vicarious action, and secrete *something like bile!* Like many other truths in our uncertain art, it can only be proved inferentially, and to do so I must trust less to any power of demonstration than to an intuitive perception, on the part of the student, of a physiological truth.(!) I hope to show also that its admission will serve to reconcile some apparent anomalies, not only in the pathology of disease, but also in our treatment otherwise empirical and seemingly inconsistent. . . In a state of acholia, then, the function of a viscus so large and important as the liver being interrupted, it seems quite natural to look out for some process of substitution; and it is evident that from the inner surface of the intestines alone could such substitution be *beneficially* afforded, for in no other place would bile, or any imperfect imitation of bile, be of any use; and *there* it is indispensable, not only for purposes of assimilation, but because its absence is, as already shown, a cause of irritation and mischief."—P. 22. In what year of our Lord are we living?

Further on he shows how perfectly his theory of enteric secretion of bile chimes in with his therapeutical practice. "If we accept as probable a vicarious though imperfect elimination of bile from the intestines themselves in all cases where the hepatic function is temporarily interrupted, the action of mercurials or of any other cholagogue becomes intelligible enough. Whether the stools be colourless, as in some cases of jaundice, or 'bilious,' as in diarrhœa, we should then assume that, under both conditions alike, the liver was inactive—in the one case that little or no effort at a vicarious action had been made, in the other that a free vicarious action had been established, and probably with partial relief. Consequently in both cases we should administer calomel, not empirically, but with a rational view of restoring an absent and necessary secretion—hepatic bile."—P. 25.

We should think the reporters of three cases quoted by Dr. Macleod in support of his views—one by Dr. Alison from the *Edinburgh Medical and Surgical Journal* of 1835, another by Dr. Scott from the same volume, and a third by Dr. Bright from the *Guy's Hospital Reports*—would have been rather astonished had they been told the inference that would have been drawn from certain facts which they narrate.

We are truly sorry that it has fallen to our lot to review this book, in which we see the operation of a mind dissatisfied, as we all should be, with working in the dark, and struggling, as we all ought to struggle, but here with misdirected efforts, towards the light.

A Manual of the Operations of Surgery, for the Use of Senior Students, House-Surgeons, and Junior Practitioners. Illustrated. By Joseph Bell, F.R.C.S. Edin., Lecturer on Surgery, Assistant-Surgeon Clinical Wards Royal Infirmary, and to the Eye Infirmary; late Demonstrator of Anatomy in the University of Edinburgh. Edinburgh: Maclachlan and Stewart. London: Robert Hardwicke. 1866. Pp. 267.

This work, although originally intended as a text-book for the students attending Mr. Bell's class of Operative Surgery, may be considered a very useful addition to our library. Mr. Bell does not aim at originality, but has produced, as he says in his preface he wished to do, "a judicious selection and faithful compilation" of operations and the best methods of performing them.

As it is merely a practical work, all discussion on principles or pathology has been avoided. It is the work of a thorough practical anatomist, and will prove a valuable handbook, not only to those who are learning the processes of operations, but to those teachers or demonstrators of Operative Surgery on the dead subject who desire method and an accurate and intelligible way of imparting this kind of knowledge to others. The author, in his preface, pleads the size and price of his volume as an excuse for "baldness and brevity of style." In our opinion, this appears to be precisely what he has avoided, and by using brevity he has rendered what in many cases is difficult to understand intelligible to all. The work is interspersed with rough diagrams of certain operations, and at the commencement are four plates, taken from photographs, with the lines of incision for the several amputations and for ligatures of arteries.

The volume is divided into thirteen chapters, which include (1) Ligature of Arteries, (2) Amputations, (3) Excisions, (4) Operations on the Cranium and Scalp, (5) Those on the Eye, etc., (6) Those on the Nose and Lips, (7) On the Jaws, (8) On the Mouth and Throat, (9) On the Air Passages, (10) On the Thorax, (11) On the Abdomen, (12) On the Pelvis, (13) Tenotomy. Several of the chapters are excellent. We incline to think that the chapter On the Excision of Joints—not only the method of performing these operations, but the reasons when amputation and when excision should be done—as perhaps the best in the book. There are, perhaps, some "Northern proclivities" cropping up in several parts, but, on the whole, pretty much the same treatment would be adopted anywhere. The work will be to the student of anatomy a valuable companion to the text-book used in the dissecting-room, and it would be well if more Anatomical Surgery were taught, and that those employed in teaching practical anatomy would make a point of teaching not merely pure anatomy, but never lose a chance of demonstrating to pupils the Surgical bearings and the why and wherefore of all operative proceedings on the dead body. We must certainly compliment Mr. Bell on his useful little handbook.

On the Safe Abolition of Pain in Labour and Surgical Operations by Anæsthesia with Mixed Vapours. By ROBERT ELLIS. Robert Hardwicke. Pp. 80.

MUCH has been written and said on the efficacy and exhibition of mixed vapours as an anæsthetic, and we have great pleasure in recommending a study of the facts recorded and method employed by Mr. Ellis in his interesting and practical work. We cannot do better than preface our review with the author's own words. Any one who has had any experience, either practically or as a spectator, must allow that "the history of anæsthetics has unhappily a gloomy shadow to contrast with its long array of blessing and relief. That shadow is the occurrence of a sudden and unforeseen death to some of those who have applied to the discovery for immunity from a temporary pain." He further adds:—"But it is certain that this agent is, even with the greatest care, oftentimes too powerful for control when used alone," and that he (the author) "therefore advocates its use in combination with other vapours."

He divides his subject into the following chapters:—

1. On some defects of existing anæsthetic processes.
2. On the vaporisation of anæsthetic fluids.
3. On the physiological influence of the anæsthetic vapours.
4. On the fluids and apparatus employed for the mixed vapours.

He states, in the first chapter, that the principal causes of death by paralysis of the heart may be set down to the use of undiluted chloroform, and that it would seem that we require to use substances which at first gently stimulate the patient, sustaining the heart-power, tranquillise the emotional condition, and so gradually—at first partially, and then entirely—produce his insensibilty. He then proceeds to show the danger of producing anæsthesia by inhalation from a napkin or lint, as an uncertain and dangerous method, in which we entirely agree with him.

The second chapter is devoted to the consideration of the rates of volatilisation of ether, alcohol, and chloroform, and the possibility of obtaining a *definite mixture* of vapours for the induction of anæsthesia.

The physiological influence of these mixed vapours is then carefully discussed, and cases recorded in which they have been used, both in Surgical operations and in obstetric practice.

In the fourth section he describes the fluids and apparatus employed for the exhibition of these vapours. We again quote his own words with regard to the objects the writer has in view in introducing the method.

"1. Entire security against the excessive action of either of the anæsthetics.

"2. The production of modified anæsthesia, varying at the will of the operator, from a mere feeling of exhilaration to the deep unconsciousness requisite for abolishing acute pain.

"3. The power of maintaining this state of anæsthesia at the same degree for any requisite period, or of modifying it to existing exigencies.

"4. The reduction of the dose of chloroform to its lowest practicable point.

"5. The partial substitution for it of a vaporous basis of mixed alcohol and ether, whereby its properties are enhanced and sustained, and its dose diminished without abatement of its value as an anæsthetic.

"6. The counteraction of the heart-depressing power of chloroform, by combining with it a heart-stimulant, and thus obviating some of the most frequent causes of danger in chloroformisation."

This he certainly appears to have accomplished. The description of his ingenious contrivance we can hardly explain without the aid of diagrams, but the book itself is so readable and instructive that we heartily recommend its perusal, and trust to see the further adoption of a method which appears to deprive chloroform of its dreaded dangers.

On the Treatment of Pulmonary Consumption by Hygiene, Climate, and Medicine. By J. HENRY BENNET, M.D. London: John Churchill and Sons. Pp. 56.

THIS well-known author, himself a sufferer from the malady, maintains that consumption is in reality remediable; that, however, it is not a disease, but rather the termination of one—a mode of dying—the real cause of it being exhaustion of the "organic vitality" which one inherits from his parents. Consumption is, therefore, to be esteemed one of the means employed by Providence for preventing the gradual deterioration of the human race, the weaker specimens dying off too early to propagate it. Hygiene, climate, and medicine are the remedies to be employed, and their values are in the order indicated.

Die Sinnesdelirien. Von Dr. VON KRAFFT-EBING.

Delusions of the Senses. By Dr. VON KRAFFT-EBING. Erlangen: Enke. Pp. 58.

THE object of this *brochure*, as stated by the author in his preface, is to explain delusions of the senses in accordance with the most recent physiological doctrines, to remove them from the unsatisfactory domain of metaphysics, and to account for them by facts established by actual observation. His data are partly observations made by himself in the Lunatic Asylum at Illenau, and partly, more especially with regard to the effects of alcohol, narcotics, etc., cases published by others. He first gives some account of the process of "sense perception," according to the views of Du Bois-Reymond—*i.e.*, introducing the agency of electricity. He teaches that there are electric currents passing through the nerves at all times; but that external impressions, by producing irritation of the peripheral extremities of the nerve fibres, diminish the intensity of these, and so give rise to sensation. The quality or kind of the perception will therefore depend on the periphery of the nerve,—transformation of irritation into sensation upon the ganglionic cells in which it ends. Irritation of a nerve in its course gives rise to a sensation, but this is referred to the extremity or part to which the nerve is distributed.

Starting with these dogmas, and pointing out that hallucination (which is the first sense-delusion discussed) is produced by excitation of the central sensory apparatus, but referred to the external world by what is termed "outward projection," having also discussed the distinctions between ordinary perception and hallucination, as well as the evidence for his views as to the production of the latter, he proceeds to enumerate its causes. It may arise—1. From hyperæmia of the cerebral organs; 2. Anæmia of the same; 3. The action of poisonous substances, as opium, alcohol, and haschish; 4. Over-attention to business, solitude, mental and bodily fatigue, sleeplessness, and the transition from sleeping to waking; 5. Confinement; 6. The moment of death; 7. Fevers; and 8. As a complication of insanity.

Following Esquirol, our author distinguishes between hallucination and illusion, the latter of which he defines as "the interpreting of a recent impression in a way which does not harmonise with the reality." Its causation may depend on—1. A change in the media by which excitation is conveyed to an organ; 2. On peculiarities of the organs of sensation; 3. On a diseased condition of these organs; 4. On their abnormal excitability; and 5. On disorder of the cerebral organs.

In his fourth part he treats of those delusions observed in the various kinds of insanity, now classifying them according to the sense affected, and discussing them as delusions of hearing, sight, smell and taste, touch, and finally of general sensation, but afterwards considering them in relation to the forms of madness in which they most frequently occur.

The fifth and last part is occupied by the histories of a few illustrative cases.

We can recommend this little work to those interested in the subjects treated, in spite of some defects of style and peculiarities of idiom, as containing a careful *résumé* of the history of those derangements of the senses so commonly met with among the insane.

GENERAL CORRESPONDENCE.

ON THE ACTION OF ACETIC ACID ON OVARIAN CYSTS.

LETTER FROM DR. JUNKER.

[To the Editor of the Medical Times and Gazette.]

SIR,—Dr. Broadbent, in his letter on the treatment of cancer by injections of acetic acid, in your last impression, throws out a suggestion as to a similar treatment of ovarian cysts. If this suggestion were acted upon too rashly, without a full knowledge of the local and therapeutic effects of the acid upon these peculiar cysts, great danger must arise to the patient and to the reputation of the too confident Surgeon. The very properties of the acid which so strongly recommend it to a fair trial in cancerous growths, and which hold out brighter hopes as to their successful treatment, appear to me to constitute its great objection in the treatment of ovarian disease.

Dr. Broadbent says :—"It seems to me that the same considerations apply as in the case of cancer." From this I beg to differ. However desirable it may be to check the growth and functions, and to alter the character of the secreting cells on the inner surface of a cyst, the osmotic property of the cyst must never be lost sight of. Nor will the chemical action of the acid remain confined to the secreting cells; it must also affect the stroma and the peritoneal coat of the cyst, and the surrounding parts. One experiment will prove the correctness of both these statements.

Acting on the suggestion of Mr. Spencer Wells, who kindly furnished me with the most appropriate material for the experiment—viz., a simple ovarian cyst, with a smooth external coat, perfectly free from adhesions, fresh, having been extirpated only last Saturday (10th inst.)—I constructed a dialyser by stretching a portion of the cyst as a diaphragm over a gutta-percha hoop; and after having carefully washed the cyst, I placed it in a vessel containing distilled water. Into the dialyser the same quantity of a mixture of two parts of water and one part of concentrated acetic acid (sp. gr. 1040) was placed. Both liquids were tested with litmus paper; at first at intervals of five minutes, and afterwards of fifteen minutes. Even the first test detected acidity in the distilled water in the vessel, and an increase of acidity steadily occurred. By comparing the two series of test-papers thus obtained after six hours, a marked decrease of acidity in the liquid within the cyst was observable, and after twenty-four hours the osmosis was completed, the test-paper showing the same degree of acidity within and without the dialyser.

But it was not merely osmosis that had taken place; there was also a perfect alteration and disintegration of the portion of the cyst-wall acted upon by the acetic acid. It had been swelled to considerably more than twice its original thickness. From being formerly an opaque fibrous stroma, it had now changed into a diaphanous gelatine, and softened to such a degree, that the mere weight of a goose-quill easily perforated it.

I am fully aware of the objection which might be raised, that an experiment with a dead membrane is vastly different from what would take place with a living membrane within the body. I can only say that osmosis, which plays such an important part in the vegetable and animal economy, will be carried on more rapidly through membranes in which circulation and active innervation perform their functions. The physiology of nutrition bears this out.

Experiments on animals must teach us what would be the local effect of acetic acid on the peritoneum and the serous coats of the abdominal viscera, even if its dissolving and destroying properties already alluded to did not exist. We must not forget that the peculiar anatomical relations of the cyst with the peritoneum in the abdominal cavity create very different conditions from those of a cancer surrounded by fibrous tissues, fasciæ, aponeuroses, muscles, and fat.

The results of my experiments have been quite enough to prove that injecting acetic acid into ovarian cysts must necessarily be a very dangerous practice. Not only osmosis of acetic acid into the peritoneum takes place—and we want experiments to show how the peritoneum would bear this—but the cyst-wall would become so rotten that rupture would be inevitable.

I trust that the desire to prevent any such serious accident may be a sufficient reason for my troubling you with this letter. I am, &c. F. E. JUNKER, M.D.

36, Mount-street, Grosvenor-square, W., November 14.

DR. FARR'S OPINION ON THE NECESSITY OF MEDICAL CORONERS.

COPY OF LETTER FROM DR. FARR, F.R.S., D.C.L., OF THE REGISTRAR-GENERAL'S OFFICE.

General Register Office, Somerset House, Nov. 8.

My dear Sir,—I am glad to learn that you are a candidate for the City coronership. It is an important office, which you are, in my opinion, particularly qualified to fill with credit to the City.

My letter in reference to the particular qualifications of Medical men of eminence for the office still expresses my opinion, which has been strengthened by further observation and experience.

I have the honour to be,
My dear Sir,
Yours faithfully,
To Dr. Gibbon. W. FARR.

(Copy.)

Coronership for Central Middlesex.

The Committee for promoting the election of Dr. Lankester have great pleasure in publishing the following letter :—

"June 17, 1862.

"Sir,—I attach the greatest importance to the office of Coroner, as when properly filled it prevents crime, dissipates suspicion, and discovers the causes of death.

"Medical knowledge is necessary—firstly, in judging from the preliminary information whether inquests shall be held; secondly, in conducting the inquiry; thirdly, in deciding whether Medical or scientific witnesses shall be called; fourthly, in instructing the jury; and fifthly, in returning the causes of death under the Registration Act. Death is in some cases an impenetrable mystery, and in nearly all cases its physiological causes are entirely beyond the ken of non-Medical Coroners, who thus are liable to mislead, or to misdirect, or to fail in aiding the juries to sift Medical evidence, and to return in their verdicts the true causes of death. The object of the office is thus defeated.

"Inquests were held in England on 21,801 bodies, according to a recent return, and in only 482 cases was the verdict Homicide. This shows how many of the inquests are purely Medical.

"The Coroner's jury instituting only a preliminary inquiry, the accused persons detected were tried by the judges of the land, and 109 were convicted. This part of the procedure is very properly conducted by the highest judicial authorities. The duties of a Coroner are of a totally different character.

"Dr. Lankester, in my opinion, possesses all the knowledge of Medicine and of jurisprudence which is required to enable him to fill the office creditably to his Profession, and usefully to the country. I hope to see him elected their Coroner by the enlightened freeholders of Middlesex.

"I have the honour to be, Sir,
"Your obedient servant,
"WILLIAM FARR, M.D., F.R.S., D.C.L.,
"Chief Superintendent of Registrar-General's Office.
"To the Chairman of Dr. Lankester's Committee."

KREOSOTE IN DIPHTHERIA.—Dr. Knott, of Griffin, Georgia, states that he has found two drachms of kreosote suspended in two ounces of mucilage to constitute a very valuable local application in diphtheria; a sponge saturated in the mixture being applied to the parts where the exudations are exhibited.—*Boston Journal*, October 4.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, November 13, 1866.

Dr. Peacock, President.

Mr. Hulke, after reading a report by himself and Dr. Fox on Mr. Laurence's case of tumour of the eyeball, made a proposal for the appointment of

A STANDING COMMITTEE FOR THE INVESTIGATION OF CANCEROUS GROWTHS.

He said there was much confusion as to what was meant by the word "cancer." Some members described their specimens from a Clinical, others from a Surgical, and others from a Pathological point of view. He proposed that a standing committee should be appointed to report on each specimen of cancer or new growth brought forward.

The President remarked that Mr. Holmes had brought forward a similar proposition last session. The President thought Mr. Hulke's proposal was a very desirable one.

Mr. Holmes rose to second Mr. Hulke's proposition, and remarked on the desirability of defining as accurately as was practicable what was meant by the term "cancer."

The proposal was well received, but after further remarks by the President, Dr. Sibson, Mr. Holmes, Dr. Schulhof, Dr. Camps, and Mr. Hulke, it was decided to refer the matter to the Council. Subsequently, however, Mr. Hulke, Dr. Cayley, and Dr. Wilson Fox were appointed to report on specimens exhibited by Mr. Nunn, Dr. Moxon, Dr. Gibb, and Mr. Bruce.

Mr. C. H. Moore then brought forward

A DERMOID CYST OF THE OVARY.

It contained fatty-like matter, hair, teeth, and a fleshy mass. There were also (and to these Mr. Moore drew chief attention) thirty or forty smaller cysts, containing epidermic matter and hair, but no teeth. Mr. Moore thought these smaller cysts were altered ova. He referred to the views and researches of Dr. Woodham Webb and Dr. Barrett on this question.

Dr. Cayley exhibited a specimen of

CANCEROUS TUMOUR OF THE STOMACH.

A fat woman, 43 years of age, was admitted moribund. She had had dyspeptic symptoms and vomiting of blood two years before. There was no cancer elsewhere except in the pancreas.

Dr. Pavy exhibited a specimen of urine from a case of

INTERMITTENT HÆMATURIA OR HÆMATINURIA.

The patient, whenever he got a chill, passed red urine, and the redness was found to be due, not to blood, for there were very few blood-corpuscles in it, but to hæmatin-granules There were also albumen and casts of tubules coloured by hæmatin-granules. One great peculiarity was, that there was no smell or sign of decomposition in the urine after it had been kept several weeks. Dr. Pavy referred to the researches of Dr. Harley, Dr. Dickinson, and Dr. Gull. Dr. Pavy thought the kidney was congested in these cases, and that the congestion was due to some fault in the sympathetic system.

After remarks on this subject by Dr. Greenhow and Mr. Holmes,

Mr. Nunn brought forward a specimen of

TUMOUR REMOVED FROM THE BLADDER.

The point of interest in this case was, that the tumour resembled soft cancer in its clinical features. After removal, it was found to be fibro-plastic.

Dr. Moxon showed a specimen of

CANCER OF THE HEART.

The patient, a married woman aged 46, was admitted into Guy's Hospital, Oct. 3, for a tumour in the neck. She had had a small tumour "close beside the windpipe" for ten years: it did not trouble her until July last, when it grew rapidly. On admission she suffered little, complained of dyspnœa and dysphagia in some degree; the latter grew worse. She died quietly Oct. 23. The only symptoms referring to the heart were pain over its situation, and, upon percussion there, a horrible sense of impending death. At the autopsy the body was found moderately well nourished, and the lungs anæmic, so that she died neither of suffocation nor of starvation, but probably of syncope from the condition of the heart. The pericardium was covered over four-fifths of its surface with soft cancer; the substance of the right ventricle and auricle had cancerous tumours; and there projected into the cavity rounded bodies. These were like the common "polypi," but where they rested on the cancerous muscle they were themselves, Dr. Moxon believed, invaded with cancer. The cervical tumour was found to be made up of encephaloid cancer in a perishing condition, brown and soft, but in the left lobe of the thyroid gland was a scirrhous nodule. The chief interest of the case turns, Dr. Moxon thinks, upon the question whether here we have evidence of cancer invading the blood.

Mr. Nunn asked if the blood in the vena cava had been examined. He alluded to a case of cancer of the testes in which the vena cava had been blocked by cancerous and semi-fibrinous matter.

Dr. Moxon had found cancerous matter in the vena cava, and alluded to a case of cancer in which the walls of veins in the neighbourhood had become replaced by cancerous matter.

Dr. Charlton Bastien then brought forward a specimen of

CANCER OF THE BLADDER.

The patient, an extremely sallow, anæmic, and emaciated subject, had been in St. Mary's Hospital under Dr. Sibson's care. The base of the bladder, one ureter, and the prostate gland were involved in one cancerous mass. The mucous membrane was not abraded, and during life there had been no bladder symptoms. There had been a little albumen in the urine, and after death it was found that the cancerous disease had extended up the left ureter to the kidney, and both kidneys contained nodules of cancer. There were nodules also in the suprarenal capsules and in the liver. There were deposits in the pleuræ, but none in the lungs. The heart was free from cancer, but was in a state of fatty degeneration.

Mr. Holmes exhibited a specimen of

ENLARGED FIBULA AFTER PERIOSTITIS, REMOVED BY SUB-PERIOSTEAL RESECTION.

The specimen, the shaft of the bone, was taken from an infant. The malleolus was left, to avoid opening the ankle-joint. The dead bone was encircled by a mass of new bone, so that the specimen was as large as the fibula of the adult. The cloacæ were internal, so that removal of the old bone could not be effected.

HERPES CIRCINATUS FROM FAVUS IN THE CAT.

Dr. Tilbury Fox exhibited several specimens of parasitic fungi sent to him by Dr. Purser, of Dublin—one from a favus patch on the paw of the cat, the others from herpes circinatus (tinea circinata) of the arm produced by inoculation with the fungus (achorion) from the favus of the cat. It appears two cats were affected by favus, the one already mentioned, and a second about its nose; attempts were made by one of the ladies in the house to rub off the crusts from the diseased places in these cats, and very shortly afterwards tinea circinata showed itself about her hands, arms, and shoulders; three other inmates (females) were similarly attacked. The disease was most carefully diagnosed, and not a feature of favus showed itself. Dr. Purser then inoculated his own arm, and produced what was pronounced to be tinea circinata (herpes circinatus); he sent some of the scales to Dr. Fox, which were exhibited. There was an absence of spores, but mycelial threads were very abundant. They were smaller, less branched, and more devoid of granules than the achorion-tubes, characters which belonged to trichophyton. The cases were interesting as showing that favus may give rise to other forms of parasitic disease, a view which Dr. Fox holds against many authorities, and he remarked that De Bury's recent experiments show conclusively the difficulty of getting an interchange of characters between varieties of the same fungus.

Mr. Bruce brought forward a specimen from a case of

ENCHONDROMATOUS TUMOUR OF THE SHOULDER.

A young woman, aged 20, of miserable and cachectic appearance, was admitted into University College Hospital under Mr. Quain in April last, and had since been under the care of Mr. Marshall. The tumour was first noticed in November, 1865. It had steadily increased until April, when the patient entered the Hospital. The tumour then extended from two inches from the sternum in front to about the same distance from the spinal column behind, and from the middle of the clavicle above to the middle of the humerus below; the surface was smooth, slightly nodulated; the skin tense, and large veins ramified over it. The lower limbs were much deformed, spontaneous fracture of the bones (tibia and fibula) of both legs having taken place, and a false joint formed at the seat of fracture. The general condition of the patient was such as to preclude all thought of operative interference. The patient died about the end of October. The autopsy showed extensive pleurisy on both sides; the lungs were compressed and in great part airless; the pericardium also contained a large quantity of fluid. The superior vena cava was found to be obstructed by a firm mass, which completely filled the vein, and was continuous with a similar deposit in the subclavian vein and its branches, and with the general mass of the tumour. Two deposits, presenting all the naked-eye characters of cancerous deposits, were found in the liver—one in the right, the other and larger one in the left lobe. The fundus of the uterus was indurated and nodulated to a slight extent, the mucous membrane being red, spongy, and congested. The tumour measured 30 inches in circumference at the base, and 18 inches horizontally from front to back. The surface was nodulated, and at two points ulceration had taken place. Microscopic examination showed that it was a rapidly growing enchondroma, presenting various conditions in different parts. In the more recent portions it appeared almost like normal cartilage, the matrix being hyaline and the cells well formed; in other parts the matrix was fibrous, the cell element in great excess, and the nuclei very granular. In other portions, again, ossification was taking place. Mr. Bruce considered that it was not a true ossification, but rather a mixture of ossification and calcification in which the process became arrested before true bone was formed. The mass in the liver consisted mainly of caudate, ovate, and irregular cells, with distinct nuclei and nucleoli, and generally granular contents. A few elongated fusiform cells were found, but they were quite in the minority. The characters were such, Mr. Bruce added, that the deposit might be considered to stand on doubtful ground between the two families of sarcomata and cancers. The origin of this mass was briefly discussed. The case was illustrated by some large drawings by Mr. Berkeley Hill.

Mr. William Adam remarked on the diagnosis of cancerous and enchondromatous tumours, and referred to an account by himself, in an early volume of the *Transactions*, of a case of large enchondroma of the shoulder. He said that there was often a difficulty in the diagnosis of such tumours, but he added there was none after ulceration. In enchondroma the skin never became involved. It gave way by rupture, and the edge of the ulcer became attenuated, and gelatinous matter exuded from the opening.

Mr. Bruce said that in his patient's case the skin had been thickened at the edges of the ulceration.

Dr. Gibb exhibited a specimen of

PRIMARY CARCINOMA OF THE LARYNX, INVOLVING THE EPIGLOTTIS,

from a man, aged 66, who had been a patient under his care at Westminster Hospital. When first seen, in April last, the disease had been existing seven months. The laryngoscope revealed deep, foul, sloughy ulceration at the back of the tongue on the right side, cutting through the epiglottis and destroying all but a pencil-shaped process. The right side of the pharynx was involved, and large and painful glands were present in the parotid region of the same side. The voice was good, the vocal cords normal, and there was no dysphagia. Under treatment he improved; the ulceration became less, but the pain was more or less persistent. By the end of June he was more comfortable. Later, severe throat cough set in with expectoration, which irritated and harassed him and appeared to resist all treatment. He died suddenly from exhaustion on September 21. The lungs were healthy, and the disease was confined to the larynx, chiefly involving the right regulator of the glottis (false vocal cord) and the arytenoid cartilage of the same side. The disease was clearly primary, and tracheotomy might have prolonged life for a time in alleviating the distressing and exhausting cough which proceeded from the throat.

Utilising a Legacy.—Some months since Dr. W. Byrd Powell, a phrenological enthusiast in America, bequeathed his head to a widow lady who had been a favourite pupil. A Kentucky court ordered the head to be severed and given to the lady, which was done. The widow, with this odd dowry, was soon after married to Professor A. T. Kickeler, who is now lecturing in New York on physiological subjects, and illustrating his subject with Dr. Powell's head.

BOOKS RECEIVED.

Epidemic Cholera and Epidemic Diarrhœa—Can these Diseases be Prevented? By William Camps, M.D. Edin. London: H. K. Lewis.

. The author says they can be prevented by the use of such substances as quinine and salicine, and, as a proof of the accuracy of his proposition, cites his own case and that of another, who (in consequence of these drugs?) have not taken cholera. He believes that the same means might be had recourse to with regard to the cattle plague; for if what he says about cholera be sufficiently proved, may it not with equal certainty be applied to cattle, which, like men, belong to the class [illegible].

Animal Magnetism and Magnetic Lucid Somnambulism. With an Appendix. By Dr. E. Lee. London: Longmans. Pp. [illegible].

. An extension of an essay which obtained the prize from the Milan Society for the Encouragement of Arts and Sciences, by the well-known writer on home and continental baths. Let those who want to amuse themselves with the most recent stories about clairvoyance, table-turning, etc., have recourse to this volume, where they will find sufficient marvels to satiate the most unquestioning believer.

Atlas of Portraits of Diseases of the Skin issued by the New Sydenham Society. Sixth Fasciculus.

. This fasciculus, which has just reached us, contains three plates, two representing eczema in the infant and in its impetiginoid form in the adult, and a third representing the hands as affected by psoriasis, onychia maligna, and onychitis of a syphilitic origin. We need not say that the plates are of a high quality both artistically and practically.

On Hæmodromometers. By W. Handell Griffiths. Read before the Royal Irish Society, December, 1865.

. Only two hæmodromometers are in reality described—the well-known Volkmann's, and a most complex, though very ingenious, one invented by the author.

The Calendar of the Pharmaceutical Society of Great Britain.

. A volume likely to be of great use to the pharmaceutical chemist. Containing a great deal of information with regard to the constitution of the body from which it emanates, the regulations as to membership, examinations, the lectures at the Society, the scholarships and examination papers for these, and a synopsis of those Acts of Parliament which at all affect the members of the Society or druggists generally.

On the Endoscope as a Means for the Diagnosis and Treatment of Urethral Disease. By Christopher Heath, F.R.C.S. London: John Churchill and Sons.

. A reprint of a paper from one of our contemporaries, with the addition of some letterpress and a few engravings.

A Practical and Theoretical Treatise on Diseases of the Skin. By George Nayler, F.R.C.S.E. London: Churchill and Sons. Pp. 292.

. Arranged on the plan of Willan, slightly modified: contains some beautiful tinted engravings illustrative of the anatomy of the skin, hair, and nails, and of some of the principal animal and vegetable parasites found infesting the human being.

Sanitary Measures and their Results. By Thomas Shapter, M.D., F.R.C.P. Third Edition. Exeter: W. Clifford. Pp. [illegible].

. A new edition of the author's account of the sanitary measures taken to prevent the spread of cholera in 1849 and recently, contrasting the results thus obtained with those of 1832, and now giving a history of the epidemic of 1849.

The Use of the Laryngoscope; with an Appendix on Rhinoscopy. By Morell Mackenzie, M.D. Second Edition. London: Hardwicke. Pp. 156.

. This work reappears in a somewhat improved form, with additional engravings. The former edition has been exhausted within twelve months.

MEDICAL NEWS.

Royal College of Physicians and Surgeons, Edinburgh.—Double Qualification.—The following gentlemen passed their First Professional Examinations during the recent sittings of the Examiners:—

Roderick Macdonald, Skye; Philip S. Warren, Cork; Richard Sullivan, Bandon; Daniel Heagerty, Cork; Benjamin Bain, Caithness-shire; John Murray, Drung; James Walsh, Castlebar; James S. Conway, Limerick.

The following gentlemen passed their Final Examinations, and were admitted L.R.C.P. Edinburgh and L.R.C.S. Edinburgh:—

James Butler Norris Cane, Kilkenny; George Dods, Haddington; William Herbert Masson, India; Henry Bath, Glastonbury, England; Henry Wilson Nason, Dublin; George Murray Sinclair, Tranent; John Stewart Boyd, County Tyrone; John Riddell, County Monaghan; Henry Thomas Brownrigg, Waterford; William Henry Garde, Australia; James Stockwell, Musselburgh.

Royal College of Surgeons of England.—The following gentlemen having undergone the necessary Examinations for the Diploma were admitted Members of the College, at a meeting of the Court of Examiners, on the 13th inst.:—

Charles Nutt, Newton Abbott, Devon; Charles Holley, Richmond, Yorkshire; John Routledge Bosworth, Clapham-road; and Frederick Reynolds, Woburn-square, Students of Guy's Hospital; Edward Hewer, Winchester; William Iliffe, Nuneaton; Edward Homfray Addenbrooke, Smethwick; and Edwin Renshaw, Lee, Kent, of St. Bartholomew's Hospital; John Ockenden, Bayswater, and Henry Ezekiel Sewill, L.D.S., R.C.S., Clifton-gardens, of St. Mary's Hospital; Thomas Harvey, L.S.A., Baldock, Herts, and John James Jackson, Jersey, of St. Thomas's Hospital; Christopher Henry Dowson, Bristol, and Clarence Henry Messiah, Clifton, of the Bristol School; Robert Charles Brookes, Westminster-bridge-road, and Joseph Randle Buck, Dudley, Worcestershire, of the Westminster Hospital; John Beswick Perrin, Wigan, of King's College; and George Cardwell Rigby, Chorley, near Preston, of the Manchester School.

The following were admitted Members on the 14th inst.:—

John Holm, Camden-town; John Joseph Bingham, L.S.A., Staveley, Derbyshire; Thomas Lettis, Argyle-street; Arthur Hensman, Camden-street; and John Williams, M.B. Lond. and L.S.A., Llangadock, Carmarthen, Students of University College; Douglas Wills, L.S.A., Old Kent-road; Thomas Alpheus Buck, Kennington-park-road; and Richard Tudge, Credenhill-court, Hereford, of Guy's Hospital; Frederick Rainbow, Lower Norwood, and Robert Hullah, Devonshire-place, Wimpole-street, of St. Thomas's Hospital; Edward Sandwell, Gerrard street, of Charing-cross Hospital; Augustin le Rossignol, B.-ès-Sc. Univ. of France, Jersey, of the London Hospital; George Bishopp, Northiam, Sussex, of St. George's Hospital; James Robert Hill, Old Brompton, of St. Mary's Hospital; Donald Fludyer Boulton, Usk, Monmouthshire, of St. Bartholomew's Hospital; Scudamore Kydley Powell, Newcastle-on-Tyne; Sydney Griesbach, Leeds; Lionel Hirst, Morley, near Leeds; Joseph Demaine, Leeds; and Matthew Henry Molloy, Dublin.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—The following gentlemen passed their Final Examinations, and were admitted Licentiates of the College, during the October sittings of the Examiners:—

Donald Campbell Black, Argyllshire; John Ralph Ross, Drumbrain; Andw. Mullan, Banbridge; Geo. Haliburton Hume, Berwickshire; Robert Peel Macalevy, Scarva; John Dysart M'Caw, Portglenone; Thomas Carmichael, County Antrim; George William Robertson Hay, Roxburghshire; Stewart Stirling, Kilsyth; James Anderson Laing, Edinburgh.

APOTHECARIES' HALL.—On Thursday, November 8, the following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise:—

George Bainbridge, Harrogate; William George Tayler, Broadstairs, Kent; Charles John Walford Meadows, Otley, Ipswich.

The following gentleman also on the same day passed his First Examination:—

Essex Thomas Williams, University College Hospital.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

GROTH, E., M.D. Berlin, has been appointed Physician to the Islington Dispensary.

RICHARDS, J. PACKE, M.R.C.S.E., has been elected Assistant Medical Officer to the Devon County Asylum.

STRANGE, A., M.R.C.S. Edin., has been appointed one of the Assistant Medical Officers to the Gloucester County Asylum.

WRIGHT, J. H., M.R.C.S.E., has been elected Surgeon to the Halifax Infirmary.

BIRTHS.

BARLOW.—On November 5, at Norfolk House, 38, Albion-road, Dalston, the wife of R. Barlow, M.R.C.S.E., of a daughter.

BRITTON.—On November 4, at Acacia road, St. John's-wood, the wife of W. S. Britton, M.R.C.S.E., of a daughter.

DUNBAR.—On October 28, at Blackburn, Lancashire, the wife of R. P. Dunbar, M.D., of a son.

HENSLEY.—On November 12, at 10, Spring-gardens, S.W., the wife of F. J. Hensley, M.D., of a daughter.

HOCHEE.—On November 12, at The Elms, Fenny Stratford, Bucks, the wife of James Hochee, M.R.C.S.E., of a daughter.

McKELLAR.—On October 11, at Jhansi, the wife of Surgeon E. McKellar, 10th Lancers, of a daughter.

MILES.—On November 10, at Gillingham, Dorset, the wife of E. J. Miles, M.D., of a daughter.

MURRAY.—On September 29, at Elgin-terrace, Victoria, Hong Kong, the wife of Dr. J. Ivor Murray, Her Majesty's Colonial Surgeon, of a daughter.

TODMAN.—On September 12, at Port Elliott, South Australia, the wife of J. Todman, M.D., of a son.

MARRIAGES.

BAINES—BAINES.—On November 8, at St. Michael's, Melksham, Wilts, C. W. Baines, M.D., of Dursley, Gloucestershire, to Anne Isabella, eldest daughter of John Baines, Esq., of the former place.

BRADDON—VAUDREY.—On October 25, at Christchurch, Stockport, C. H. Braddon, M.D., of Manchester, to Mary, daughter of the late John Collier Vaudrey, Esq., solicitor, Stockport.

KAVANAGH—FRIEDBURG.—On November 10, at Greenwich, P. Kavanagh, M.D., of Deptford, to Frederica Ellen, only child of J. M. Friedburg, Esq., Hatcham.

KYNSEY—JOLLY.—On November 9, at St. Paul's Church, Kandy, Ceylon, W. R. Kynsey, Army Medical Staff, to Isobel Keith, second daughter of the late John Keith Jolly, Esq., of Farieland, Kandy.

MANTELL—OSBURNE.—On November 4, at Walcott Church, Bath, A. A. Mantell, M.D., Civil Surgeon, of Burdwan, Bengal, to Sarah Louisa, youngest daughter of the late Lieutenant-Colonel Osburne, Bombay Fusiliers.

MASON—DAWES.—On November 8, at Christ Church, Surbiton, C. J. Mason, M.D., of Surbiton, to Sarah Henrietta, second daughter of the late Rev. C. T. Dawes, Vicar of Dilhorne, Staffordshire.

TOMKINSON—BROWN.—On November 13, at St. Pancras, Euston-road, R. Tomkinson, M.R.C.S.E., of Cheadle, Staffordshire, to Catharine Mary, second daughter of S. King, Esq., of 19, Camden-square, and widow of T. Brown, Esq.

DEATHS.

ARTHUR, J., L.R.C.S.E., at Balcastle, on October 29.

BASSETT.—On November 8, at Hockley-hill, Birmingham, Hannah, the wife of John Bassett, Esq., M.R.C.S.E.

BOND, H. H., M.R.C.S.E., of Richmond-road, Islington, on November 1, aged 61.

CLARKE, A., M.R.C.S.E., of Clarence-street, Gloucester, on October 27, aged 46.

COLLIER, C. F., Inspector-General Medical Department, Bombay Army, at Bellair, Charmouth, Dorset, on November 9, aged 67.

GUILLOT, M. NATALIS, Professor of Clinical Medicine in the Paris Faculty of Medicine, died at Nice on November 9.

JONES, ROBERT, M.R.C.S.E., at Bron Hendre, Carnarvon, on November 7, in his 54th year.

JULIUS, G. C., M.D., at Maizehill House, St. Leonards-on-Sea, late of Richmond, Surrey, on November 6, in his 92nd year.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Cardiff Union.—The East District is vacant; salary £45 per annum.

Stroud Union.—Dr. Rowe has resigned the Fourth District; area 4894; population 4147; salary £61 per annum.

Wigan Union.—Mr. J. T. Winnard has resigned the West District; salary £70 per annum. Also the Workhouse; salary £30 per annum.

APPOINTMENTS.

Christchurch Union.—William Watmough, M.R.C.S.E., L.S.A., to the Eastern District.

Lambeth Parish.—Henry S. Hutcheon, M.R.C.S.E., L.R.C.P. Edin., to the Seventh District.

Isle of Wight Union.—Henry T. Castle, M.D. Edin., M.R.C.S. Edin., to the Shorwell District.

Skipton Union.—William Terry, M.R.C.S.E., L.S.A., to the Grassington and Kettlewell Districts.

Uxbridge Union.—Thomas Reynolds, M.R.C.S.E., L.S.A., to the West Drayton District.

CONTAGIOUS DISEASES ACT.—Her Majesty's Secretary of State for War has appointed William Stuart, Esq., M.D., to be Visiting-Surgeon for Woolwich and the London Lock Hospital, under the Contagious Diseases Act of 1866.

ACADÉMIE DE MÉDECINE.—M. Follin has just been elected into the Section of Surgical Pathology, vacated by M. Jobert.

APOTHECARIES' HALL, LONDON.—The annual November dinner of the Apothecaries' Society took place at their Hall on Wednesday, November 14. George Cooper, Esq., F.R.C.S., Master, presided. Amongst the guests were—Sir Thomas Watson, Bart., Sir William Fergusson, Bart., General Sir George Robinson, K.C.B., Sir Ranald Martin, C.B., etc., etc. The toast of the Royal College of Physicians was responded to by Sir Thomas Watson, that of the Royal College of Surgeons by Sir William Fergusson, that of the General Medical Council by the President, Dr. Burrows, and that of the Court of Examiners by their chairman, Dr. Dyer. Due credit was given by the various speakers to the great improvement which during the last fifty years the Society had wrought in the education and consequent status of the General Practitioner.

THE ROYAL ACADEMY.—Professor Partridge, President of the Royal College of Surgeons, commenced his course of lectures on Monday last, in the large room of the institution, Sir Edwin Landseer, R.A., in the chair, surrounded by several distinguished visitors, many of whom were members of our Profession.

BELFAST BRANCH OF THE ROYAL MEDICAL BENEVOLENT FUND SOCIETY OF IRELAND.—On Wednesday, the 7th inst., the stated quarterly meeting of the committee of this branch of the above useful Society was held at No. 33, High-street. Dr. T. H. Purdon, the permanent President, occupied the chair. It was determined to issue a special appeal to the members of the Profession generally belonging to this branch, earnestly directing their attention to the large number well able to contribute, but affording nothing whatever to a society which entirely depended upon voluntary support for fulfilling its special purposes, and which so eminently deserved the most liberal aid—more particularly when it was recollected that it was for the relief of those who, through no fault of their own, could do nothing for themselves, and who hitherto had enjoyed all the comforts of an independent position.

Provincial Medical Schools.—In the return lately published in the *Medical Times and Gazette* of the number of students pursuing their studies in our metropolitan schools a slight increase over the number of last year was exhibited. Judging from a similar return just prepared for the Government Inspector of the provincial anatomical schools, it appears there is a decrease in the entries this year of nine. The gross number now pursuing their Professional studies at the undermentioned towns is 258, against 267 last year: Birmingham (two schools), Manchester, Leeds, Newcastle-upon-Tyne, Liverpool, Bristol, Sheffield, and Hull. The largest number at any one school is 58, the smallest 10. The following will, no doubt, be read with some interest by metropolitan and provincial teachers:—

In 1860	there were	at the above	9 schools	333	Medical students.
1861	,,	,,	,,	258	,,
1862	,,	,,	,,	248	,,
1863	,,	,,	,,	214	,,
1864	,,	,,	,,	247	,,
1865	,,	,,	,,	267	,,
1866	,,	,,	,,	258	,,

It will be seen that 1860 was the *annus mirabilis* for Medical students at the provincial as well as at our metropolitan Hospitals. In no session since have the entries been so large.

The New Infirmary at Leeds.—A new Infirmary, elegant in structure and of great extent, has been built in Leeds at an expense of £100,000. Before devoting it to charitable purposes, a resolution has been agreed to by some of the wealthy inhabitants of the borough to hold in the building an exhibition of treasures of art, products of industry and processes of manufactures, on a scale not hitherto attempted in the county. To accomplish this end a guarantee fund of £50,000 was solicited, and Leeds answered by raising £85,000 in a fortnight. It is expected that the fund will reach £100,000.

The week has been characterised by an unusually large number of meteors, even though this is the season of the year when they are most commonly observed. Many of our readers will have seen a long article in the *Times*, others will need no information as to these curious phenomena. Notwithstanding some minor inaccuracies, the article we refer to is well worth perusal. Its theories as to the origin of aërolites are very ingenious. A few people still look upon them as thrown up from a volcano in the earth, and reprecipitated on its surface; but the curious chemical composition some of them present, such as nickel along with iron, a sulphide of calcium like galena, and various other things, show that they are akin to nothing on our globe. Others suppose that they have come from the moon, and others still that they are concretions formed in mid space. All know that minute planets are from time to time discovered between Mars and Jupiter, whose orbits differ very greatly from those of the nearest members of the planetary system. Just here, according to Bode's law, should be a single large planet. Where is it? It is probable that it has been split up into these small ones; hence their great number and varying orbits. Hence, too, aërolites are probably small portions of this former planet, which, travelling round the sun, come at times within reach of the attraction of the earth.

Fleas.—It is an old saying, and a very true one, that one-half of the world does not know how the other lives. The saying, we think, might be applied with still greater force to some of the lower divisions of the animal kingdom of whose habits we are sadly ignorant. Mr. Beck has, it seems, been investigating the natural history of that not very interesting animal the flea, and his researches have been followed up by another enthusiast, Mr. McIntire, who, in an article in a late number of *Science Gossip*, details the results he has attained. From what is said by these authors, there can be no doubt that the flea whilst in its larval condition lives on the half-digested blood which forms the excrement of its parents. Nor are the modes of life fashionable among the so-called "water fleas" less curious. Among them the male is generally a puny insignificant creature compared with the female, occasionally living on her as a parasite, and, in one instance at least, fixing his residence permanently in the vulva of his spouse. Both plans show a tendency on the part of Nature to save all the material possible; every fragment is picked up, so that waste is, it might be said, unknown.

Army and Navy Medical Departments. — The following letter, which appeared in a recent number of the *Pall-mall Gazette*, points to the most serious of the remaining grievances of the Army Medical Department. Whilst relative rank is only a name, and a different measure of social treatment is proffered to the Medical officer from that which the so-called executive ranks receive, we hope that our Profession will consult their own dignity and self-respect by keeping aloof from the public services:—

"To the Editor of the *Pall-mall Gazette*.

"Sir,—The causes of the lamentable decline in the *personnel* and prestige of the Army Medical Staff, to which I was once proud of belonging, are not those you have alluded to in your late remarks on that department. The pay, rank, and other advantages are now far greater than when there were hundreds of candidates for Assistant-Surgeoncies. No doubt the free competition for ensigncies and writerships, formerly so hard to obtain, attracts many of the class who formerly joined us, but still the great drawbacks to our obtaining first-class recruits are these:—First, a prudent man of ability does not like to join a service which sends him adrift on £320 a year as soon as he reaches fifty-five years, if he has not previously obtained one of about thirty appointments among a thousand officers, to which seniority gives no title. Second, no gentleman of spirit likes to join a service which, though nominally enjoying high 'relative rank,' finds it practically ignored on every possible occasion.

"To explain what I mean, let me point to two instances. When the Queen held 'a chapter' of the Victoria Cross at Buckingham Palace, she decorated two Medical officers as V.C., with a number of 'executives.' Every one of the latter class was invited to the Royal ball the same night; the two Doctors, one a 'relative' field officer, were alone excluded.

"The other day when our volunteers went to Belgium, all their field-officers, and, I believe, their captains, were presented to and invited by the King, the Doctors being again excluded. Thus in all grades, from Majesty downwards, there is a persistent practice of treating Medical officers as an inferior caste in the services. This may seem to some perhaps a comparatively small matter; but I can assure you such treatment is very sorely felt by Medical officers, and does deter many who would otherwise become candidates from joining the service. Another point is the age at which Medical officers are turned adrift. A general is often employed even at 70; a Doctor is declared unfit to do the slight duty of a cavalry regiment, perhaps five patients, at 55. It does not need any Royal Commission, I think, to see why we can no longer get first or even second class recruits.—Your obedient servant,

"D. I. G."

Meeting of the New Medical Club.—A meeting was held at the Hanover-square Rooms on Thursday, November 8, with the object of establishing a club in London for the social intercourse of members of the Medical Profession, British and foreign, to promote and maintain a mutual interest and fellowship between them, and to cultivate friendly relations with men of art, science, and letters. Sir William Fergusson, Bart., in the chair. The Chairman having referred to the advantages to be obtained by the formation of such a club, he then called upon the Honorary Secretary, Dr. Lory Marsh, to read the report, of which the following is a copy:—"The establishment of a club in London for the social intercourse of members of the Medical Profession of this and other countries has at different times engaged a considerable amount of attention. Almost all agree that such a club would be a great convenience; and as it is proposed to include as members gentlemen connected with other scientific societies, a further advantage will accrue, by the cultivation of friendly relations with men of art, science, and letters. At present the number of members enrolled is upwards of 300, and, doubtless, many are waiting to see the local habitation of the club settled before joining. In this, as in other clubs, the amount of entrance and subscription will be increased so soon as the opening of the club is decided upon. It is proposed to conduct the club on the proprietary principle; so that members will not incur any personal pecuniary liability beyond the amount of their entrance and subscription. All existing clubs are designed more or less with a view to the special convenience of some particular class of members. Few, if any of them, however, would afford those conveniences which it is confidently anticipated a club of the nature we now propose to establish will possess. The club would require to be moderately economical. Members should in all cases be allowed to introduce their friends as visitors. Many of the members would reside out of London. It is, therefore, desirable they should, if possible, be provided with sleeping accommodation, so that they might find at the club a genial and comfortable home. As the members would frequently require to meet for the purposes of Professional consultation, rooms would be set apart during a portion of the day for that purpose. Of course the club would possess the usual conveniences of such a place of resort. There would be a reading-room, refreshment room, and library, etc. These are some of the advantages the promoters propose to accomplish by the establishment of the new club. The movement has been carried on thus far without incurring any expenses beyond those necessary for printing, postage, and advertising. A favourable opportunity now offers of opening the club, and to enable the Committee to carry out the necessary arrangements it is important that gentlemen desirous of joining should send an early intimation of their intention of so doing." The following resolutions were afterwards put and adopted :—"1. That in the opinion of this meeting it is desirable to establish a club in London for the social intercourse of members of the Medical Profession, British and foreign; to promote and maintain a mutual interest and fellowship between them, and to cultivate friendly relations with men of art, science, and letters. 2. That the club be called 'The Medical Club,' but that it be competent to elect as members gentlemen connected with literature, science, and art, as well as members of other scientific societies. The election in all cases to be by ballot. 3. That a Committee be formed, consisting of the following gentlemen, together with the Treasurer and Honorary Secretary—viz., Sir W. Fergusson, Bart., London; Sir Charles McGregor, Bart., London; Mr. Clement, M.P., Shrewsbury; Dr. Bell Fletcher, Birmingham; Mr. Grigg, R.N., Greenwich Hospital; with power to add to their number—to settle the rules, to determine the amount of the future entrance and subscription, and to take the necessary steps for opening the club as soon as practicable, it being distinctly understood that, previous to their adoption, the rules shall be revised by counsel, so that members shall not, under any circumstances, be rendered liable to pay more than the amount of their entrance and subscription. 4. That a copy of these resolutions be forwarded to the members of the club, with a request that they will circulate them among their friends." The proceedings concluded with a vote of thanks to the Chairman.

Dublin Obstetrical Society.—The first meeting of the twenty-ninth annual session of the above Society was held in the Pillar Room of the Rotundo, adjoining the Lying-in Hospital, Rutland-square, on the evening of Saturday, the 10th inst., when the inaugural address was read by the President, Dr. McClintock. In the commencement of his address Dr. McClintock gave a lengthened sketch of the Medical history of the late Dr. Charles Johnson, one of the Honorary Presidents of the Society, and of whom an obituary notice appeared in our present volume (p. 21). The concluding portion was taken up with some general observations upon uterine therapeutics. The purport of these remarks was to point out and to reprobate the mechanical or physical character of the prevailing views of uterine pathology, and the principles of treating many uterine diseases. This tendency to ignore, or not sufficiently to estimate, the importance of the vital or dynamic conditions of the organs concerned, Dr. McClintock attributed to—1st, the habitual reliance on physical signs in the forming of our diagnosis; 2nd, to the modern discovery of the frequent existence of misplacements of the uterus; and, 3rdly, to the exaggerated etiological importance attached to these misplacements. Whilst pressing this charge, he freely acknowledged that real progress had been made in gynecology under the influence of doctrines which, he felt convinced, were now being pushed, in certain quarters, to an unphysiological extent, just as the iatro-mechanists of the 17th century may be said to have rendered some service to Physicians and to the general advance of Medicine. At the conclusion of the address, the reading of which occupied about an hour, Dr. McClintock declared the result of the ballot for the election of officers for the ensuing year to be as follows:—*President*, Dr. Sawyer; *Vice-Presidents*, Drs. Hardy and Johnstone; *Treasurer*, Dr. Halahan; *Secretary*, Dr. Kidd; *Committee*, Drs. Beatty, McClintock, Denham, Churchill, and Byrne. Dr. McClintock gave notice that at the next meeting he would propose the following resolution:—"That we feel it due to the character and position of the Society that it should entertain the British Medical Association at a *conversazione*, or in some other fitting manner, on the occasion of their visit to Dublin next year, and that the Council be authorised to make the necessary arrangements, and to open a special subscription to meet the expenses attending it."

The Boundou Poison.—At the meeting of the Academy of Sciences at Paris, MM. Pécholier and Saintpierre reported the results of their experiments on this substance, derived from a shrub of the *Apocynea*, and which is employed by the Africans on the Gaboon in an ordeal liquor. The Boundou contains a poisonous principle soluble in water and alcohol, and produces an action on the sensitive nervous system analogous to that of nux vomica. When administered by the stomach or by the endermic method, it produces at first an augmentation of the number of inspirations and cardiac pulsations, and afterwards a considerable diminution of those movements. It causes an exaggeration of sensibility, next tetanic convulsions, and finally insensibility, paralysis, and death. Its action on the motor nervous system is only secondary, and it does not affect the contractility of the muscular system. It is not a poison of the heart, which, on the contrary, continues to beat for a long time after death. These results were obtained from administration of the poison to rabbits, a dog, and frogs. In some cases the animal slowly recovered. This may be the case sometimes with man, and the Africans regard those champions in the judicial duels who escape from the deadly influence of the Boundou poison as recalled to life by the justice of God demonstrating their innocence.—*Comptes Rendus*, tome lxiii., p. 809.

Exclusion of Air from the Surface of the Body—At the meeting of the Academy of Sciences at Paris on November 5, M. Guérin exhibited a new method of producing a rigorous protection of the surface of any part of the body from atmospheric influences by means of an impermeable membrane applied immediately and hermetically, whereby the exhalations may be collected and drawn off, and at will replaced by other fluids, gaseous or liquid. The apparatus comprises a perfectly air-tight pneumatic receiver, in which a vacuum may be obtained and maintained to any degree required, and shown by an indicator, this receiver being furnished with two or more cocks to be put in communication with the air-pump and the media from which the gases are to be extracted. The other parts of the apparatus and the method of using them are described in M. Guérin's memoir in the *Comptes Rendus*, tome lxiii., p. 767. As results of his invention he asserts that its application will render it possible to ascertain in the higher animals whether the skin be an auxiliary organ of respiration and where cutaneous respiration exists; what are the effects and products of this respiration; what influence the air exercises on the skin, the calorification, and the temperature of animals; what influence the atmospheric pressure has on absorption; what are the gases and substances exhaled or secreted cutaneously; and finally, whether the exclusion of air from the skin, or free communication with it, be beneficial or injurious to the maintenance of life. M. Guérin expects that his apparatus will become a new instrument of scientific exploration for Physiology, Medicine, and Surgery, and prove a source of novel therapeutic applications.

Composition and Quality of the Metropolitan Waters in October, 1866.—The following are the returns of the Metropolitan Association of Medical Officers of Health :

	Total Solid Matter per Gallon.	Loss by Ignition.(a)	Oxidisable Organic Matter.(b)	Hardness.	
				Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction .	21·00	1·00	0·81	15·0	5·0
West Middlesex . .	20·98	1·01	0·98	16·0	6·5
Southwark and Vauxhall	21·66	1·14	1·00	15·0	6·0
Chelsea	20·33	0·66	0·59	14·0	6·0
Lambeth	21·34	0·75	0·80	16·0	5·0
Other Companies.					
Kent	27·19	1·98	0·28	18·5	8·0
New River . . .	18·87	0·75	0·31	15·0	4·5
East London . . .	18·59	0·80	0·68	16·0	5·0

(a) The loss by ignition represents a variety of volatile matters as well as organic matter, as ammoniacal salts, moisture, and the volatile constituents of nitrates and nitrites.

(b) The oxidisable organic matter is determined by a standard solution of permanganate of potash, the available oxygen of which is to the organic matter as 1 is to 8; and the results are controlled by the examination of the colour of the water when seen through a glass tube two feet in length and two inches in diameter.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

M. D.—It is a point still under discussion. A Government Committee are now employed in investigating it. The same space should be allowed to the aged as to other adults.

Sanitary Conference at Leamington.—In the multitude of counsellors there is wisdom, says the proverb, and now men of science, not less than statesmen, seem inclined to accept the words as true: at all events, congresses and conferences on scientific questions are becoming the order of the day. At the recent conference held at Leamington on the sewage of towns, we believe that the question of how Leamington itself is to be relieved of its sewage was one of the chief topics discussed.

Alleged Absurd Dresses at Oxford.—Some Medical friends who have sons at Oxford inform us that the statement lately made by the *Saturday Review*, to the effect that large numbers of undergraduates have insanely robed themselves in ecclesiastical garments, must be the result of a hoax. The strangest thing that the writer can have seen may have been the ornate gowns and caps worn by young noblemen. Fears of epidemic ecclesiastical insanity at Oxford are, we are assured, groundless.

Alleged Neglect on the Part of a Poor-law Medical Officer.—We regret to notice that an investigation has been instituted into the conduct of the Poor-law Medical Officer of the Frimley District of the Farnham Union, in so far as he is said to have neglected three pauper patients belonging to that union. From the account which has reached us, we suspect that there is a considerable amount of ill-feeling existing between the Medical Officer and the board of guardians. Certainly, we should not like to give judgment on either side until we have heard both, and even from the report we have received, we can see that a good deal can be said in favour of the Surgeon concerned.

Improved Form of Wooden Leg.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Your correspondent, "A. C. S.," would be entitled to much praise for his ingenious improvement upon the construction of the common wooden leg did it not unfortunately happen that precisely the same plan has been for more than ten years adopted by myself, and supplied by me to every Chelsea and Greenwich out-pensioner.

I feel confident his declaration of its novelty has only arisen from not being acquainted with this fact; but as publicity has been given to the subject by its appearing in your largely-read columns, I feel bound to ask you to permit me to notify the non-priority of the claim advanced by "A. C. S." I am, &c.

56, Wimpole-street, W. Heather Bigg.

Supposed Cause of Trismus Nascentium.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE

Sir,—On the 1st inst. I attended Mrs. D. in her confinement, when she was delivered of a healthy female child. Some slight hæmorrhage from "the cord" caused me to apply a second tape. All went on well till the evening of the 7th, when the child became suddenly unable to catch the breast. The nurse therefore gave it some castor-oil. When I saw it next day, there were evident symptoms of lockjaw, which rapidly increased in severity, and death ensued on the morning of the 9th. Dr. Watson, in his remarks On Trismus Nascentium, says, "Some refer it to irritation from the wound made by dividing the navel-string." Would any of your readers of more experience say whether similar cases in their practice had been preceded by any such occurrence? Also the treatment. Mine was by stimulants. Would any other have been likely to have proved more favourable? I am, &c.

Dunning, November 10. W. S.

A Substitute for Forceps.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In the last number or two of your periodical there have been some communications relative to improvements (?) on the forceps at present in use in midwifery. Permit me to mention a simple means I have on a few occasions found very useful. I happened some months since to go into a house where a woman was in labour and much needed assistance, having been a long time ill. In the course of time the child's head passed into the pelvis, and there stayed; the pains lost their power, became frequent, teasing, and ineffectual, and the patient distressed and restless. I was four miles from home, and had no instruments with me, but it struck me, if I could get a strap under the child's chin, I could effect delivery. Having procured a skate strap, with a little manipulation, and not much difficulty, I got it under the child's chin and delivered easily. I do not think the whole process took more than about five minutes. I have since adopted the plan three or four times, and always most successfully. As a means of delivery, under certain circumstances, a thong of leather, besides its own real utility, has other recommendations—it can always be obtained, it has no terrors with it, and, if the Surgeon thinks himself justified in so doing, he can use it without the mother's knowledge. I am, &c.

Lindfield, Sussex, November. William Elliott Porter.

Local Treatment of Cancer by Vegetable Acids.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In reference to Dr. Broadbent's interesting investigations for the relief of cancer by acetic acid, the enclosed paragraph, which appeared in the *Evening Mail* about two years since, may prove interesting to your readers at the present time. The spray producer would be a convenient instrument for applying the acetic, citric, or other acids, to a cancerous tumour, when a breach of surface has taken place. I am, &c.

Leamington, Nov. 12. J. Fenn Clark.

"Dr. Brandini, of Florence, has recently discovered that citric acid will assuage the violent pain concomitant of cancer. One of his patients in the Hospital, 71 years old, was afflicted with cancer in the tongue. There was no possibility of performing an operation, the surface attacked being far too extensive, investing the base, the sublingual, and the submaxillary glands. In the midst of his torments he asked for a lemon, which was nothing remarkable, as cancerous patients generally have an extraordinary liking for acids. But the seat of the disorder being in the mouth, a circumstance was observed which might otherwise have escaped attention—the juice of the lemon diminished the pain. On the following day he asked for another. This gave him greater relief than the day before. This led Dr. B. to try citric acid itself in a crystallised state. A gargle was composed of four grains of the acid in 350 grains of common water, and it entirely carried off pain. On its reappearing, the same remedy was repeated with the same success. In the course of a month this treatment not only delivered the patient from all suffering, but reduced the swelling of the tongue very considerably. Dr. B. tried the remedy on a female patient of 73, who for years had been suffering from an ulcerous cancer on the breast. The affection had been pronounced incurable. The torment was great—she could get no rest night or day. Dr. B. applied a pledget of lint, previously soaked in the above solution, to the part, and the relief obtained was instantaneous. The pain disappeared, and when, after the lapse of six or seven hours, it began again, a fresh application was sufficient to keep it off. Dr. B. observes if subsequent experiments should prove equally successful, citric acid must be considered a great boon to humankind. A substance capable of removing violent pain in an incurable affection is not less valuable than one that will effect a cure in more tractable maladies."

Are Medical Officers in the Army Better Paid than Combatant Officers?

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—The frequency with which I have been told by combatant officers that Medical men in the Army were so much better paid and quicker promoted than combatants, induces me to send you the following comparisons between the career of a combatant and of a Medical man, with a few general observations on the Medical Department of the Army as at present constituted, which you may possibly think worth taking notice of in some form in your valuable journal. Allow me at the same time, to thank you for inserting what you did with regard to the pay of cavalry Medical officers. I am, &c. A Cavalry Officer.

Comparisons between Combatant and Medical Officers of the Army with regard to Promotion, Pay, etc. etc.

A combatant enters the army at about 18 years of age, knowing nothing about his profession, and learns it in the Army, while a Medical man enters the army at probably 24 or 25 years of age with his profession learned. In fact, a young ensign or cornet, when he enters the service, is just in the same position with respect to his profession as a Medical student in his first year is to his; and yet the young combatant draws pay and has free quarters all the time in which he is learning his profession, while the Medical student has neither of these advantages, and in addition is spending money, hand over hand, for lectures, &c., &c., &c.; added to this, he has very likely served an apprenticeship before entering at his school or college, which, in the shape of an apprentice fee, has cost him quite as much as the price of the combatant's commission. If, now, to the apprentice fee we add the expense of studying for four or five years at a metropolitan School of Medicine, with no free quarters and no pay (as in the case of the combatant learning his Profession), we shall find that the expenses which a Medical man has to incur before he can enter the army as an Assistant-Surgeon are far greater than those incurred by a boy who enters as a combatant, the price of his commission included. Such being the case, and the Medical man entering the service at so much later a time of life, with his profession learned, in contradistinction to the combatant, who enters as a boy with his profession to learn, one would reasonably suppose that the period during which the Medical man would be called upon to serve as a subaltern or assistant would be an extremely short one, or at any rate much shorter than that of his brother combatant officer, but not a bit of it. The combatant enters the army at 18 and commences to study his profession, and is frequently promoted to the rank of captain in three or four years (especially in cavalry), or at the age of 21 or 22, and has every reason to count on being promoted from the subordinate position of a subaltern to that of a captain in 10 years, or when he is about 28 years of age; while the poor Doctor, who had learned his profession before ever he entered the Army, has to go on serving the Surgeon of the regiment in the capacity of his subaltern or assistant for 10 or 12 years (or, at the present rate of promotion, for 20 or 30 years). In fact, the subaltern career of the combatant, counting from the time he commences the study of his profession, is a short one while that of the Doctor, counting from a variable time after he has finished his studies, is a very, very long one; the one is promoted when he is about 28, the other about 10 years later. Of course, an Assistant-Surgeon's relative rank increases with service. He ranks as a captain after six years; but relative rank, except with respect to choice of quarters, is of little use. It does not change the position of the Assistant-Surgeon with regard to his own superior, the Surgeon of the regiment. The Assistant-Surgeon is as much the subaltern of the Surgeon after he has attained the relative rank of captain as before, and is in all respects as true and veritable a subaltern as an ensign or cornet is to his captain. No; relative rank is not wanted. What is wanted is substantive promotion in the Medical Department, or some reorganisation of the service where the present relations of Surgeon and Assistant-Surgeon would be changed. You may give a man the relative rank of a general, but as long as you leave him in the position of an assistant his relative rank avails him little. It must never be forgotten that an Assistant-Surgeon in the Army is a totally different thing from an Assistant-Surgeon or Physician in a London Hospital; the latter is independent of the Surgeon of the Hospital to which he belongs. It is a misnomer to call him an assistant at all; while the Army Assistant-Surgeon is an assistant pure and simple. As the case at present stands, instead of the Medical officer having gained anything by undergoing the laborious studies necessary to qualify for Medicine, it has turned out a positive disadvantage, as he might have saved himself all the trouble, and been better off, by entering the Army at 18, and beginning to draw pay from the moment he commenced his profession, have been promoted from among the subalterns about the same time of life at which a Medical officer begins his long subaltern career. In fact, the advantages of the Army as to promotion, etc., are in inverse ratio to the trouble and pains a man has taken in educating himself. With regard to position, in the Army, and the influence of relative rank on that position, it simply amounts to this—that a major has his position in the regiment accorded to him as a matter of course, while a Surgeon ranking with him has to gain his position; it is difficult to see how it could be otherwise.

As to the question of pay, an Assistant-Surgeon cannot live on his even in a cheap regiment; while in a cavalry regiment (in addition to having to buy a uniform on entering at a price of about £150, two horses at a variable sum, and being obliged to subscribe a sum equal to fifty days' pay as subscription to the mess on joining, amounting in all to £250 or £300), he would require about £200 a year of private means even to make ends meet in the most scrubby way, while, to live at all like his brother combatants, about £300 a year of private fortune, in addition to his pay, is required; consequently, if we start with the axiom that a man's profession ought to be able to keep him, more pay is required. A man on the staff might probably live on his pay if he could start free of debt; but unless he has private means, the expenses of uniform, travelling expenses at the time of his examination, living in London at that time, and the insufficiency of his pay at Netley, run him into debt to the extent of probably £100. If sent abroad, he has of course fresh expenses in the shape of a foreign outfit. On being gazetted from the staff to a regiment, he has either an alteration of his staff uniform to pay for, or an entire new uniform to buy. This latter happens if he should be appointed either to the cavalry or artillery, to some special infantry corps, as the Rifles or Highlanders; so, what with staff uniform, to begin with, and changes to other uniform, added to foreign outfits, etc., etc., the Medical officer has every now and then a very heavy deduction from his pay, which very often involves him in debt, which he just manages to clear, when he is involved in a fresh expense.

There is no doubt that, to induce men in any numbers to enter any calling in life, that calling must be either somewhat lucrative or very agreeable. In the olden time, the army was certainly the latter, as regiments were quartered through the country in agreeable neighbourhoods, and not congregated in huge camps to the disgust of the officers and the men alike, which latter show their feelings by generally taking their discharge when their first term of enlistment is over, and declining to have anything more to do with a service where the work has greatly increased while the pay remains the same. To confine our observations to the Medical department, there is no doubt that its work has greatly increased of late years. The pen-and-ink work has increased amazingly. All sorts of useless returns are called for, and what with Medical officers having to attend musketry and brigade field days, the department is very differently worked from what it was before camps were thought of. It is not so much that these duties make the daily work of the Medical officer severe as that they prevent his obtaining leave, so that he often does twelve months' work for the combatant's nine months; he, the latter, always obtaining three months' leave. At any rate, the principle that the work of any man or any department can be increased indefinitely, while the pay remains the same, is a bad one.

To touch on a delicate subject, the subject of dress—delicate, because Doctors are generally accused of a desire to ape the combatant. There is no doubt that for regimental Medical officers the present one is objectionable, for the simple reason that it is neither staff nor regimental, but a compound of both, and is generally disliked; and now that the convention of Geneva has decided that a red cross on a white ground should be worn as a distinguishing mark on the arm to indicate Surgeons, etc., on the field of battle, the old cocked hat and black belt might well be dispensed with. (The piece of cloth with the cross could be easily put on or off.) As to the present costume, no one who has seen it can form two opinions regarding it. It is simply the very ugliest that could possibly be invented, and almost justifies the opinion of a great many Medical men that it was ordered for the express purpose of drawing a disparaging comparison between themselves and combatants. If all Medical officers were dressed exactly the same as the other officers of their own regiments on all ordinary occasions, wearing the Geneva arm badge when on duty, it would probably conduce to that good feeling which it is so desirable to cultivate. In the army, dress is not so unimportant as a civilian might be inclined to imagine. The colonel is dressed better than his captains; the captains better than their subalterns. And dress, by habit, has something to do with the respect of the men. At any rate, there is no good reason why a Medical officer should be made a laughing-stock to the privates. The musketry is a horrid nuisance. A regimental Medical officer has often to stand for hours near some ranges while firing is going on. He is of little use, as of course he would not perform any operation on the field, and every purpose would be answered by telling him not to leave barracks till the firing party returned, in case any man was brought in wounded. I am, &c. MEDICAL OFFICER.

COMMUNICATIONS have been received from—

Dr. WALLACE; Mr. ELLIOTT PORTER; Dr. HOLT DUNN; Dr. STEWART; Dr. DAUBENY; J. FENN CLARK, Esq.; W. S.; Dr. BUCKELL; Mr. J. J. LUNDY; Mr. LAWSON TAIT; Mr. PARKER; FIAT JUSTITIA; Dr. B. W. FOSTER; Mr. E. BELLAMY; Mr. F. H. MARSH; Dr. HUGHLINGS JACKSON; Dr. W. D. MOORE; Mr. J. CHATTO; Professor R. DYCE; Dr. JUNKER; Dr. M'CALL ANDERSON.

BOOKS RECEIVED—

Griffiths on Hæmodromometers—Dublin Quarterly Journal of Medical Science, No. 84—Monthly Report on the Health of the Parish of Saint Marylebone, by Dr. Whitmore—Gazette Hebdomadaire, No. 45—Henry Bennet on Consumption—Nayler on Diseases of the Skin—Harley and Brown's Histological Demonstrations—Shapter's Sanitary Measures and their Results, third edition—Mackenzie on the Laryngoscope, second edition.

NEWSPAPERS RECEIVED—

The Sunday Gazette—Gazette des Hôpitaux—L'Union Médicale—Gazette Médicale de Paris—The Midland Counties Herald—United Service Gazette.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 10, 1866.

BIRTHS.

Births of Boys, 1132; Girls, 1080; Total, 2212.
Average of 10 corresponding weeks, 1856-65, 1831·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	679	682	1361
Average of the ten years 1856-65	643·0	609·9	1252·9
Average corrected to increased population..	..	..	1378
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	5	..	5	2	1	8	7	1
North ..	618,210	11	6	4	1	7	21	5	7
Central	378,058	4	1	3	1	3	5	3	10
East ..	571,158	12	7	5	1	14	9	7	16
South ..	773,175	5	15	13	..	9	7	11	33
Total ..	2,803,989	37	29	30	5	34	50	33	67

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 10, 1866, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending Nov. 10.	Deaths.		Temperature of Air (Fahr.)			Rain Fall.	
				Corrected Average Weekly Number.*	Registered during the week ending Nov. 10.	Highest during the Week.	Lowest during the Week.	Weekly Mean of the Mean Daily Values.	In Inches.	In Tons per Acre.
London (Metropolis)	3067536	39·3	2212	1400	1361	59·6	30·6	48·4	0·32	32
Bristol (City) . .	163680	34·9	108	73	‡168	58·7	31·7	49·0	0·88	89
Birmingham (Boro')	335798	42·9	225	163	150	58·0	29·0	46·2	0·43	43
Liverpool (Borough)	484337	94·8	383	281	267	58·1	38·1	50·4	0·47	47
Manchester (City) .	358855	80·0	231	203	‡184	60·0	29·0	47·7	0·90	91
Salford (Borough) .	112904	21·8	64	57	51	59·1	29·9	47·8	0·86	87
Sheffield (Borough) .	218257	9·6	184	115	98	58·0	30·5	46·7	0·71	72
Leeds (Borough) .	228187	10·6	255	116	124	60·3	25·0	46·2	0·46	46
Hull (Borough) .	105233	29·5	73	49	39	..	..	..	..	..
Nwcastl-on-Tyne, do.	122277	22·9	90	65	87	57·0	30·0	45·7	0·16	16
Edinburgh (City) .	175128	39·6	104	84	123	54·7	30·0	44·2	0·50	51
Glasgow (City) . .	432265	85·4	352	252	238	53·9	27·3	45·0	1·79	181
Dublin (City and some suburbs) .	318437	32·7	146	†156	216	58·4	27·5	46·2	0·39	39
Total of 13 large Towns . . .	6122894	34·4	4427	3014	3006	60·3	25·0	47·0	0·66	67
					Week ending Oct. 27.	Week ending Oct. 27.				
Vienna (City) . .	(1863) 560000	..	..	..	439	..	..	§ 37·2	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·837 in. The barometrical reading increased from 29·57 in. on Thursday to 30·06 in. on Saturday.

The general direction of the wind was S.W. and W.S.W.

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* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 49·2°.

APPOINTMENTS FOR THE WEEK.

November 17. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p.m.

METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH, 7½ p.m. Meeting.

19. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

20. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

ANTHROPOLOGICAL SOCIETY OF LONDON, 8 p.m. Meeting.

PATHOLOGICAL SOCIETY, 8 p.m. Meeting.

21. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

22. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

23. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.

ORIGINAL LECTURES.

LECTURES ON CATARACT,

AND THE

MODERN OPERATIONS FOR ITS TREATMENT.

DELIVERED AT
King's College, London,
During the Summer Session, 1866,

By J. SOELBERG WELLS,
Professor of Ophthalmology in King's College, and Ophthalmic Surgeon to King's College Hospital.

Lecture III.

Gentlemen,—The general condition of the eye should always be carefully examined before an operation for cataract is determined upon. The tension of the eyeball, the degree of sight, and the state of the field of vision must be ascertained, so that the presence of any deep-seated lesion may not escape detection. Otherwise we might fall into the reprehensible and unjustifiable error of operating upon an amaurotic eye.

Should the patient be suffering from epiphora, dependent upon some affection of the lachrymal apparatus, or from inflammation of the eyelids or the conjunctiva, this should, if possible, be cured prior to the operation, as any such complication not only enhances the difficulties of the after-treatment, but may even endanger the result of the operation.

The perception of light and the extent of the field of vision of cases of mature cataract are to be tried in the following manner:— A low burning lamp having been placed in a darkened room at a distance of 10-12 feet from the patient, it is then to be ascertained whether he can see its light with the cataractous eye, the other being closed. If he can do so, the lamp is to be alternately shaded and uncovered by our hand; the patient being questioned as to when the light is present or absent, so that we may be able rapidly to test the readiness and accuracy of his answers. Each eye is to be tried separately We have next to ascertain the furthest distance at which the light is apparent to him. If the perception of light is very good, the light from a low burning gas or moderator lamp should be seen at about twelve or fourteen feet, by an eye affected with mature cataract. Von Graefe has invented a graduated disc with which the perception of light may be most accurately ascertained. But for general purposes the method above described will perfectly suffice. The activity of the pupil should also be tried, as it is a fair guide to the sensibility of the retina. Some Surgeons, especially Serre d'Uzès, have strongly advocated another mode of testing the sensibility of the retina. You are aware that when the eyeball is pressed by the tip of the finger, a little luminous ring (phosphène) appears before the eye. Now it has been thought that the readiness with which such rings were produced would indicate the degree of sensibility of the retina. But this is not so, for the intensity with which these luminous rings may be produced does not always correspond with the degree of perception of light.

We next proceed to examine the field of vision. The patient is directed to look with the one eye (the other being closed) in the direction of his uplifted hand, which is to be held straight before him, and on a level with his eye, at a distance of from twelve to eighteen inches. A lighted candle is then held in different parts of the visual field, and the furthest point at which it is visible in various directions is noted. The candle is to be alternately shaded and uncovered, so that the accuracy of the patient's answers may be tested and any guessing be at once detected. It should also be shaded when it is moved from one part of the field to another. Care must be taken that the eye remains fixed upon the hand, and is not turned towards the light. The perception of light and the field of vision may also be tested by throwing the light from the lamp into and on the eye by means of the ophthalmoscope; but this method is not so accurate as the one I have described. If there is any marked deterioration of the perception of light, or of the field of vision, the history of the case must be carefully inquired into, in order that we may, if possible, detect the existence of any complication. If the upper or lower half of the field is lost, we must suspect detachment of the retina; if the lateral halves, an affection of the optic nerves. Cerebral amaurosis generally causes a concentric contraction of the field, or it commences mostly at the temporal side. In glaucoma the contraction of the field begins almost invariably at the nasal side, the outer portion of the retina being the first to suffer, but from thence it extends in other directions. If such a condition of field exists, the tension of the eyeball must be ascertained, and other symptoms of glaucoma searched for. I must here call your attention to the fact that glaucoma may attack an eye affected with mature senile cataract, and as it is of the greatest importance that the true nature of such a complication should be at once recognised and properly treated, I may quote from my work on Glaucoma the following passage bearing upon this point:(a)— "We may find that an eye affected with mature senile cataract is attacked by glaucoma, and we then have the usual glaucomatous symptoms in addition to the original cataract. The eye becomes tense, there is more or less ciliary neurosis, the conjunctival and subconjunctival vessels are injected, the cornea is perhaps somewhat anæsthetic, the anterior chamber more shallow, the aqueous humour hazy, the iris discoloured, the pupil dilated and sluggish, the opacity of the lens very evident. Together with these symptoms the perception of light is deteriorated (the patient being unable to distinguish between light and dark as well as a person suffering from simple, mature, uncomplicated cataract should be able to do), and the field is contracted. These glaucomatous symptoms vary, of course, in intensity. There may be a well-marked premonitory stage which passes over into typical acute, subacute, or chronic inflammatory glaucoma. Generally there can be no difficulty in the diagnosis of the nature of the disease; that it is a case of simple cataract which has become complicated with glaucoma. Nor will the cataract be readily mistaken for a glaucomatous cataract, although if it be amber-coloured the haziness of the aqueous humour will lend it a somewhat greenish tint. But a careful examination into the history of the case will prevent the occurrence of such a mistake. The question now arises, How is such a case to be treated? The glaucoma is in the first place to be cured by an iridectomy, and then, when the glaucomatous symptoms have disappeared, when the eyeball has regained its natural tension, when the intra-ocular circulation has been restored to a normal condition, the cataract is to be operated upon; but some length of time—some months at least—should elapse between the two operations, in order that the improvement in the circulation and in the nutrition of the eye may have become thoroughly established; otherwise the extraction of the lens may lead to severe and very dangerous intra-ocular hæmorrhage. The length of time which should intervene before the performance of the second operation must of course depend upon the state of the eye before the iridectomy. If there was great increase in the intra-ocular pressure, if this had existed for some time, and if the congestion and stagnation in the vessels was very considerable, a longer period should elapse before the operation for the removal of the cataract is undertaken, than if the glaucomatous symptoms were but slight and only of short duration.

"The lens should never be removed at the same time that the iridectomy is made, for we know that when the increased tension is at all considerable, the sudden diminution of pressure by the escape of the aqueous humour is generally accompanied by hæmorrhage into the retina, etc. Now, the tendency to intra-ocular hæmorrhage will be greatly increased, if not only the aqueous humour flow off, but the lens is also removed."

The pupil should be dilated by atropine before the operation of flap extraction. In a very presbyopic eye, with an exceedingly shallow anterior chamber, there is always some danger, even to an expert operator, of wounding the iris either before the counter-puncture is made, or whilst the flap is being formed. Wide dilatation of the pupil is the best safeguard against such a danger, for the iris will be removed out of the way of the puncture, the counter-puncture, and the line of incision. When the aqueous humour flows off, the pupil again contracts somewhat; but this will not be of much consequence, as the section should by this time be nearly completed. The degree and rapidity with which the pupil dilates under the influence of atropine also affords us a hint as to the probability of iritis. Von Graefe has called attention to the fact that if the iris is easily and quickly affected by atropine, there is less tendency to subsequent iritis than if its action is tardy and imperfect.

The patient should be operated upon in the recumbent position, being placed either on a couch or in his bed. In the Hospital I prefer operating in the ward, as there is considerable risk of the dressing being disturbed in the removal of the patient from the operating theatre. The light should, if possible, come from the side, for this dazzles the patient less, and causes much less reflection upon the cornea than when it comes from the foot of the bed or from a skylight. The latter, indeed, is the worst light of all for eye operations, more especially those of a very delicate nature.

(a) *Vide* the author's work on Glaucoma, p. 44.

The position which the operator is to assume with regard to the patient will depend upon which eye is to be operated on, and upon the fact whether the Surgeon is ambidexter or not. Some think it a *sine quâ non* that an oculist should be able to use both hands equally well; but this is not the case. By changing his position, he may always operate with the right hand upon either eye, either by the upper or lower section. Yet I strongly advise you to practise operating with your left hand, for you will constantly find it a great advantage to be able to use it well. For instance, in performing iridectomy it is very desirable that you should be able to grasp the iris with the forceps held in the left hand, and snip it off with the scissors in the right, or *vice versâ*. Still, if you find after much practice on the subject, that you cannot operate for extraction nearly so well with the left hand as with the right, you should not endanger the result of the operation by using the left hand. If the left eye is to be operated on (either by the upper or lower section), the Surgeon, if he is not ambidexter, is to seat himself on the couch in front of the patient and on his left side. If he operates with his left hand, he will stand behind the patient. The latter position is also to be assumed when the right eye is to be operated on.

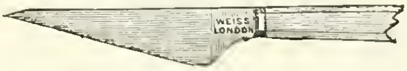
Flap Extraction.

The section may be made either upwards or downwards, as the advantages are pretty evenly balanced. The downward section is, however, the easier of the two. There is often, moreover, an uncontrollable tendency for the eye to roll upwards beneath the lid, which materially enhances the difficulties of the operation, and may greatly embarrass the operator, especially during the laceration of the capsule and the exit of the lens. The chief advantages of each mode of operating may be briefly stated to be as follows:—In favour of the upper section, it may be urged that the broad smooth surface of the inside of the upper lid will lie in contact with the section and support it, and thus facilitate the union; whereas the edge of the lower lid may rub against the lips of the incision or even get between them, set up considerable irritation, and prevent the union by first intention. Again, if in the upper section the wound does not unite by first intention, either from the occurrence of prolapse of the iris, or suppuration of the edge of incision, the cicatrix thus produced will be hidden by the upper lid. But to this it may be objected that if the prolapse has produced much distortion of the pupil, the latter may be so much covered by the upper lid as greatly to impair the vision; so that it will be necessary to make an artificial pupil in another direction. The advantages offered by the lower section are, that it is more easy of performance; as are also the division of the capsule, the exit of the cataract, and the removal of the remains of cortical substance. The cornea is, moreover, less liable to be bruised, and should suppuration of the cornea occur, it is more likely to limit itself than in the upper section. Bearing these points in mind, I should advise you at first to perform the lower section, until you have acquired sufficient dexterity and experience in operating, to give each method a fair trial.

The instruments required for flap extraction are—1. An extraction knife. 2. A pair of forceps for fixing the eyeball. 3. A pricker or a Graefe's cystotome for dividing the capsule. 4. A curette, which, for convenience' sake, is fixed to the other end of the pricker. 5. A blunt-pointed secondary knife. 6. A blunt-pointed pair of scissors.

Various forms of extraction knives are recommended by different operators. I myself prefer Sichel's knife (Fig. 3). It is rather long and narrow, and increases regularly, but not too abruptly, from point to heel, so that the flap is formed by simply pushing the blade on through the anterior chamber until the section is completed. Its wedge shape fills up the gap, and prevents the premature escape of the aqueous humour. The handle is to be lightly held between the thumb, fore, and middle finger, the thumb being slightly bent outwards at the joint. The elbow must be kept close to the side and the wrist steady, so that all movements are made from the fingers and hand.

Fig. 3.

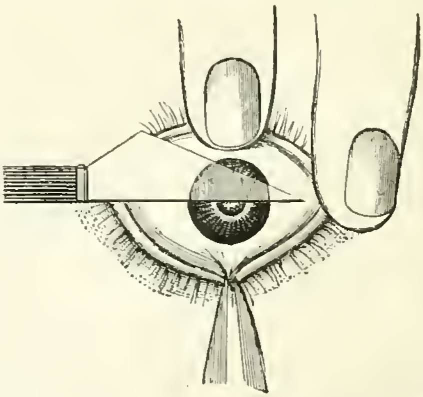


I will now proceed to a description of the operation, and I shall throughout suppose that the right eye is to be operated upon by the upper section.

The operator should stand or sit behind the patient, who is to be placed in the recumbent position. If he is about to operate without fixation, he will hold the upper eyelid with the forefinger of his left hand, drawing it upwards and away from the eye. The tip of the second finger is to be placed gently against the sclerotic on the nasal side of the cornea, so as to prevent the eye rolling too far inwards. An assistant is to draw the lower eyelid down without everting it. Many of our best operators do not employ fixation, and generally make admirable sections; but yet cases will occur in which even the most skilled operator does not make the counter-puncture just at the desired point. The chief difficulty in operating without fixation is, that the eye may roll swiftly inwards directly the puncture is made, or even before, so that the cornea becomes almost hidden in the inner canthus, and the knife has to traverse the anterior chamber and to make the counter-puncture without the operator being able to see its course. This will prove extremely embarrassing to the beginner, and may even unnerve him for the remainder of the operation. I should, therefore, strongly recommend you to fix the eyeball, as this greatly facilitates the first part of the operation, and as there is not the slightest objection to your doing so. It has been objected that the fixation often produces pain and much irritation, but this will hardly occur, if it be gently and carefully done. Moreover, so sensitive an eye would prove most difficult to operate upon without fixation. Afterwards, when you have gained more confidence and dexterity, you may do without it, if you choose. Various instruments have been devised for this purpose, but the common eye forceps are the best. Their use in this operation has long been advocated by von Graefe, and more lately by Mr. France. As soon as the counter-puncture is made, they are to be removed, for the eye is then completely under our control. The operator should rather fix the eye himself than entrust this to an assistant, for it is impossible that their hands can work together with such unanimity as if both hands are guided by the same volition. If fixation be employed, an assistant must hold the lids. If the right eye is to be operated on, he should stand on the left side of the patient, and place the tips of the fore and second finger of his right hand upon the edge of the lid (without touching the lashes), and draw it gently upwards and a little inwards, away from the eyeball. If the lids are at all moist, a piece of linen may be folded around the fingers, so as to prevent their slipping. The lower lid is to be held with the forefinger of his left hand. If you have not a dexterous and trustworthy assistant, and if you cannot operate well without fixation, the spring speculum may be employed to keep the lids apart, but I am rather afraid of it, as it is apt to irritate the eye, and to press upon the eyeball. The operation is divided into three periods—1st, The formation of the flap; 2nd, The laceration of the capsule; 3rd, The removal of the lens.

First Period.—Let us again assume that the right eye is to be operated upon by the upper section, and that the operator will fix the eye. Holding the forceps in his left hand, he seizes a fold of conjunctival and subconjunctival tissue near the lower edge of the cornea (as in Fig. 4, after France),

Fig. 4.



or, as I prefer it, rather more to the nasal side, and draws the eyeball gently down, so as to bring the cornea well into view. Then, holding the knife lightly in his right hand, and steadying the latter by placing his ring or little finger against the temple, he enters the point at the outer side of the cornea about a quarter of a line from its edge, and just at its transverse diameter, and then carries the blade steadily and rather slowly across the anterior chamber to the point of counter-puncture, keeping it quite parallel to the iris. Especial care must be taken not to rotate it or to press upon its edge, but rather to press upon the back of the blade, as if, in fact, he were wishing to cut with this. If this be done, the blade will be pushed steadily on and fill up the gap, thus preventing the premature escape of the aqueous humour. I find this pressing upon the back of the blade one of the most difficult things for the young operator to acquire. The eye of the operator is not to be kept fixed upon the point of the knife, but upon the point where he wishes to make the counter-puncture, for this will insure the knife being brought out at the desired spot, which should lie slightly in the upper half of the cornea, about a quarter of a line from its edge. As soon as the counter-puncture is made the forceps are to be removed and the handle of the knife turned back towards the temple, the blade being pushed steadily on until the section is all but finished. When only a small bridge of cornea remains undivided, the section is to be slowly completed by turning the edge of the knife a little forwards, and, instead of carrying it straight on, drawing it back from heel to point until the section is finished. Von Graefe insists especially upon the advantage of doing this, for as the narrowest part of the blade thus issues last from the incision, the flap will be less elevated than by the broad part; moreover, the altered position and direction of the knife cause a relaxation in the tension of the muscles of the eye, and thus diminish straining. When the incision is completed, the upper lid is to be gently and carefully dropped, so that it may not catch in between the lips of the wound and evert the flap. The patient having been calmed by a few words of encouragement, we pass on to the

Second Period, the Opening of the Capsule.—This may be done either with the pricker (Fig. 5, which represents this instrument, together with the curette, which is placed at the other end of the handle), or with Graefe's cystotome. The patient is directed to look well down to his feet, and the upper lid being slightly lifted, the pricker is introduced with its blunt angle downwards. When arrived at the inner side of the pupil it is slightly rotated, so as to turn its point against the capsule, which is to be divided across as far as the outer edge of the pupil by one or more incisions. The point is then turned downwards, and the instrument carefully removed, so as not to entangle it in the iris or cornea. For flap extraction I prefer Graefe's cystotome (Fig. 6—beside it is an enlarged view), as it makes a freer opening, and as we need not change its horizontal position in lacerating the capsule, whereas the handle of the pricker requires to be a little elevated, which causes more or less gaping of the wound. Care must be taken not to press the point of the pricker or cystotome against the lens in dividing the capsule; otherwise we may cause a displacement of the lens into the vitreous humour.

Fig. 5.

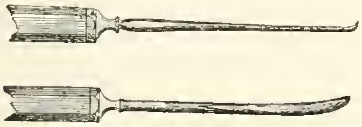
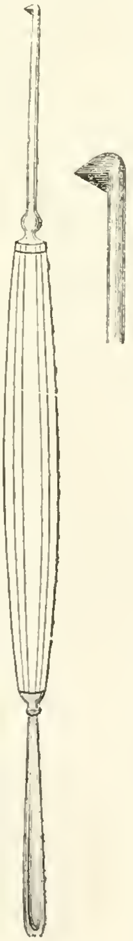


Fig. 6.



Third Period—Removal of the Lens.—The patient being again directed to look downwards, the point of the forefinger, or the end of the curette, is to be placed against the lower lid, and a gentle, but steady, pressure made upon the globe. The point of the other forefinger may be placed on the upper portion of the eyeball, so as to regulate and alternate the pressure to a nicety. The pressure on the lower lid should be at first backward, in order that the upper edge of the lens may be tilted slightly forward against the upper portion of the pupil, which gradually dilates and permits the presentation of the lens. The pressure is then directed a little more upwards and backwards, so that the lens advances through the pupil into the anterior chamber, and makes its exit through the incision. If it halts a little in its course through the section, it may be extracted with the curette. The pressure throughout should be steady, but very gentle, in order that the lens may not be violently jerked out, which is generally accompanied by rupture of the hyaloid membrane and escape of vitreous humour. When the lens has been removed, we should examine its outline to see whether this is perfect, or whether it is irregular or notched, as the latter shows at once that portions of the cortical substance have remained behind. If the cataract is not quite mature, fragments of cortex are apt to remain in the capsule, or are stripped off during the passage of the lens through the pupil or the corneal incision, to either of which they may cling. These portions should, if possible, be removed, as they are very apt to set up iritis or to give rise to secondary cataract. The lids are, therefore, to be closed and lightly rubbed in a circular direction, so that any little flakes remaining behind the iris may be brought into the area of the pupil, whence they are to be gently removed with the curette, as also any portions adhering to the lips of the wound. The vision of the patient may also be tested by trying if he can count fingers, and if it is not as good as might be expected, we may examine again as to whether remnants of lens substance still linger behind.

ORIGINAL COMMUNICATIONS.

EXCISION OF THE UPPER JAW.

By J. FAYRER, M.D., F.R.C.S.,
First Surgeon Medical College Hospital, Calcutta.

J. S., a Hindoo, was admitted into the Medical College Hospital, Calcutta, on July 20, with a tumour of the left superior maxillary bone. The patient was a slight but healthy-looking peasant of 25 years of age. He says that the tumour has been forming during six or eight months; he is not very certain as to the precise time of its commencement, nor can he trace it to any particular cause. It has been growing very rapidly lately and causing him great pain. This has brought him from a distance to seek relief.

The tumour occupied the entire maxilla and encroached somewhat on the opposite alveolar process, for as far as the right canine all the teeth were displaced. It had a fleshy vascular appearance, distending the cheek and protruding from the mouth. The teeth of the lower jaw on the same side were displaced by the pressure, and the eye was somewhat pressed on by the extension of the growth upwards. That part of the tumour corresponding to the alveolar process was the most developed, and was evidently rapidly increasing. The pain on pressure was excessive, and he could not bear the slightest manipulation of the protrusion, which had a firm elastic sarcomatous appearance and feeling. The posterior part of it was much inflamed and suppurating, for on the least pressure a purulent discharge issued from the mouth. He had for long eaten with difficulty, and he was somewhat emaciated from the want of food as well as by the pain and constitutional disturbance caused by the morbid growth. None of his family appear to have suffered either from tumours or from any form of malignant disease. He was quite unable to account for the morbid growth, and denied ever having had anything the matter with his teeth.

On August 13, his general health being good, I removed the tumour, taking away the maxillary and part of the malar bone. I divided the upper lip into the left nostril, and continued the incision round the ala, by the side of the nose, to the inner canthus of the eye. I then divided the cheek from the corner of the mouth to the malar bone, tying vessels of importance as I proceeded. I next reflected the soft parts to the margin of the orbit, abstracting a tooth, the incisor next to the right canine of the opposite side, for the disease extended thus far; I divided the osseous structure in the left nostril with a pair of bone forceps. The orbital process was next divided with the same instrument, and the malar bone having been cut through, partly with a saw, partly with the bone forceps—the eyeball being raised and protected by a spatula—the tumour was firmly seized (with the Lion forceps) and wrenched out. The entire morbid growth was thus removed. Several small and ragged portions of the velum were taken away, a few arterial branches of small size were ligatured, and the divided soft parts were then brought together by the aid of horsehair sutures. He lost very little blood, and bore the operation well, being under the influence of chloroform during nearly the whole of the proceedings. The cavity was filled with cotton, and he was put to bed, with his face supported by a few turns of a roller. In the evening it was reported that he was doing well; no hæmorrhage; body slightly heated. Took some milk and sago.

The following day the face was somewhat swollen, the lower eyelid being œdematous; he was slightly feverish; pulse 120.

On the 16th, face still swollen; a small abscess had formed below the eyelid. Took out the cotton, and would recommend that it never should be employed for this particular purpose, as it sticks, and remains, as I found afterwards, a source of local irritation after the necessity for it as a support has passed away. The ligatures now began to separate, and a purulent discharge from the mouth made its appearance.

On the 18th it is noted that the swelling had quite subsided, and that in all respects he was doing well, able to sit up or stand, and had a vigorous appetite.

On the 22nd it is recorded that the wounds had entirely healed, and the horsehair sutures (which are so admirably adapted for all plastic operations about the face) had been removed, the line of union being so perfect that it was difficult, except at the angle of the mouth and near the septum of the nose, to discover where the incisions had been.

On the 27th he was in excellent health and spirits, eating with a good appetite, rapidly regaining his strength, and much pleased with his improved condition. When the cavity in the mouth has contracted a little further, Dr. P. Smith, Dental Surgeon to the Hospital, has kindly offered to make him something that will completely close it.

Remarks.—The tumour was examined by Dr. Ewart, and he has favoured me with the accompanying account of its structure, which accounts for its rapidity of growth, and, I think, proves that immediate removal was necessary. As to the probability of recurrence, I am somewhat anxious about the other superior maxilla, the alveolar process of which was partially involved; but as the whole of the diseased structure was removed, and sound bone only left, I hope he may escape. Some months ago I had another case, in which both superior maxillæ were affected. I removed one, as in this case, and contemplated the removal of the other, but the patient unfortunately died of pyæmia. The present case may be regarded as a very fortunate one, considering the rapidity with which he recovered during the season of the year most unfavourable for Surgical operations. In August the thermometer stands at 84° to 90°, the atmosphere is saturated with moisture and malaria, and the vital powers are much depressed. I would particularly call attention to the horsehair sutures, which in this case proved so successful. They have many advantages over wire, being less irritating, less apt to cut themselves out, and when no longer required are so easily removed, without causing either pain or hæmorrhage, as is so frequently the case when the wire suture is removed. Well-selected white horsehair is a most excellent suture for nearly all wounds, and for those on the face it is particularly well adapted. If much tension has to be provided against, the horsehair can be doubled, when it is strong enough for any purpose. Even in this hot and damp climate it is not affected by the discharges from the wound, and when removed, after being in the body four or five days, it is not changed, but retains its cohesion, and is not either softened or decomposed. It has now been used in the Medical College Hospital for some years, and is found to be a most efficient suture for minor wounds and operations, in which it has been chiefly hitherto employed; but lately, having applied it to more extensive injuries, I am inclined to adopt it altogether as a substitute for wire.

Dr. Ewart's Report on the Tumour.—The tumour is about four inches in its long diameter, and measures a couple of inches in breadth. It has several teeth implanted in its buccal aspect; it is hard and inelastic; its surface protruding into the mouth is undegenerated and free from ulceration. But it must have caused irritation, inflammation, and probably ulceration of the neighbouring soft parts in the mouth. On making a section of the growth in the region of the hard palate it cut like cartilage, and on examining portions of this under the microscope there were a good many cells resembling cartilage cells intermixed with fine fibrous tissue. There was a nodule of the tumour growing towards the pterygoid region. This was soft, somewhat marrow-like, and somewhat resilient under pressure. This body was full of nuclei of an oval shape, and a few large cells with a number of small nuclear-looking bodies inside. Some of these large cells were in process of division. There were also elongated fusiform fibre cells. The tumour appears to be partly fibro-cartilaginous and partly myeloid.

SUGGESTIONS FOR THE TREATMENT OF CHOLERA.

By ARTHUR ERNEST SANSOM, M.B.

According to my views, cholera is the result of a poison which manifests its effects in two different ways, accordingly as it is in immediate relation with the intestinal canal or absorbed into the circulating blood; as a primary intestinal irritant it may cause the "immediate" phenomena of vomiting or purging, and as an absorbed poison it may ultimately manifest the "deferred" phenomena of central irritation of the great sympathetic nerve, and cause the combined symptoms of true cholera-diarrhœa and collapse.

I. Ordinary Choleraic Diarrhœa and the Premonitory Diarrhœa of Asiatic Cholera.

I think every grain of evidence is in favour of this being caused by a direct irritation of the intestinal canal, whether due to the contact of irritating organized material with the mucous membrane, or whether arising during the elimination of the germs from the circulating blood.

It is one thing to suppose that the germs of cholera in the process of their elimination by the intestinal surface excite diarrhœa; it is another to suppose that this diarrhœa has a directly curative tendency. The amount thus eliminated can bear but a small proportion to the amount diffused throughout the mass of the blood. We cannot stop fermentation by diminishing the bulk of fermenting material; nor can we arrest the course of a zymotic disease by draining the poison which must exist in every capillary of the body through the mucous membrane of the alimentary canal. These observations, of course, apply only to the absorbed poison; if the poison merely exists as a local irritant on the mucous surface, the purgative plan must be directly curative. But even then is there a better course? I think so. It is more feasible to kill the germs than to remove them, for in their removal the elements of nutrition must, *pari passu*, be eliminated.

We come next to the consideration of those bodies which have the power of specifically altering organic or destroying organized matter. Let me insist on the essential difference between these classes of agents. The first exerts no especial action upon living matter other than that which it manifests upon organic. Permanganate of potash oxidizes every organic body with which it comes in relation. It would be hopeless to administer permanganate of potash with the idea of decomposing the organic poison existing in the body, for its action would likewise be exerted in the intestinal tube itself as well as its contents, whether organized or not. The researches especially of Mr. Crookes show carbolic acid to be a type of the other class—a class which does not destroy or chemically alter organic bodies, which does not interfere with chemical processes, but which destroys organized bodies, animal and vegetable, and stops zymotic change. Is it not more hopeful to render inert the *materies morbi* by such an agent as this than to attempt the herculean task of sweeping away the germs which mingle with every drop of blood to

> "Cleanse the stuff'd bosom of that perilous stuff
> Which weighs upon the heart?"

Mr. Crookes's researches show that carbolic acid destroys the vitality of animal or vegetable cells, and a large amount of evidence is brought forward to the effect that it has had a directly destructive effect upon the poison of cattle plague. If we glance for a moment at those medicines which have been reputed efficacious in cholera, we find that many of them have a powerful action on organic matter. Calomel is antiseptic as well as purgative, and its tendency is to induce a flow of bile, which is Nature's own disinfectant. Creosote has been recommended, and that is an undoubted antiseptic. The compounds of sulphurous acid (*e.g.* the sulphite of lime, to which attention has been lately called) have a power of disinfection which it is not necessary here to recapitulate. Turning to the analogy of another disease, we find that there is no more successful plan of treating diphtheria than by the sulphites recommended by Professor Polli. I have just had under my care a case in which sulphite of soda has been most demonstratively successful. Again, we cannot help noticing the success of oxidizing agents in this disease. Nitrate and chlorate of potash are directly oxidizing agents; perchloride of iron is an oxidizing agent—that is to say, in the presence of organic matter it gives up its chlorine, which unites with the hydrogen of water and liberates oxygen. Chlorination in the presence of water is oxidation. I have adduced these considerations to show the probability that some of those medicinal agents which have been used empirically may have been in reality actual destroyers or decomposers of the *materies morbi*.

The treatment of cholera by doses of carbolic acid has been tried, and though it is as yet *sub judice*, the reports from the *Belleisle* Hospital ship state that it would appear that "the carbolic acid system has been most successful." The advantage of carbolic acid is that it may not only be administered by stomach and bowel, whereby it acts upon the organic matter in the alimentary tract; but it is most undoubtedly absorbed into the blood, and, being a volatile body, its vapour can easily be introduced by the lungs. The castor-oil treatment, though I do not think it possesses the merits of the disinfecting plan, has done much for the treatment of cholera. Dr. Johnson has enticed Medical Practitioners from the beaten track of astringents, and chalk, and opium—measures which check the process of elimination, and which cause retention, with all facilities for active fermentation and decomposition, of vitiated matter. Whether there were hypersecretion of bile or suppression thereof, the treatment used to be the same—opium and brandy. Opium, which may arrest the perhaps already feeble flow of bile; and brandy, which may contract the narrowed arteries, and force the current of blood back upon the veins.

From the foregoing facts what shall we educe as the most rational treatment for choleraic diarrhœa during the prevalent epidemic?

1st. Thoroughly disinfect the chamber and the house with carbolic acid or McDougall's powder.

2nd. Let the patient be placed at perfect rest, horizontal, with draw-sheets, so that the discharges may be frequently removed. All soiled linen should at once be placed in a vessel containing carbolic acid solution.

3rd. Commence the treatment with the following:—℞ Acidi carbolici gtt. ij., chloroformi ♏iij., mist. acaciæ ℥j.—to be taken every two or three hours.

The carbolic acid used, which at ordinary temperatures is a white crystalline solid, should be liquefied by the addition of a few drops of water. The presence of a very minute amount of water is sufficient to reduce the solid to a liquid. A piece of carbolic acid will melt down under the influence of the moist breath.

The objection to carbolic acid is its odour, which resembles that of tar. The presence of the chloroform (which acts locally on the nerves of taste) masks this in great degree, but it may happen that in certain cases this remedy cannot be applied. Under these circumstances, and especially in cases of children, it will be well to use sulphite of soda.(a)

I think sulphite of soda is better than sulphite of lime, as the latter so soon becomes oxidized to sulphate of lime, and it is well not to administer the lime salts until the germs be, if it be possible, rendered inert.

4th. The diet, while the absorbing powers are yet active, should consist of beef-tea thickened with isinglass or arrowroot. By being thickened, irritation of the stomach by it is much lessened, and small quantities may be retained in spite of vomiting. Stimulants *purs et simples* should never be given, but mingled with food they may be administered in small quantities—thus, a teaspoonful of brandy with a wineglassful of milk and the white of an egg may be given every three or four hours.

II. TRUE ASIATIC CHOLERA—COLLAPSE.

Supposing that the fore-mentioned means have been tried, and yet the special symptoms of cholera set in—supposing coldness and cramp and the signs of incipient collapse occur—what are the indications?

The cause, I firmly believe, is an union of the poison with the sympathetic. It may be that the system is so overburdened that nothing can lift the load; (b) but what plan of treatment offers the best chance?

1. *Counter-irritation of the Epigastrium.*—I have often seen the value of heat employed to the epigastrium in relieving the symptoms of collapse. I have employed it in cases of chloroform administration wherein there have been signs of syncope. Derivation from the solar plexus seems *à priori* likely to do good. What is the best form of counter-irritation in these cases? The carbolic acid, which is close at hand, offers itself. Let it be rubbed over the pit of the stomach for a short time by means of a piece of flannel. Dry cupping to this region may be employed with advantage. Subsequently to the counter-irritation, warmth by means of hot water bottles or hot salt bags should be applied.

2. *Keep the Patient at perfect Rest.*—The stomach should be spared fruitless efforts to exhibit nourishment. It is true that in collapse the powers of absorption are not annihilated; but it must be remembered that absorption is, in fact, a mechanical act (dialysis), and that though mere absorption may take place in this way, still vital transmutation is necessary to make the absorbed material of any avail for nutrition; and this assimilating power is wanting. No medicine and no food should be given by the stomach, but enemata of warm water may be administered with the hope, not of supplying heat, but of diluting the thickened blood. The best way of administering the enema is by using a siphon tube proceeding from a vessel placed at a convenient height, or the douche enema, made for me by Messrs. Francis, Upper-street, Islington. By this means a continuous and equable flow is maintained, and the saltatory jet and the frequent mess of an ordinary enema-syringe are avoided.

It has been proposed to transfuse blood or a fluid analogous to it into the veins, and in some instances this practice has met with at least a temporary success. The warm fluid dilutes the thickened contents of the venous system, promotes a flow in the capillaries, then reaches the minute contracted arteries, and distends them. Motion is renewed, and motion is life. It is at first sight very strange that two such opposite courses as transfusion and venesection should have been of equal benefit. But if we consider that the symptoms are due as well to diminished arterial supply as to retention of products which should be excreted, as well to arterial anæmia as to venous engorgement, we may understand the cause. The veins in the case of bleeding being lightened of their load, the excretory products which had narcotized the system being in part removed, respiration and aëration return, and the column of blood moves. In a patient suffering from syncope, motion of the blood is of the first importance for reanimation. If we tilt the feet, so as to allow the column of blood to fall back upon the heart, the failing circulation is rapidly restored. Again, in cases of threatened death from suffocation, it is only when the current of blood is set in motion that the symptoms of danger pass off. In a case of collapse, in which the arteries are nearly empty and the veins over-full, motion of the blood can only be induced in two ways—either by venesection, which allows an escape from the distended right side of the heart, or by forcing a stream *à tergo* from a vein. Either or both these means may be tentatively employed, but neither should be adopted unless other means are found to fail.

If there be any mode of relaxing the contraction of the arteries, this should be tried. I think a fair trial should be given to inhalation of chloroform. This procedure has been known to relieve the cramps and to induce at least a temporary reaction. Combined with local warmth to the epigastrum and warm injections to the bowel, it may be yet more successful, and it certainly deserves a fair and careful trial.

THE MEDICAL OFFICER OF THE FARNHAM UNION.—The Poor-law Board have given their decision in regard to the Medical Officer of the Farnham Union, to whose case we referred last week. They state their opinion that the evidence proves, in two of the charges, such a degree of neglect as to disqualify him for the further care of the sick poor, and that therefore he must be required at once to resign his office.

(a) ℞ Sodæ sulphitis ʒss.; aquæ ℥j. M. Every two or three hours.

(b) Cases have occurred in which symptoms of collapse have happened without previous warning, and have continued with fearful rapidity until death. A few days ago a man was observed to fall down in the street. He was taken to an Hospital, and died almost immediately. At the post-mortem examination the appearances peculiar to cholera were noticed in the intestinal canal, and there was no other lesion to account for death.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

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KING'S COLLEGE HOSPITAL.

TRAUMATIC INFLAMMATION OF KNEE-JOINT AND SUBSEQUENT INFLAMMATION OF THE SHAFT OF THE FEMUR—AMPUTATION OF THIGH —RECOVERY—REMARKS.

(Under the care of Mr. HENRY SMITH.)

The following very interesting case of disease of the knee-joint, resulting in amputation of the thigh, has lately occurred in the practice of this Hospital. Its details must be highly instructive to the Surgeon, as showing the difficulty of determining what method of treatment should be adopted to arrest the progress of the disease, or, supposing the disease to have baffled ordinary means, what ultimate measures should be used to endeavour to save the patient's life.

The question of excision of the knee-joint for strumous disease has been so frequently discussed, and the general results so well known, that it would be hardly worth while to enter into it here; but there must be certain doubtful cases where the patient's chances of recovery are about equal, whether the capital operation of excision or amputation be resorted to; and it would appear that the one quoted below was typical of this state of things.

In this case, however, the question of excision was not considered, as this proceeding was thought to be from the first inadmissible, and the interest attached to it lies rather in the determination of the most suitable period for amputation.

Mr. Smith remarked in reference to the case that the features of interest presented by it are two, and it is impossible to overlook their practical utility. In the first place, the diagnosis of the case was uncertain and difficult; for although he (Mr. Smith), on seeing the patient before he was transferred to the ward, came to the conclusion that it was a case of traumatic inflammation of the knee-joint and subsequent implication of the shaft of the femur and periosteum, there was reason to doubt the correctness of this opinion, and to believe that the symptoms were due to a vertical fracture through the condyles of the thigh-bone; and here is shown the practical importance of a correct diagnosis, for a more prolonged confinement to the Hospital would possibly have prevented the mischief which recurred when the patient began to use his limbs.

The second point of interest relates to the question of the proper period for amputation in such cases. One of the most difficult things a Surgeon has to decide upon is the exact period at which an amputation should be performed in a case of destructive injury to an important articulation or limb, and the case especially illustrates this. He soon made up his mind that the limb should be removed, but he was in extreme doubt as to whether it would be prudent to adopt this measure whilst the patient was in such an exhausted state. It was feared that the patient might be suffering from some pyæmic deposit which could not be detected; for although the local mischief was appreciably great, it was hardly sufficient, in his opinion, to produce such extreme exhaustion as was present, and which called for the use of a bottle of brandy daily to keep the patient alive. For this reason the operation was deferred, and the result showed the wisdom of this plan, and also proved that there was no foundation for the suspicion that pyæmia existed.

J. R., aged 17, admitted July 4, 1866. About five weeks ago he jumped out of a first-floor window on to the pavement, and fell on his feet. He noticed nothing amiss with his leg till three or four weeks after, when it began to start and tremble under him when he walked. He applied as an out-patient to the Hospital, and the knee was painted with iodine. Soon after this the joint became rapidly worse, and he came in as an in-patient. On admission, it was found that there was fluid in the left knee-joint; this extended up under the muscles in front of the femur for a short distance. There was not much pain on pressure.

On July 28, a dextrine bandage was put on, extending from some distance below the knee to half-way up the thigh.

He left the Hospital, somewhat improved, to attend as an out-patient, August 3.

Re-admitted September 4. Since he had been an out-patient the lower third of the thigh had become much inflamed, and an abscess formed, and burst, at the back of the thigh in the popliteal space. The knee-joint much inflamed and swollen, but not much tenderness on pressure.

On the 7th, an abscess was opened on the outer side of the thigh, from which a large quantity of pus escaped.

10th.—Feverish symptoms came on, and he was sick and much purged. Slight erysipelas had set in at the site of the abscess. This, however, disappeared after a while. All the symptoms of acute periostitis were present, either in a greater or less degree, until September 27, when Mr. Smith determined to delay amputation no longer, and accordingly performed the double flap operation in the middle third.

From the day of the operation the patient began to mend; the ligature came away on October 20, and the effects of the shock soon passed off.

He left the Hospital, November 5, with the wound healed and in excellent health.

EXCISION OF SHOULDER-JOINT.

(Under the care of Sir W. FERGUSSON, Bart.)

The following case, although the operation was performed at King's College Hospital some time ago, we think right to publish, as showing the valuable result of a somewhat formidable operation. We have lately had an opportunity of seeing this patient, who is in perfect health, and has an almost incredible amount of use in the upper extremity:—

Alfred L., aged 30, was admitted into King's College Hospital June 20, 1861, with disease about the shoulder-joint—a tall, well-made man, spare; his family healthy. About twelve years ago he fell on his shoulder. Of this he took no notice, and enjoyed free motion of the joint, and no pain in it except during a change of weather. This pain seemed to be the only remnant of the pain complained of. He was struck by a cricket ball in the fourth or fifth rib about nine years ago. Within the last twelve months he has suffered more severely, and a little nodule appeared at the posterior border of the axilla, eventually becoming painful, the extent of motion in the joint diminishing. At length it broke of its own accord, and in its site is situated the main sinus. Another sinus comes down to within two inches of the insertion of the deltoid. These sinuses run up to about the outer third of the spine of the scapula. The muscles are much wasted about the joint. He has considerable motion left, and pushing the humerus against the scapula gives him but little pain. A probe detects dead bone in the locality specified.

He was discharged for a short time, and applied poultices during the time he was away.

On July 30 two abscesses, which had formed lower down in the arm, were opened. Shortly after this Sir W. Fergusson, determining to make an examination of the joint under chloroform, his health being much improved, opened up some of the chief sinuses, and found that one of the lower ones ran into the joint. He then cut across the deltoid by a lunated incision, and, opening the joint, turned out the head of the humerus and sawed it off. The coracoid process being diseased, this was also removed. The head of the humerus was necrosed; the glenoid cavity sound. There was very little hæmorrhage; the wound was stitched up, and wet lint applied, and the arm bandaged to the side.

By November 2, the back part of the wound had united; but there was some tendency to gape in the anterior part. The wound healed very readily, and he had no bad symptoms, with the exception of being unable to pass his water for two or three days after the operation; but this difficulty soon passed off.

He was well enough to get up December 4, and when he was discharged December 23, the wound had entirely healed, there being a very slight discharge from the lower part of it.

Since his discharge he has been two or three times to the Hospital in perfect health, and with a great amount of power in the arm, and very little disfigurement to the shoulder.

Purgative Action of Euphorbiaceous Seeds.—Dr. E. J. Waring, in a short paper, has been bringing forward some ideas as to the nature of the purgative principle in these seeds. From his observations he is inclined to believe that it does not reside in the oils (croton oil, castor oil, etc.) themselves, but in a peculiar resinous principle dissolved in these oils, and which is contained mostly, if not entirely, in the cotyledonous portion of the embryo, for this last being removed, some of the most acrid (*e.g.*, *Curcus purgans*) may be eaten with impunity.

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SATURDAY, NOVEMBER 24.

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CHANGE OF DOCTOR.

Patients will from time to time change their Medical attendant; they have a perfect right to do so, and the thing cannot be resisted, and ought not to be resented if done courteously. Even the old family Doctor, who has attended perhaps two generations in one house, some day finds himself superseded by a younger rival; this is quite reasonable, natural, and inevitable. Patients too must, so long as human nature is human nature, and so long as anxiety, fear, hope, and credulity operate, desire from time to time to have a second opinion, and it may even happen that the "second opinion" may be that of a man no way superior to the first attendant—nay, sometimes of a man much inferior in the eyes of real judges. Moreover, a change of attendant, or a consultation, may be carried out not only unreasonably, but brusquely, discourteously, and without due regard to the feelings and Professional repute of the displaced Practitioner. Under such circumstances, we hold it to be bad policy in the latter, however aggrieved, to remonstrate or make any show of annoyance. It never does any good, and only gives the patient reason to believe in his own importance, and in the heavy loss which the withdrawal of his patronage may occasion. Yet, if the patient is a man of sense, he ought to know that it is against his own interests as one of the public to treat his Medical attendant shabbily.

In many callings, but in Medicine more than any of them, there is the greatest possible difference between "eye service"—that is, the mere mechanical routine of duty, done perfunctorily, for mere pay—and the zealous, watchful, inventive heart service of a man who throws himself with all his powers and all his feelings into the effort to mitigate suffering or save life. It is just that which is above price, and which money cannot buy, which is trampled in the mud by persons who act shabbily to a zealous and conscientious Medical attendant.

As for fellow-Practitioners, whether of a superior grade or not, they need hardly be told of the rule, "Do to others as you would be done by," so far as is compatible with the exercise of their duty to their patients. There is a sort of customary etiquette which is worth notice. Any patient may go and get a bare opinion, anywhere and of any one, without offence, so as it be done openly. For example, suppose a patient, a stranger, to call on a consulting Practitioner. He details his symptoms, receives advice, pays his fee, and goes his way, and there the transaction ends. If the patient should say, "Sir, I have been for some time under the care of Dr. So-and-so, for a chronic ailment, but, feeling no benefit, have come to place myself under you," the consulting Practitioner is under no obligation, moral, customary, or legal, to say one word. The patient comes for advice, which he is bound to give, and he takes his fee and injures no one. Custom sanctions this, especially as regards the transfer of chronic patients from one consulting Practitioner to another in large towns; and there is good reason for it. A consulting Practitioner is not supposed to have the minute and intimate and frequent intercourse with the patient which the general Practitioner has. He is called in from time to time, gets larger fees, and sees a greater variety of patients during shorter attendances.

On the other hand, custom and courtesy seem to prescribe a different etiquette amongst general Practitioners, whose relation to their patients is of the frequent, minute, and confidential kind we have described. It is a greater blow to a general Practitioner to "lose a family" than it is for any consultant simply not to be called in, or to be replaced by another. And until it is generally understood that Ishmaelitish customs are sanctioned by general use, it is the customary duty, and the interest too, of general Practitioners to treat each other tenderly in all that regards family attendance. When a general Practitioner is appealed to as a consultant, he should do his best loyally that the existing attendant may keep his hold on his patient's confidence. Should the patient be determined to change, he should insist on at least allowing his brother Practitioner to bow himself out courteously, instead of being dismissed. It can do no good to the Profession to have such phrases in use as "turning off" a Physician, Surgeon, or Apothecary, as if he were a groom.

Few persons, except conductors of a Medical journal, have any idea of the heartburning and dissension and mass of angry correspondence called forth by want of courtesy or good feeling on the part of the patient, want of brotherly reciprocity on the part of the Practitioner called in, and possibly a want of dignity and self-assertion on the part of him who is superseded.

We have before us a case from a western county which is one sample of a thousand others.

Mr. A. attends Mrs. B., and, so far as he knows, enjoys the confidence of the family, except, by the way, that Mrs. B. refuses to take any medicine. One day he is told, with the ordinary white lie, that "they were sorry they had not been able to let him know, but they had sent for Mr. C. the day before." In fact, Mr. B. had gone to another general Practitioner at a distant town, had described the case to Mr. C., and was supplied by him with medicine, and Mr. C. came next day to see Mrs. B., all without the knowledge of A., and without giving him the opportunity of a consultation. A. is aggrieved, and writes to C., complaining of his taking the case without giving A. a meeting; to which C. replied that B. had desired him to take charge of the case absolutely, which, of course, he had a perfect right to do. In this case the blame seems to rest with the patient, who showed a want of straightforwardness to A., and led C. into doing what seemed an act of Professional discourtesy. A. certainly has a right to complain of uncandid and discourteous treatment from B.; C. also, who naturally should have desired, as a neighbour, to have acted considerately towards his brother Practitioner, seems to have been overruled by B. Lastly, we should think that A. can very well afford to treat the patient's rudeness and want of candour with the contempt it deserves. He may well say that the patient may choose another attendant and welcome; only he should do it like a gentleman.

YELLOW FEVER AT SOUTHAMPTON ON BOARD THE "ATRATO."

Yellow fever has again been brought to our shores, and it is strange that two years in succession should witness the advent of this tropical disease.

It is probably within the recollection of our readers that last year in the early part of September great alarm was created in Swansea by the fact that yellow-fever cases and deaths had occurred there. Then the contagion was brought by a vessel which arrived at Swansea from Cuba with one of her crew sick, as the captain said, of "dropsy," having lost three men on the voyage home. Under these circumstances, the captain stated that his ship was under-manned, and obtained assistance from the shore, and the ship, not being suspected, was admitted into dock. The crew and passengers immediately left the ship and distributed themselves over the town. Three sick men were landed from the ship, one, ill with the dropsy referred to above, and two others stated to be recovering from "fever." The cargo began to be discharged, and then the rumour of yellow fever got bruited about. The "dropsy" case terminated fatally, and without any sign of that disease, but the body was of a yellow tinge, and the Medical man who saw this case certified the cause of death as "fever, probably yellow fever." On examination of the ship's papers, it was clear that six men had died on the voyage, and these deaths were entered as yellow fever.

The result of all this was that in various parts of the town people were attacked with yellow fever; that, in addition to the death of the man removed from the vessel, fifteen deaths were undoubtedly caused by this disease, and one other death (though this case was not so strongly marked) was believed to have also resulted from it.

But it must be borne in mind that the weather in September of last year, the time of the importation of the fever, was very favourable to the development of this disease, as the heat during that portion of the year was almost as great as it is in the tropics.

This year, however, there is little need for alarm, for the weather is such that even if an infected person had managed to get on shore from the ship, there is but little chance of the disease developing itself; for heat is absolutely necessary for its spread, and no landing from the infected ship has been allowed, as will be seen from the following account of the present yellow-fever arrival:—The *Atrato* is one of the ships belonging to the Royal Mail Steam-packet Company, and is engaged in the transmission of the West India and Pacific mails, and on her arrival at Southampton had just completed her homeward voyage with the above mails. She had on board sixty passengers, and a valuable cargo of specie, indigo, etc. It appears that, before her departure, on October 29, from St. Thomas for Southampton, a case of yellow fever had occurred on board, and though every attention was paid by the Surgeon, it was thought that it would be better to send this case on shore to the Hospital than to treat it on board. This was accordingly done, but infection had evidently remained in the ship, for after sailing from St. Thomas the fever broke out again, and was prevailing at the time of her arrival at Southampton on Monday, the 12th inst., a fresh attack having occurred as recently as the previous day. The number of attacks, as far as could be ascertained, was thirty-five, and of these fourteen ended fatally.

Immediately on its becoming known to the authorities that a ship had arrived with yellow fever on board, steps were taken to prevent any communication with the shore. The mails were landed under the process of disinfection, and also the specie, which consisted mainly of bar silver, this being also subjected to disinfection. After this had been done, the vessel was sent to the Motherbank to perform quarantine; the whole of the sick portion of the crew and as many of the healthy portion as could be spared from the ship being sent to the *Menelaus*. The ship itself was also well ventilated and disinfected. The fever having been confined to the officers and crew of the ship, and the passengers having escaped the infection, it was hoped that long before this the vessel would have been released from quarantine. Unfortunately, however, while the expediency of this step was under discussion, a fresh attack took place amongst the crew, one of their number on board the *Menelaus* having been seized on Friday. The consequence was that an order in Council was issued putting the vessel, etc., into quarantine until further order by the Privy Council.

On Monday last the Lord President of the Council (the Duke of Buckingham), the Medical Officer of the Privy Council (Mr. Simon), the Medical Superintendent of Quarantine at Southampton (Dr. Wiblin), and Captain Vincent, the Superintendent of the Royal Mail Steam Packet Company, went, on board the *Firefly*, to the infected ship *Atrato*, and to the quarantine hulk *Menelaus*, and made inquiries as to the arrangements existing at the Motherbank for the purposes of quarantine. They subsequently went on board the steamship *Parana*, a vessel sent by the Packet Company for the reception of the passengers, and made inspection of the accommodation on board with the view of turning her into a lazaret ship. The passengers were removed to the *Parana* on Tuesday, in order that the authorities might be enabled to disinfect the cargo of the *Atrato*, a proceeding which could not be taken while the passengers remained on board.

We have not heard of any fresh case having occurred since Tuesday, and, as far as we have been able to ascertain, all the passengers were quite well, excepting some who were complaining of severe colds, incidental, no doubt, to their having just returned from a warm quarter of the globe, and to their being detained so long on board ship without, probably, the kind of clothing rendered necessary by a change from a warm to a colder atmosphere.

Every precaution has been, and is being, taken, and we trust that the passengers, crew, and ship will soon be released from quarantine.

ROUGH NOTES ON SYPHILIS.—No. III.

THE LOCAL TREATMENT OF INDURATED CHANCRE.

THE writer is desirous of calling attention to a simple and efficacious method for dissipating the induration which often proves a very marked characteristic of chancre, and which is so apt to remain long after the healing of the ulcer. Its presence forms a very important feature as far as our diagnosis and prognosis are concerned; for it is the *induration* in the chancre and glands that is the disease, and not the ulceration, which may be very insignificant. The best local method for dissipating this induration is to apply some vesicating liquid, and then to maintain the irritation by means of a dressing of savin ointment, so as to induce some suppurative inflammation. This practice is tolerably well known to military Surgeons, who have greater facilities for applying it to their patients than their civil brethren. So long as any induration remains—and it is sometimes so chronic that the writer has removed a solid "ball" from the prepuce many years after its first appearance there in connexion with chancre—it is liable to recurrences of ulcerative action. A patient is always desirous of getting rid of an obvious mark of unsoundness, to say nothing about the secretions from it proving a source of contagion to others. Not once, but very many times, has the writer been gratified by the steady decrease and disappearance of a large induration under the effect of an artificial irritation sufficient to maintain a slight amount of suppuration. Every one accustomed to observe small things must have noticed the differences between the indurated and the soft venereal ulcer of the prepuce as the patient retracts this part. Often, without the aid of touch, one can tell the characters of a sore. The soft ulcer bends upon itself, and the prepuce is retracted evenly and easily. The hard chancre refuses to bend on itself; it momentarily lags behind, and then rolls over *en masse*. Then, again, the relations of the base to the edges of the ulcer are generally quite different in the two sores. In the soft, the edges and base are *dis*continuous; the former descend vertically to the latter without directly joining it; the edges and base look as if they joined at a right angle, but they do not, for the tissue is a little undermined at this part, and you may with care move the edge a little without moving the base; it is a honeycombed, cellular, pus-discharging, acute ulcer. In the indurated sore, the edges are both sloping and continuous with the base, and the force that is required to move the ulcerated edge moves the whole lesion. Perhaps it may be well to state here the various forms of primary lesions which may be the precursors of constitutional manifestation.

Induration, when it exists, may unquestionably vary in degree—in quality as well as quantity.

1. A large, dense, strictly limited induration, varying from the size of a small shirt-button to that of nearly half a walnut. If any ulcer exists on its summit, it is commonly superficial, of a dull brick-red hue, of an indolent character, and without concomitant inflammatory phenomena.

2. A superficial flattened hardness of less density, feeling like a piece of leather, coarse cloth, or parchment, according to its extent and depth, circumscribed, but not possessing that well-defined edge which limits the induration of the first form.(a) The surface of this presents a dull, gummy-looking exudation, or it is covered by an adherent scale, or it is dotted in parts where the lymph is softening and undergoing a molecular, purulent, or fatty disintegration.

3. A very superficial, rough, irritable-looking abrasion, which heals in due time, with scarcely any loss of substance or any induration, or sometimes it is replaced by a small, flat, firm elevation. These varieties are best seen on the glans penis.

4. An elevation like a miniature boil, which inflames, becomes covered with a thick scale or scab, then ulcerates, of the consistency of thick cloth, and with an indurated "root" in the cicatrix. This cicatrix assumes a rounded or oval form, like a vaccination scar, of a dark brown tint, and finally it leaves a dull white dotted scar, which contrasts in colour with the neighbouring skin. This is witnessed on the outside skin—the sheath of the penis.

5. With more or less phymosis, there may be an epithelial ulceration and balanitis, with a firm induration of the whole, or nearly the whole, prepuce superinduced upon it.

6. After the appearance of a sore, possessing all the characters of the soft venereal ulcer, specific induration may appear at its base during its progress, its granulation, or upon its healing—the mixed, twofold, or non-conformable type of chancre.

7. A form of syphilitic urethritis, pursuing a course which shall so exactly mimic a gonorrhœa as to be clinically identical with, and commonly mistaken for it.

8. Those sores which are complicated with a destructive form of inflammation—sloughing, gangrene, or phagedæna. These may be ranged under two heads—viz., those primarily phagedænic, and those secondarily attacked with this complication.

Now, what the writer would desire to inculcate is, that in those forms of chancre characterised by considerable and chronic induration there is no *local* treatment equal to that he has named. In his own practice he has frequently employed it without any mercury, and with much success.

The sooner we regard syphilis as a disease very closely allied to the contagious exanthemata, as depending upon a specific animal poison, and as tending to run a definite course (variable, it is true, according to the dose and potency of the virus and the constitution of the patient), the better. Cases of syphilis differ from one another as much as cases of small-pox and scarlatina do, although every example will present a group of symptoms and characters sufficient for us to diagnose the disease.

The syphilitic virus is often a very powerful antagonist to encounter, and commonly proves far too strong to be strangled at the outset by the administration of mercury or any other remedy. With all due deference to those authorities who think otherwise, and with an entire belief that mercury is the most reliable and best weapon we possess for combating the effects of the virus, and for removing syphilitic manifestations, we nevertheless believe that mercury must generally be worsted at the outset of the encounter, and that it is only when the poison is somewhat exhausted by general manifestations that the therapeutical properties of this agent will be crowned with success.

THE WEEK.

CHOLERA AT PILL, NEAR BRISTOL.

ANYONE who has noticed the rates of mortality prevailing in the chief cities of the kingdom for some months past will have remarked that, with one exception, the city of Bristol has uniformly exhibited the lowest death-rate, the returns in one week not long since indicating the remarkably low annual rate of 14 per 1000. The report of the Health Committee of the city enables us to see in great measure how so enviable a state of things has been brought about. Wherever any of the few cases of cholera occurred all the drains and sewers communicating with the locality were charged with sulphate of iron or other chemicals by the health officers, and all the sewers in the low levels of the city were kept so charged until the end of September. The most stringent measures of sanitary supervision and disinfection were adopted, and the Health Committee are quite justified in believing that their exertions were instrumental in preserving the city from the epidemic which has extended from one end of the land to the other. Yet all the while the good citizens have been in a proximity about as dangerous as can well be imagined. About five miles from the port of Bristol, at the mouth of the Avon, which bears the full tide of commerce up to the busy wharves and quays, is situated the village or hamlet of Pill, inhabited by the pilots whose services are so essential in the intricate navigation of the river. Within the last fortnight a most virulent outbreak of cholera has occurred in this village, and in a few days there were nineteen or twenty cases, with many deaths. The Bristolians were thoroughly alarmed, as well they might be, seeing the possibility of the tide bringing the seeds of infection from the village to the city. The normal condition of Pill, as described in the local newspapers, is so revolting as almost to be incredible, and those who are making their fortunes by the ships which the Pill pilots are sent out into the Channel to bring safely into harbour are almost as much to blame for the bestial state of the village as are the benighted inhabitants themselves. As usual in so small a community, there was at first some difficulty about what power could legally be acted upon in so pressing an emergency, but fortunately Sir William Miles took on himself the responsibility of sending for Dr. Budd, of Clifton, and giving him *carte blanche* to use all means *coûte que coûte* to check the spread of the disease. Dr. Tibbits was then installed as sanitary inspector under the Nuisances Removal Act, and from his report we gather the following particulars:—

"The sanitary state of Pill was, when first visited by me on Tuesday last, in the most deplorable condition. At the top of the village is situated a brewery, the privies from which, and from some of the houses above, drain into an open ditch. This ditch for about 200 yards was full of sewage, the smell from which was most offensive. The fluid portion of this passes down to join the brook at the upper end of the village, and into this brook in its course to join the Avon are drained all the privies situated near it, these privies, in several cases, containing cholera discharges. Those privies that are not within a reasonable distance of this brook are in many cases drained into open cesspools, some of which contained, I should think, a cartload of fæcal matter, the stink from which defied description. Many houses have no privies, and in these cases the inhabitants throw their refuse either on to the rising ground behind the houses or else on to the banks of the Pill. At one row of houses I found the ground at the back of them completely saturated with fæcal matter and cholera discharges, the fluid portion of which drained down into the kitchens of some of the houses. The water supply I also found to be most imperfect, the inhabitants depending principally upon two pumps, one of them being liable to run short of water, the other having since become contaminated. In some cases I believe the people took their water for domestic purposes from the brook below the place where sewage is poured into it. Pill, from its natural situation, might, I believe, be one of the best drained villages in England, and the water supply ought to be one of the purest. At about 600 yards from the King's Head Inn, a spring of water comes from out of the rock, and, from the statement of the inhabitants of Pill, even in the very driest weather it is never deficient in quantity."

(a) You must compress the ulcer in its short diameter, or you must take up a part of it, to appreciate this induration.

The untiring exertions of the Sanitary Committee have apparently been successful in putting an end to some of the grosser evils in which Pill abounds; but until the Sanitary Act is in full force, and a system of sewage established, there can be no real safety for the inhabitants.

It is a significant fact that last week two deaths of children from Asiatic cholera were registered in St. Augustine's, Bristol, the city having been entirely free from that disease for some time previously. The difficulty of touching pitch without being defiled, or of preserving purity of life in the midst of an atmosphere of vice and wickedness, is not greater than the difficulty of keeping off the mischief incurred by proximity to such a pestilent spot as the village of Pill is declared to be; and the citizens of Bristol should consider themselves in great measure responsible for the prevention in future of any such explosion of epidemic disease as the recent outbreak of cholera at Pill.

DEATH FROM CHLOROFORM.

A DEATH from chloroform occurred at Birkenhead on Thursday week last. The patient was a boy named Hughes, and the operation that was to be performed was lithotomy. The death took place previously to the performance of the operation, the boy ceasing simply to breathe, and the action of the heart ceasing almost at the same moment. The chloroform was administered with every care, and there was nothing in the condition of the patient to indicate special danger. The jury returned a verdict of Death from chloroform, with an intimation that the anæsthetic "had been properly administered."

This case is very remarkable, owing to the youthful age of the deceased. It has been almost accepted as proven that if moderate care be employed persons under 14 years can hardly be exposed even to risk by chloroform inhalation. The fallacy of this view is now proved by a sad experience, and that which was thought to be a sequence is shown to be coincidence. If the truth be told, neither in this fatal case, nor in the fatal case at Bristol, where the radial artery was about to be tied, need chloroform have been administered at all; unless it be proved that local anæsthesia would not have afforded every requirement for a painless procedure.

THE ARMY MEDICAL SCHOOL AT NETLEY.

THE following letter has been addressed to the editor of the *Pall-mall Gazette* by the Professors of the Army Medical School at Netley. It will be seen that the Professors admit the fact that two of the candidates for commissions have been lately expelled for misconduct; and however satisfactory the conduct of the remainder may be, we suppose that the Professors would scarcely assert that they represent that high class of Medical education and training which should be found at the service of the army.

"Sir,—We, the undersigned Professors of the Army Medical School, have had our attention called to an article in the *Pall-mall Gazette*, which was reprinted in the *Times* of the 9th inst., headed 'The Medical Military Service.' As this article contains statements reflecting unjustly on the character and attainments of gentlemen who have passed and of those who are now passing through the course of instruction in the Army Medical School, we feel it to be our duty to request space in your paper for some observations on it. While it is unhappily true that two of the candidates for commissions were a short time ago dismissed for a grave breach of discipline, it is unfair to others who had nothing whatever to do with the misconduct of the offenders to assert that 'the present batch of students exhibits this peculiarity of national distribution (*i.e.*, they are mostly Irishmen) in common with others of the last few sessions, but it seems to have a greater variety of *mauvais sujets* than usual.' Now, in reply to this we beg to say that, from the opening of the Army Medical School until now, the strictest discipline has been maintained. When the Army Medical School had its home in Chatham, the general officer commanding the garrison declared that no class of officers under his orders had given him so little trouble as the young men going through the probationary course in the Army Medical School at Fort Pitt. This is the thirteenth session of the school, and we declare that, from first to last, only two examples of serious misconduct have taken place, including the late occurrence, both of which were punished by immediate dismissal. We submit, therefore, that the Army Medical School, in the conduct of the gentlemen under instruction, will bear a favourable comparison with any of the Universities or other places of public instruction, military or civil, in the three kingdoms. With regard to the gentlemen candidates now in the school, we assert that, so far from being a set of men with a large proportion of '*mauvais sujets*' among them, they, as a body, are men of sound education, correct and gentlemanlike in their conduct, attentive to their duties, and in a high degree submissive to the requirements of military and academic discipline.—We have the honour to be, Sir, your most obedient servants,

"W. C. MACLEAN, Deputy-Inspector-General,
Professor of Military Medicine.
E. A. PARKES, M.D., F.R.S., Professor of
Military Hygiene.
THOMAS LONGMORE, Deputy-Inspector-General,
Professor of Military Surgery.
W. AITKIN, M.D., Professor of Pathology.

"Army Medical School, Royal Victoria Hospital,
Netley, November 13, 1866."

CHOLERA MATTER v. ANIMAL CHARCOAL.

DR. FARR has submitted the rice-water evacuations of a cholera patient, which were obtained by Dr. Sutton from a well-marked and severe case admitted into the Cholera Hospital, Whitechapel, to Professor Frankland for experimental investigation of the effect of animal charcoal in purifying water contaminated by choleraic discharges. The following is Professor Frankland's report, which will be read with interest:—

"On the 27th ult. I received from Dr. Farr three bottles containing the rice-water evacuations of a cholera patient collected on the previous day. After agitation the rice-water had the appearance of thin cream, from which a small amount of flocculent matter gradually subsided after the lapse of some hours, leaving a supernatant liquid looking exactly like milk, and from which no further perceptible subsidence took place, even after the lapse of several days.

"One volume of this choleraic evacuation was mixed with ten parts of distilled water, and sealed up in a long glass tube; the flocculent matter now subsided much more readily, leaving an opalescent liquid above. One volume of the rice-water was mixed with 100 volumes of distilled water and sealed up in a similar glass tube. The flocculent precipitate now subsided still more readily.

"One volume of the rice-water was mixed with 500 volumes of distilled water, and the mixture passed through filter paper. The filtered liquid was still very opalescent, proving that a process of filtration, far more perfect than any available for the filtration of water upon a large scale, fails to remove entirely the suspended matter of choleraic evacuations.

"Submitted to the action of potassic permanganate, 100,000 parts of the filtered liquid just mentioned required ·0430 part of oxygen for the oxidation of the organic matter contained in it. The average amount of oxygen required to oxidise the organic matter contained in 100,000 parts of filtered Thames water as supplied to the metropolis is ·0724 part. Thus a sample of water containing $\frac{1}{500}$th of its volume of choleraic evacuation, exhibits, when tested by potassic permanganate, a much greater degree of purity as regards organic matter than the water supplied to the inhabitants of the metropolis; in fact, it may be safely asserted that the addition of cholera rice-water to the water of the Thames in the proportion of 1 to 1000 would not materially affect the results of a chemical analysis of the water.

"After rapidly passing the above filtered but opalescent liquid (containing $\frac{1}{500}$th of choleraic evacuation) through animal charcoal, the opalescence was diminished, but not entirely removed. The organic matter still remaining in 100,000 parts of it now required only ·0103 part of oxygen for its oxidation. Animal charcoal, therefore, fails to remove entirely, even from previously filtered water, the suspended matter of choleraic evacuations.

"The foregoing experiments show first that water may become seriously contaminated with choleraic matter without the presence of the latter being indicated by chemical analysis; and secondly that water so contaminated is not completely deprived of this impurity either by filtration or passage through animal charcoal.

"It still remains to be proved to what particular constituent of choleraic dejections the propagation of the disease is due, but it is obvious that if the propagating matter be a germ or an organism it must be in suspension and not in solution.

"E. Frankland."

This inquiry unluckily stops short at a point upon which all of us would like to be further informed—namely, whether the charcoal deprives the cholera matter remaining after filtration of its zymotic character, so that it may be drunk in dilution with impunity. Who will "bell the cat," and adventure a trial for the satisfaction of so momentous a doubt? It is hardly probable that the Home Secretary will be disposed to hand over to Professor Frankland the next criminal sentenced to death, with a proviso that the convict should be liberated if he survived the experiment, and therefore, unless a modern Marcus Curtius be found, willing to immolate himself on the altar of science, the gulf now separating the known from the unknown must remain open. Happily, we have an alternative—namely, to determine that henceforth we will not run the risk of swallowing cholera matter, whether innocuous or otherwise, by continuing to drink water drawn from sources liable to contamination. If the London Water Companies are wise, they will "accept the situation," and begin at once to make arrangements for a change of supply.

THE CHARGE AGAINST THE STUDENTS OF ST. MARY'S.

The following paragraph appeared in the *Pall-mall Gazette* of Wednesday. If it be true that certain of the students of St. Mary's Hospital were guilty of the gross folly and indecency alleged, we can only say that we are very sorry for it, and recommend their conduct to the consideration of the Dean of the Faculty of the St. Mary's School. But it is manifestly unjust to charge the misconduct of certain of the students on the authorities of the Hospital, and we are surprised that a paper generally so well informed on Medical matters as the *Pall-mall Gazette* should have admitted such an accusation. No body of professors or teachers can be responsible for the conduct of their pupils at all times and under all circumstances, and this is especially the case in a public Hospital, which is only partially an educational institution.

"The jury which sat on the body of James Newby, a fireman, accidentally killed on the Great Western Railway, complained to the coroner, on their return from the dead-house of St. Mary's Hospital, of the scandalous treatment the body had received at the hands of the students of that institution, who had actually poked it about with sticks, and made jokes on it, in the presence not only of the jury, but of the widow of the deceased. The jury expressed the strongest indignation at the conduct of these young reprobates, and the coroner declared that if ever a similar complaint was made to him he would commit the offenders to prison. Such a transaction reflects the highest discredit on the officers and managers of St. Mary's Hospital, and calls for immediate explanation and apology; all the more that, as we believe, St. Mary's Hospital depends entirely upon voluntary contributions."

Medical students should remember that riotous play, the mere offspring of high spirits and youthful joyousness, though unattended with serious blame to individuals, brings serious discredit on the body of which they are members. Medical students once were a byword for vulgar dissipation, from the fact that every young lawyer or student for holy orders who got into a scrape called himself one. Now that we are striving for better positions in the Army, Navy, and Poor-law Services, our young friends and successors must restrain their mettlesome spirits, and keep within bounds of decorum.

DR. MARY WALKER'S LECTURE AT ST. JAMES'S HALL.

It is much to be regretted that Dr. Mary Walker's friends permitted her to make her appearance as a public lecturer in London. It was an undertaking altogether above her powers, and its only result has been to throw ridicule on herself, her sex, her Profession, and her country, and to strengthen the opinions of those who hold that women had better not meddle with physic. As a composition the lecture was an entire failure, and clearly had never been revised by any educated gentleman before delivery. It professed to be an account of the Doctor's experience at college, in private practice, and in the army; but so far as actual facts, anecdotes, or descriptions were concerned, it was meagre and unsatisfactory to the utmost. Self-consciousness, or vanity, or egotism, call it what you will, and that of an unmistakably feminine order, gave the predominant key-note to the address. Let the topic be what it might—college, practice, or military adventure—the speaker involuntarily brought in the subject of dress, and this not merely in its physical and objective bearings, but also in their delicate subjective relations, to which the mind of even a female Physician is shown not to be insensible. The Doctor's evident consciousness of sex was one of the characters which contributed to make the entertainment painfully ridiculous. Why need she have talked about showing her ankles? and why introduce that anecdote about the dying soldier who asked her to kiss him? She clearly mistook for a compliment to her sex a request prompted by the mere weakness of a dying man. A kiss is a very natural act, expressive of sympathy and affection; it is in our colder society reserved almost entirely for the intercourse of parents and children, brothers and sisters, and of women with each other. In many parts of Europe, however, it is common amongst men, and we may affirm of it, that, although used, like all other possible modes of endearment between persons of opposite sexes, to express sexual affection, yet that it has *per se* no sexual character whatever. Nelson, when dying, said "Kiss me, Hardy." It was the expression of the natural desire of a poor creature just sinking out of daylight for one little touch of human sympathy, and was prompted by feelings common to all humanity, not by sex. To introduce such an anecdote, and to expose the weakness of a poor dying fellow to the profanity of ridicule, was one of those points in the lecture which required erasure by a judicious critic, and which made the friends of female Physic present grind their teeth in despair. Miss Mary Walker should learn from her male colleagues that all consciousness of sex should be absent from the mind of the Medical Practitioner. In thus speaking freely of this melancholy exhibition, we do not forget that a female Physician is one thing, a female lecturer another. If a woman choose Physic as a vocation, and follow it through its wearisome and disgusting studies, we respect if we do not commend her, and certainly no word of ours shall tend to deprive any female Physician of her claim to unprejudiced trial. If women are clearly not fit to practise Physic, the race must die out—if they are, let them. It may be a mistake, but is no business of ours. To come forward as an orator in a public hall is quite another thing. Dr. Mary Walker's entertainment, apart from the interest which the presence and costume of the lecturer created, was vapid and thin, showed no intellectual grasp or solid foundation, and, when it was enriched with a bit of the pathetic or sublime, threw the auditory into convulsive shrieks of laughter. It was listened to with contemptuous good nature, intermixed with occasional unmannerly interruptions from a gallery said to be filled with Medical students, and with an ironical cheer at its close. The Doctor may be consoled by reflecting that if she had been a man the whole thing would have been unequivocally damned in five minutes, and the room in an uproar. The interruptions and jocularities she experienced were not an insult to her sex, but to her capabilities as a public lecturer. It was clear from her own statement that she may have been of great use in the military Hospitals at Washington as a tender, skilful, and intelligent nurse. Of her capabilities as a Physician her lecture gave no evidence. Of her power of guiding public opinion and inducing other women to follow her example, we suspect that the evidence is all of a negative order. If English women are to be induced to practise Medicine, they must not be led to fear that they need part with the quiet, modest, unobtrusive habits and good taste which have hitherto characterised gentlewomen.

FROM ABROAD.—VACCINAL SYPHILIS—THE ITALIAN MEDICAL ASSOCIATION—INJECTION OF TUBERCLE—ABSORPTION BY WOUNDS.

Two Medical Practitioners having drawn the attention of the Academy of Medicine to a reported outbreak of vaccinal syphilis in the department of Morbihan, MM. Depaul and Roger were despatched on the part of this body to investigate the matter on the spot. From their report it seems that a midwife residing at Grandchamps received on the 20th of May some vaccine lymph on glasses from the Préfecture, and next day vaccinated with it two infants, by name Mahé and Noroy, both apparently in excellent health. A week afterwards she vaccinated from Noroy's arm a strong, healthy child three months old. As it was intended to vaccinate several from this last, six punctures were made in each arm, all of which were followed by pustules. On the 3rd, 4th, and 5th of June the midwife took this child to various communes, and practised numerous vaccinations from its arms—more than 80, as she averred. On the 12th of June further vaccinations were made from two children of this first series, and by the 9th of July the two Practitioners who drew the attention of the Academy to the circumstance had met with 30 infants from among those of both series, who manifested well-marked signs of primary or secondary syphilis. MM. Depaul and Roger found, in fact, that many of the children submitted to their notice really exhibited symptoms of secondary syphilis, and they could attribute its occurrence to nothing else than the vaccinations which the children had undergone, these being, in fact, true cases of vaccinal syphilis. They also believe that the lymph supplied by the Préfecture was the origin of all the mischief. M. Ricord, while not making any objection to the report, thought it of importance that it should be distinctly specified that not only secondary, but primary, symptoms of syphilis were observed in these children.

The Italian Medical Association has just been holding its third session at Florence under the most favourable auspices, its object at present being rather the effectual organisation of the Profession in the various new provinces of the kingdom than occupying itself with the more scientific objects which will afterwards engage its attention. Baron Ricasoli, the Premier, who was present at the inaugural meeting, has addressed to its President an interesting letter, from which we select a few passages:—

"I am," he says, "a believer in the power of individual initiation in the conception and discovery of great truths; but in order to arrive at the infinite series of their consequences and their applications, and to convert them into multiple instruments which may serve for the progressive amelioration of civil life, it is requisite that there should be an association of intelligence, labour, and force. The faculties of man, which are but limited, undergo enlargement when we associate for a common object, become invigorated and multiplied, and, breaking through the confines of time and space, render man greater than himself, and the dominator of nature.

"Much do I desire that the example set by the Medical Association may find many imitators among the cultivators of other branches of knowledge, the arts, industry, and commerce. Now that the inevitable causes of war have ceased to exist, it is essential that Italy should labour to recover her intellectual and material patrimony. The fine arts, in which she once stood foremost, are now neglected, her industry and commerce are impoverished, and the sources of her splendour and prosperity are dried up. She must now resume her ancient spirit with renewed determination. She must labour and study, for the time has passed when she must wait for impulses from the governing powers or seek her encouragement in the smiles and munificence of princes. The sun of liberty which now enlivens us with its warm rays should revive in the breasts of all the consciousness of their own powers, together with the sense of their own dignity, inspiring them with an honest trust in themselves, leading to a laboriousness which is due to the society amidst which we are placed, and, now that the chains of distrust and diffidence have been loosened, collecting together for the same object homogeneous forces and desires."

Professor Lebert, of Breslau, in a paper recently read at the Academy of Medicine, gave an account of some experiments which he has made upon the transmissibility of syphilis by inoculation. In place of venous injections, by means of which M. Villemin has also proved its transmissibility, he employed subcutaneous injection, the quantity of either grey or yellow tubercular matter injected, diluted and triturated with distilled water, varying from $\frac{1}{2}$ to 1 gramme. Guinea-pigs and rabbits were the animals selected, and as a consequence of these injections tubercles (in nowise differing in their microscopical characters from those found in man) were found in the lungs, liver, spleen, and the lymphatic system.

M. Demarquay, at the same meeting of the Academy, laid before it a paper on "Absorption by Wounds," of which the following are the chief conclusions:—1. A substance which is soluble in water, like iodide of potassium, when applied to a large denuded surface is rapidly eliminated by the saliva. 2. Applied to a recent wound, the presence of iodine is recognised in the saliva in a period of time which varies between 60, 30, 19, and 15 minutes. 3. When wounds are completely organised they possess great absorbing power, so that at the end of 10, 8, 6, or 4 minutes, and even less, very evident traces of iodine are found in the saliva. We may therefore ask whether the septic element which gives rise to puerperal fever or erysipelas may not be absorbed by the wound itself. 4. In that dangerous complication of wounds known as purulent infection, may we not suppose that this absorbing power, which has hitherto been so little investigated, plays a considerable part, and will it not explain some of the phenomena generally attributed to phlebitis? 5. Iodine injections thrown into the cavities of abscesses or cysts are rapidly absorbed, elimination having been proved to have commenced in a period varying from 45 to 3 minutes. 6. When these injections are employed in too great quantities or too often repeated, harm may result from the incessant introduction of iodine into the system. 7. Iodine introduced by these various means is generally eliminated by the saliva and urine in from 4 to 5 days.

THE NEW SESSION AT EDINBURGH.

(From an Edinburgh Correspondent.)

We are now just settling down fairly into the work of the session. The wanderers are nearly all returned, but the lodging-house keepers seem to be despondent in the student quarters, for there are yet many "Apartments to Let." There has indeed been a woful diminution in the number of freshmen within the last few years, and this year it is more marked than ever. In spite of this, however, a new school, or rather a re-collection of lecturers, has taken place at Minto House, a place famous as the site of Mr. Syme's early triumphs. Here, as at the College of Surgeons' School, the very sensible idea of having a reading or waiting room, supplied with journals, for the pupils has been put in force. A part of the old Natural History Museum at the University has also been turned into a news-room and a luncheon-room *with a bar!*

> For the education of young gentlemen,
> To study how to drink and take tobacco.

Think of that, Master Brook — *in Edinburgh!* But some enthusiastic teetotaller, to testify to the usual dissent, has erected two water stalls in the quadrangle. An athletic club has also been started, and, as a room has been granted and fitted up as a gymnasium, is likely to do well. On the whole, our *alma mater* seems to improve as her revenues seem inclined to decrease.

All the teachers are at their posts and looking well, save Dr. Laycock, whose place is well filled by Dr. Warburton Begbie, and of whose entire restoration to health most favourable hopes are given. Sir James Simpson is also confined by slight indisposition, and his place is supplied by Dr. Keiller. The cholera is still present in our city, but not to an alarming extent. It is, however, committing fearful ravages in some of the dirty fishing villages on the coast of Fife. In Leven especially has it destroyed many lives, and among others Dr. Kennedy, a Practitioner well known and respected in the district.

THE OPENING OF THE MEDICAL SESSION AT GLASGOW.

We have already expressed our regret that we are unable to reproduce in our columns at full length many of "the introductories" which have reached us from the various Schools of Medicine in this and the sister kingdoms. Those who listened to Professor Gairdner's address at Glasgow will readily understand that in its case an expression of such regret is no mere piece of editorial rhetoric. Rarely from any Professorial chair has issued a more thoughtful, a more learned, and—to adopt a modern but expressive epithet—a more suggestive oration. Our want of space forbids us publishing it whole, and we feel that compression would rob it of many of its graces of diction and of those minor touches which give it freshness and interest. Dr. Gairdner's theme was the contrast of Medical science past and present, or, to use his own words, of old orthodoxies and modern opinions. The fate of the former he illustrates by the history of the controversy respecting antimony which rent the Parisian Medical world in the sixteenth and seventeenth centuries. The prescribers of antimony were publicly condemned by the Faculty of Medicine in 1561, whilst, about a hundred years afterwards, the legitimate use of the same drug was established by a majority of ninety-two Doctors of the same Faculty in an assembly of one hundred and two. From this history Dr. Gairdner draws the following

LESSON OF THE PAST.

It is, perhaps, worth while to have detained you thus far over this old story, in order to draw from it the moral which it supplies. The century of bitter and violent controversy here alluded to did almost nothing, after all, towards the settlement of the question. The actual therapeutic properties of antimony were scarcely at all brought into view amid the dust and noise of the strife, and although pamphlet followed pamphlet in endless succession, filled with all the extravagance of the language of intemperate discussion, there is absolutely not one of the whole farrago that contains a fact known to the nineteenth century, or is referred to as in any degree valuable in the numerous investigations which the last hundred years have produced as regards this powerful and yet dangerous remedy. Its powers for good and for evil were alike lost sight of in the confusion of the struggle, and instead of a careful and judicial inquiry we have the humiliating spectacle presented to us of a mere wrangling for power, under the watchwords created by a statutory orthodoxy on the one side, and a fashionable heresy on the other. On the whole, it may be said that, had antimony never been discovered by Basil Valentine, the Doctors of the Paris Faculty would have been none the worse, and their patients surely much the better. To arrive with anything like safety at an estimate of the value of this remedy, or a knowledge of its true properties, required not only a different temper of mind, but a far more enlarged circle of ideas, and a more carefully educated experience than that of any one of these old Physicians. How far have we that improved temper, that enlarged circle of ideas, that more carefully cultivated experience? How far can we hope to apply these to the ever new and unsolved difficulties of our own daily life and duty? How far does the instruction supplied to you, or placed within your reach, in this school enable you to rise out of the mere routine of dead orthodoxies, and to take your place among the highly endowed minds that are now everywhere working, in the impartial light of modern science, at the problems of practical Medicine?

These are questions, gentlemen, of no small importance to all of us. But more especially are they of importance to you, with whom the door is not yet closed, by the harassing and absorbing practical duties of life, to the elementary instruction which is to fit you for these duties. Suffer me therefore to address to you a few considerations on this subject, and to keep in view in doing so that you are not only pupils of a Medical school, but members of an ancient University. The first lesson to be learned in order to make all other lessons possible is, in my opinion, this—to deal as much as possible with things, and not with mere words; to realise, as much as possible, all your instruction by making it your own through personal observation; to suffer nothing, if it can possibly be avoided, to lie in the mind as a dead weight of vocables, oppressing the memory, and dwarfing the intellect, but to bring everything into the living light of fact and of nature, and thereby at once assure to yourself the truth and exactness of your knowledge, while at the same time you are stamping it down upon the memory, by the most sure and lasting of all technical methods. This is essentially the modern spirit of scientific inquiry, in virtue of which alone you can rise out of the dogmatisms and orthodoxies of the past to make secure and beneficial progress in the knowledge of your Profession. It is to imbue you thoroughly with this spirit that we give you the freedom of dissecting-rooms, and laboratories, and museums, and Hospitals. It is for this reason also that we urge upon you, as a study of the first importance to your future welfare and progress, the fascinating pursuit of natural history, whether in the realm of geology, of botany, or of zoology. That study, when rightly pursued, is, I hesitate not to say, at once the most agreeable and the most effective discipline for the work of the dissecting room, the laboratory, or the Hospital. It trains at once the mind and the senses; and through the most wholesome and delightful observations of detail, it leads up to the most profound generalisations and the most far-reaching theories. In even so simple a set of objects as those which lie between the petals of a daisy there are whole depths of thought, a thousand times more practical and more useful to you as Medical men than all the speculations and assertions of all the pseudo-philosophers who wrote for or against antimony, from Basil Valentine in the 13th century to Gui Patin and Guénaut in the 17th. For in the one case you are feeding your mind with substantial truth, and realising it step by step as you go along; in the other you are feeding on the wind of doctrine, and the result is simply nothing or worse than nothing—wasted time, disappointed effort, a painful sense of utter vacancy—"Vanity of vanities, saith the preacher; all is vanity!"

In the middle ages, and to a considerable extent also, though not without exceptions, in the early ages of the Greek philosophy, the whole method of science was precisely the opposite of that which I commended to you in the study of the daisy. It was to place before the mind in the first instance the most abstract propositions and ideas, and to reason outwards towards the facts. Very often the facts were never reached at all, and then the whole process of thought ended, in what?—of necessity in formulæ of words, which were handed down from teacher to scholar as ultimate solutions of the problem. Thus, Democritus reduced the principles of things to a "concourse of atoms," and was followed by the Epicureans, and by Lucretius; but neither Democritus nor the Epicureans, though setting forth a purely physical philosophy, concerned themselves in the least with the exact observation of facts, except in so far as was absolutely indispensable to give something like body and substantial illustration to their purely hypothetical atomic theory. So, too, the great controversy of the twelfth century was as to the essential reality, or the merely nominal existence, of genus and species, property and accident; but no one thought for a moment of extending thereby the knowledge of the actual objects included under genera and species, or of the actual qualities of things included under the description of properties and accidents. To do this would have appeared to Abelard, or to the followers of Aquinas or Duns Scotus in the two succeeding centuries, not only a waste of time, but a most shameful prostitution of Divine philosophy. And so also in Medicine, the study of words and notions of the mind came in place of the observation of symptoms; while occult qualities and inscrutable masses of polypharmacy came to represent the treatment of disease.

It would extend this lecture far beyond reasonable limits were I to attempt to show you how the despotism of this false method was gradually relaxed, and the study of external objects substituted for that of mere notions or conceptions of the mind. Roger Bacon, even in the 13th century, opened the way in Natural Philosophy with surprising power and originality, but it was a "voice crying in the wilderness." Vesalius, of Brussels, in the 16th century, laid the foundations of modern anatomy, and was followed by a brilliant succession of discoverers, who, by their united labours, cleared the way for our English Harvey. Conrad Gesner, in Switzerland, explored the realm of natural history; and Fuchs and Gerarde the special province of botany. Greatest of all, Galileo Galilei dared for the first time to set forth physical facts in astronomy which were not only the result of independent observation, but in direct opposition to the dicta of the Church, and thus he set free for ever (notwithstanding his own submission) a host of the most enlightened minds from the sway of authority in matters of science.

But meantime the study of Medicine proper—that is, of the healing art—remains, even now, to a very large extent governed by precedents derived from the past. Nor can this ever be otherwise; for the whole art of Medicine is steeped in antiquity, and draws a large part of its most accurate and striking observations from a date long before the Christian era. So long as it can be said with truth that we inherit the labours and the very language of the schools of Cos and Cnidus—so long as we follow prognostics derived from Hippocrates, and details of symptoms taken from Aretæus—it cannot be a matter of indifference to an enlightened Medical man whether he knows or not those languages which bridge over the chasm between the nineteenth century and those remote epochs. I am not at all, therefore, on the side of those who, because they have cast aside the fetters which the middle ages imposed on us, would therefore forget that Medicine has a history. Rather would I have you use the freedom of the modern Physician in such a way as to make it a graceful and real tribute to those great men whose names still shed a lustre over our art and over the history of human opinion in all the arts and sciences.

Arthur MacMorrough Kavanagh, Esq., descended from the ancient monarchs of all Ireland, and whose ancestors at the time of the English invasion under Henry II. were kings of Leinster, has just been elected, by a large majority, to represent the county of Wexford in Parliament. Mr. Kavanagh is a remarkable instance of the power of nature in compensating for congenital or acquired deficiencies. Born without arms or legs, he is nevertheless highly accomplished; he writes well, is an admirable draughtsman, a keen sportsman, and an excellent country gentleman. These qualities, combined with his high Milesian descent, account for the popularity demonstrated on his triumphant return for the county.

The deaths registered in London during the week were 1428. It was the forty-sixth week of the year; and the average number of deaths for that week is, with a correction for increase of population, 1519. The deaths in the present return are less by 91 than the estimated number. Thus the mortality has been below the average for two weeks in succession. The eruption of cholera in October, partly due to the sanitary defects of Woolwich and Lower Charlton, is subsiding, and the small houses of Lower Charlton are now supplied with a system of drains. Thirty-two persons died of cholera, 22 of diarrhœa, in the week. The decline of the disease is decisive; and with due vigilance in London it will ere long be extinguished in the epidemic form. The deaths from cholera in the last five weeks were 144, 112, 73, 67, and 32 among more than three millions of people.

THE MEDICAL HISTORY OF ENGLAND.

By B. W. RICHARDSON, M.A., M.D., F.R.C.P.,
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THE MEDICAL HISTORY OF NOTTINGHAM.

Nottingham readers who know the locality will not wonder that one should begin a history of this kind or of any kind by a reference to caves, because they know that every man who has written on Nottingham has invariably been up in caves, if not down in them. But the general reader requires a little information on the subject, and to him, therefore, it must be told that Nottingham, in the ages deep very deep back in antiquity, was a place of subterranean passages and of caves hewn from the "craggy rocks over and near the river Lene." In these caves, say the historians, the ancient Britons housed themselves, and, for a period of time lost to all ordinary record, lived unmolested and free, a primitive people. Tradition is not wanting in interest and assumed fact as to certain details of this epoch. We have a story of a British king—Coilus by name—who was buried here in the year of the world 3832, a date, says one historian, with much circumstantiality and nicety, between the fall of Gomorrah and the siege of Troy. We have another story of a king—Ebranc—who, growing, as it would seem, disgusted with the caves, had stones carried up above head and built a town under the blue canopy. During the Roman occupation of Britain there does not appear to have been any interference with the cave men, or rather with the men now over the caves. Various attempts have been made to prove that the Romans had a city or residence here, but the evidence as it presents itself breaks down and comes to nothing. Subsequent history also throws a doubt over the hypothesis of Roman occupation; for we discover that when the place passed, as it did pass, into Saxon hands, the conquerors found the caves still there, and the other characteristics of an undisturbed British town. Thereupon they, the Saxons, named the town after its peculiarities; they called it Snottingham—Snottinga, a cave, and Ham, a small village or hamlet—the place of caves. Snottingham had the same name during all the Saxon time, and anon it became a town of sufficient importance to be fought for and lost and won. In the seventh century it was included in the Saxon kingdom of Mercia. In 832 the Danes came down on Snottingham and took it; then came Buthred, King of Mercia, and regained the place, but did not drive the enemy far away; so to Buthred's aid came the King of the West Saxons, Ethelred, and with him his warlike brother Alured, who fought with such effect that the Danes, the burning fiery sea rascals, were intent to cry for peace in their language, and to get away at least for a time. They nevertheless would often return until the reign of Edmund, the great king, who let them feel the weight of his iron wrath, upon which they subsided for good, and were heard of no more in the neighbourhood of the caves. At last we come down to the reign of the Confessor, and then we have it noted that Snottingham contained 107 burgesses with their families and 19 villeins with theirs—a village of rather more than 600 inhabitants, if the race increased and multiplied in the same ratio as it does at this day. The town remained in Saxon occupation until the time of the Norman invasion, when it soon fell under the dominion of the Conqueror, and straightway rose in importance. Truly it was still a small town, containing not more than 217 houses and 136 people, for it had been in part deserted; but it was centrally situated, and so it served the purpose of the master of the island to make it a place of defence. William the First entered the town, if not in person by deputy, in the third year of his reign, and soon afterwards the famous castle raised its front on the heights, there to become the terror of the surrounding country and the theatre of events hardly second to any in history.

In the reigns of Rufus and the first Henry (Beauclerc) the castle was the scene of no serious encounter, but in the stormy eighteen years of Stephen it was the centre of a great commotion. It will be remembered that Stephen, who was only the nephew of Beauclerc, actually usurped the crown, and that Matilda of Anjou, the daughter of Beauclerc, soon after the accession of Stephen, landed to claim her right and that of her son Plantagenet, afterwards Henry the Second. Matilda was seconded warmly by Robert, Earl of Gloucester, and the Earl being on terms of alliance with Ralph Paynell, governor of the castle of Nottingham, obtained possession of it, it is said, by the governor's falsity to the King. Afterwards it was regained by Stephen, but in 1152-3 was taken by Plantagenet himself, and the town was plundered and laid in ruins. It was at this time a borough town, William the Second having made it so towards the close of his reign—viz., in 1097.

For many years afterwards the town of caves and rude houses remained a dismal ruin; but in the reign of Cœur de Lion it looked up again, and John, the next King, went so far as to endow it with a charter and a merchants' guild. Here, too, in 1212, John fled, and for a little while in his short, very troublous, and much-misunderstood life found a moment of peace. In the reign of Edward the Third the castle of Nottingham was the famous scene of the arrest of Mortimer, the paramour (perhaps) of the queen-mother Isabel; and here, too, in 1461, Edward the Fourth, amidst great rejoicing, was proclaimed King. The town was at that moment even a mayor's town, and it sent two members to Parliament precisely as it sends two members at this day.

We get another historical look at the place—which, by the way, had now for some centuries past been called Nottingham—in 1485, when Richard the Third, looking upon it as a spot from which he could march most readily to any part of his kingdom, lodged his troops in and around the castle, and from thence in proud array he marched to Bosworth Field to be a crowned King but one day more.

The town rested in peace after the accession of Henry the Seventh until the revolution excited by the first Charles; and we learn from Dugdale that it had various Hospitals of note. Especially there was the Hospital of St. John, situated in the north part of the town, originally a "common spittle house," first under the care of the burgesses, and next under Archbishop Gray. St. John's maintains a warden, two chaplains, and many sick poor.

And, again, there was a house founded by a worthy townsman, John Plumtree, in the reign of Richard the Second; it was called the Plumtree Hospital, was founded near Bridgeend, and sustained two chaplains and thirteen widows. It was a singular notion this of Master Plumtree to assign two chaplains to so small a congregation, and it would be rather difficult to know how the chaplains filled up their time. Think even of thirteen strong men under the incessant discipline of two chaplains with nothing else to do but keep up discipline, and then turn the strong men into poor old widows! The picture is fearful for the widows, but so it is painted.

Charles the First, looking, doubtless, like Richard his predecessor, on Nottingham as a good centre, set up his colours there in 1642, but Charles having a kingdom at that time politically without a centre soon pulled his colours down again. Nottingham, in fact, very plainly told him it was by instinct a Parliamentary town, soon proclaimed itself so, and held to its colours until Noll confirmed the argument by doing that infinite service to the place of hammering down the castle,—a blessed work for Nottingham, and for every other Ham that boasted a feudal stronghold for its own slavery. However, he left enough to show what he had done here, as well as elsewhere, so that freed men, such as we now are, may, if we know our own history, take off our hats to his memory when we pass the ruined battlements, dry moat, and shattered walls. What a standing lie to the books that call Cromwell the great "tyrant" these demolished tyrannies—demolished by the man who, of all others, could have used them most to his own selfish ends had he known self!

After the Restoration Nottingham fell into disgrace. At all times a Liberal town, its politics were not agreeable to the second Charles, and they so offended the delicate sense of his successor, James the Second, that he actually took away the charter from the borough. In 1692, three years after the second English revolution, the charter was restored by William and Mary, the town once more became a thriving place, and in the succeeding century marked out its own course in commerce as a town famous for the manufacture of bone lace. The shock of the great French revolution told effectively on Nottingham, giving rise to serious political convulsion. In 1794 the popular tumult long smouldering broke forth openly, and continued intermittingly, but actively, so long as the year 1816. From 1811 to 1816 there were constant disturbances of a most serious character, the poorer classes assembling in large numbers by the name of Luddites. They took this name because they were supposed to be called together by a fictitious leader named General Ludd. By this time the lace trade of the town had ceased to be the only great commercial representative, stocking weaving having become a leading business. The stocking weavers, or knitters, not only occupied the poorer parts of the town, but the surrounding villages also for many miles about. These, including large numbers of men, yielded most cause of disturbance, and gave most recruits to the corps of General Ludd. The unknown commander, in course of time, became an absolute terror; his bands went from place to place, destroying the stocking-frames of persons who were objectionable, and committing other damage; and, in one instance at least, a life was taken. The Government, blindly ignorant of the real causes of this local rebellion, and determined, in their own selfish and narrow sense, to suppress, suppress, suppress, made matters worse than they were by the cruelty of their measures. It will hardly be believed in this day, and yet it is true, that in the month of March, 1812, the Legislature was induced to pass an Act (one's heart sickens as the pen writes the fact) positively making it death for any man to break a stocking-frame. To this vile deed the only remonstrance that was offered, or could be expected, was resistance. "If thou hast nature in thee, bear it not," was the retaliating thought; and, despite the horrible decree, the Luddites went on increasingly.

We may stay here to remark with unfeigned pleasure upon the progress of humanity in this kingdom during the fifty-four years that have elapsed since the Act directed against the Nottingham rioters was passed into law. According to our present view, a House of Commons that could pass a Bill such as this, making it death for a man to break a stocking-frame, would be an assembly of barbarians; and if any legislator were now bold enough to propose such a measure, we should expect that, being insane, he would next solicit to be allowed to feed on the bodies of his victims; in fact, we should either send such a man to universal Coventry or put him under certificates. Yet remember, fifty years ago a House of Commons, not truly representing the country, but a powerful and dominant section of it, passed this law of death on living man for mere smash of inanimate matter. Alas! the little unclothed earth British savages who cut the ancient caverns of Nottingham could have been guilty of no more foolish, no more cruel policy.

With these disturbances the trade of Nottingham naturally declined, and in the year 1816 the business of the place had sunken to the lowest ebb, and now, from sheer depression, even rioting ceased; the body political sank into collapse; it slept, like a man poisoned with fever, the restless sleep of exhaustion. Anon it feebly rallied; the second Revolution of France, in 1830, woke it up again, and the town out of its poorness contributed no less than five thousand francs for those who had suffered in Paris and for whom it sympathised. Once rallied, it returned to home affairs. Again it became conscious of the oppression to which it and the rest of the nation were subject. Again, in 1831, it raised riot very high, and would have sunken after the excitement, as before, but that the remedy was at hand. The remedy was the great Reform Bill. Gradually from that time, with some fluctuations during Chartist excitements and Corn-law agitations, there has been steady progress in Nottingham. The town has increased in houses, population, and public buildings, and has improved in trade, art, science, and learning. The change is a marvel. Who remembers Nottingham by a visit to it even twenty years ago would hardly know it now: it is a town of new life, a renewed heart in the island, a centre of force equal perchance in five years now to the five hundred that preceded the magic English year of 1832.

There are no two systems so closely allied as the body political and the body personal. I think they are one and the same. For this reason there are no two sciences so closely allied as politics and medicine. Both sciences afford equal field for rare philosophies and universal quackeries. Both advance only by the discovery and the adoption of simple but great and analogous principles. The history of the town of Nottingham is essentially the history of a man subjected to various physical treatments, and growing or failing according to the natural or unnatural character of the treatment. Sustained indifferently for many centuries, Nottingham lived a feverish, fretful existence, excitable, wandering, feeble, requiring restraint and chafing under that until it sank almost to death: but waking again, set free, and allowed the air of liberty and the food of generous trust, it acquired the qualities of growth, strength, manhood, and maintained them all.

The political history of Nottingham is, again, an interesting physiological study. It presents a sedentary population in the midst of an agricultural district. Part of its working people are outdoor labourers, part indoor; part always are in rude contact and converse with Nature, part always in slumbering converse with human art; part working and using little brain stuff and much muscle, part working and using brain stuff freely and, by comparison, little muscle. Agricultural labour and artisan labour have thus grown up side by side, and the influence of the different occupations on tone and manner of life has been most striking. Still goes the labourer to his work with the sun; still in the evening he homeward plods his weary way, caring for little; except the bread that perisheth and the sleep that is so coveted still mindless of any event in the outer world; still respectfully obedient and submissive to pastors and masters still; the neatly cleaned Sunday-morning man entering church to the sound of first bell; still the habitant of the low thatched miserable hut; still the dull drudge of the soil, but happy withal, the holder and sharer of a negative life and of a contented inaptitude. And while thus he exists, the companion of the plant and the kine, there is his restless fellow of the town, of the house, and of the frame. To his work this man goes, under whitened ceiling, with an eager and a yearning mind. He mounts his stool, sets his feet carelessly on his pedals, fixes his threads, and with a sigh casts the first stitch. Hthrush goes the thread as the shuttle carries it, and hthrush back again, and on and on the same, hour after hour, in coarse monotony. He has no Nature picture on which to rest his eye, no music for his ear, no freshness of air to give him zest for food; nothing to do but watch and train his hands until they mechanically become part of the machine. Such a man must think, and that is what he does. He thinks of the hard life to which he is subjected, and, if there be occasion for it specially, of the oppressors' wrong and the proud man's contumely. He thinks of his own imperfect existence and its worse sustainment. He thinks the soul that is in him might, under happier auspices, have been filled and purified by lessons having in them something that is good and noble; and charged with these thoughts, which have given to them no outward variation, he grows up discontented, a man severed from the world, out of his sphere, a dogmatist in his way and ready at any time to enforce his own crude deciphering of what is right by any means that are strong against injustice. Infinitely superior to the farm drudge in intellect, he moulds the town and makes it what it is for good or for evil. He moulds also the policy, and influences those above him as irresistibly as imperceptibly. He goes naturally against landed interest, for he has no land; he goes against authority as far as he dare, because he believes there is not a fair balance of power; and he respects governments only to the extent of their being very strong or very free. In short, he is precisely what, from physiological conditions, he must necessarily be; and any physiologist, who had emancipated himself from minute anatomy and the art of weighing blood globules, might, on hearing how the man lived and worked, predict the cast of his mind and its influence with as much certainty as an astronomer predicts an eclipse.

In Nottingham, the artisan, working all day, thinking all day, and settled on a good broad basis, has in course of time modelled the place to its advantage, and in a sense to his own. Some day he will feel himself a man amongst men; and then, the causes of his current uneasiness—many of which still exist—removed, he and his neighbours, small and great, will rise still higher in the social life.

At the present time, if we survey Nottingham through its population as an industrial town, we find that in the Superintendent Registrar's districts the inhabitants above 20 years of age admit of being divided as follows into six classes:—

Total of all Classes (43,265).

	Total.	Per cent.
Professional class	1,224	2·8
Domestic class	13,245	30·6
Commercial class	1,746	4·0
Agricultural class	686	1·6
Industrial class	24,287	56·2
Indefinite and non-productive class . .	2,077	4·8

If from this grand division of occupations we specialise the more important, keeping still to the district of the Superintendent Registrar and to persons over 20 years of age, we learn the following facts:—

Occupations.	Numbers.	
	Males.	Females.
Needle makers	61	0
Silk manufacturers . . .	178	443
Lace ,, . . .	2,118	3,892
Cotton ,, . . .	130	309
Stocking ,, . . .	2,134	1,339

To the stranger visiting Nottingham, the idea impressed upon his mind is that he is in a new town implanted upon an old one, an idea which is virtually if not literally true. There are even yet standing evidences of the feudal miseries quite independently of remains of castle and of castellated wall. There are still the narrow streets and so-called gates in the heart of the town; but so soon as you gain the outer circle everything is new and very beautiful. I know of no town the surroundings of which are so open, so picturesque, and so cheerful.

THE GENERAL AND MEDICAL CHARITIES OF NOTTINGHAM.

The charities of Nottingham are very numerous, and the stranger who visits them will be no less pleased by what he sees than by the courtesy with which he will be treated during his inspection. There are certain of our London officials who would do well to take a lesson of their Nottingham brethren in respect to the treatment of strangers. The charities to which my attention was specially directed were the Midland Institution for the Blind, the County and Borough Lunatic Asylum, the United Lunatic Asylum, and the Female House of Refuge. These may be considered the principal general charities. The purely Medical are the General Hospital, the Dispensary, the Eye Dispensary, the Union Hospital and Dispensary, and the Wellow Hospital. We may first glance at the general charities named above.

The Midland Institution for the Blind.

This institution was founded in the year 1842, at first as a smaller institution in Park-street. For years the labours of the managers were preliminary; then proper accommodation was obtained, and pupils were not only received by the day, but were boarded. In course of time Mr. Samuel Fox gave the managers a piece of ground in Clarendon-street, and a very handsome and commodious building was erected. The building is Elizabethan in style of architecture.

The arrangements of the house are exceedingly good. The workshops, in which basket-work, brush-making, chair-mending, mat-making, mattress-making, and all kinds of knitting are carried on, are the perfection of cleanliness and order. The same may be said of the dormitories and school-rooms. Indeed, throughout there reigns an order, a spirit of gentleness, and an internal peace, the sense of which requires to be experienced to be realised.

The resident pupils consist of twenty-four males and seventeen females. They come from the towns and counties of Nottingham, Lincoln, Leicester, Derby, and Oakham with the county of Rutland. They are taught reading, arithmetic, geography, and music, together with the various useful arts already enumerated.

That which tends most to relieve the cares of the blind, that which constitutes their great amusement, is music. As though by the deprivation of one leading sense the others become more acute and more readily delighted, as though the mind could feed the more by sound when light was withdrawn from it, these blind students live on the melody of sweet vibrations. This is the most touching as it is also the most happy feature of these asylums, and never did I feel the fact more strongly than at my Nottingham visit. I had passed through the establishment, had heard the lessons, examined the work, admired the cleanliness and order that prevailed, when my friend Dr. Robertson, the Honorary Physician to the charity, inquired, "Should you like to hear them sing?" An affirmative answer gave rise to instant but happy activity. We were quickly taken into the organ-room. A prelude by one of the instrumentalists was marked by exquisite touch and the purest of artistic feeling. This over, the members of the choir arranged themselves in order, and sang out some of the sweetest of songs. Now there was something gay, now something sad; anon a ballad, and more than one patriot hymn. Tennyson's words came in for a large share of attention, and Longfellow was not forgotten. But there was one short piece of local origin which, as it was sung, seemed to come from the very hearts of the choristers, was most effective. I cannot presume to give a description of the effect really produced, but those who with me share some living sympathies beyond the mere herd of pickers and stealers may gather an idea of the effect from the words. Mrs. Robertson has been so good as to obtain the words for me, and I here subjoin them. Perchance the hard critic may find scope for his railing, and may see in verbal inaccuracies of rhyme fair food for scorn, but for all that, this is the song:—

You ask of What I'm Dreaming.

You ask of what I'm dreaming,
And why my brain is scheming,
For ever to your seeming
  With gloomy thought o'ercast;
I dream of youth's hopes slighted,
Of love's sweet promise blighted,
Of manhood's pride benighted—
  I'm dreaming of the past!

I dream of vows repenting,
Of sympathies relenting,
Of bosom'd joys absenting,
  Of all that's born to fade:
Of present time, too, thinking,
The past and future linking,
My soul is wellnigh sinking
  O'er happiness delay'd!

Yet still when thus I wander,
And over bygones maunder,
On blessings left I ponder,
  Tho' all seems overcast;
And wiser for my scheming,
With brow more brightly beaming,
I waken from my dreaming,
  To smile upon the past.

The institution for the blind is managed by a committee of twelve gentlemen, being governors, a president, vice-presidents, treasurer, and an honorary secretary. All subscribers of one guinea a year are governors. There is a superintendent and matron, and teachers for the various industries. Mr. Parr, a blind gentleman himself, for many years has conducted the teaching department. The cost of maintenance averages only four shillings per week for each inmate, and for this every possible comfort is supplied—a fact from which our Poor-law guardians might take a useful hint.

The Medical wants of the little community are attended to by Dr. Robertson as Honorary Physician, and H. Taylor, Esq., as Honorary Surgeon; but the hygienic arrangements of the house are so good that Medical attendance is rarely required.

(To be continued.)

REVIEWS.

Du Rhumatisme Viscéral. Thèse présentée au Concours pour l'Agrégation (Section de Médecine et de la Médecine Légale) et soutenue à la Faculté de Médecine de Paris le 26 mars 1866. Par Benjamin Ball, Docteur en Médecine, etc. Pp. 167; pl. 2. Paris: P. Asselin. 1866.

On Visceral Rheumatism. A Thesis presented at the Competition for the Assistant-Professorship in the Division of Medicine and Medical Jurisprudence in the Faculty of Medicine of Paris. By Benjamin Ball, M.D., etc.

Dr. Ball begins this excellent thesis by a quotation from Professor Monneret's General Pathology, to the effect that fresh facts only further establish the ancient doctrine that rheumatism depends upon some principle, not indeed capable of isolation, but manifesting its existence by characteristic and well-marked effects. If, says the author, fibrous tissue is the special seat of rheumatic manifestations, we need not be surprised to meet these in all parts of the body, as fibrous, or, as it is now termed, connective tissue, is an essential part of nearly every organ. And we do see that no part of the economy can claim absolute exemption from rheumatism; we find it attacking in turn serous membranes, muscular fibre, bones, blood-vessels, nerves, and the great parenchymatous organs. Not that we possess any specific means of distinguishing, anatomically, lesions of a rheumatic origin from the results of other diseases, but we have other means of recognising their relationship. Sydenham (*Med. Obs*, sec. vi., c. v.) was the first to describe internal rheumatism, to which he gave the quaint title of "scorbutic." The present term, "visceral rheumatism," is by no means of recent coinage, as it was insisted upon at length by Boerhaave. Rheumatism, *par excellence*, that which first attracted the attention of Baillou, Rivière, and Sydenham—the acute articular, with febrile complications—the rheumatic fever of English authors—is the form which is not only the best marked, but the one most frequently followed by those visceral complications which Dr. Ball proceeds to discuss as they affect each of the great departments of the organisation. He begins with the circulatory apparatus, as it is unquestionably the favourite seat of those lesions which occur during the progress of a rheumatic attack. Although the coincidence of pericarditis, endocarditis, and myocarditis with articular rheumatism is now so well established, it is not a hundred years since (1788) David Pitcairn impressed the fact upon his pupils, and said they might call these maladies "*rheumatism of the heart.*" Nine years later Baillie published this statement in his "Pathological Anatomy;" in 1803 Wagstaffe made public a case of rheumatic pericarditis, with the autopsy; and other observers, confining themselves principally to the pericardium, confirmed the conclusions of Pitcairn. From the English school of pathology also came the views which were developed at a later period (1815) by Kreysig, suggested by Wells (1812) in a memoir, quoted by Brodie, on the vegetations found in the left ventricle, and described under the name of *carditis polyposa*. After Laennec had given the means of determining cardiac lesions during the patient's life with an exactness previously unknown, Professor Bouillaud (1836) demonstrated the habitual coincidence of cardiac inflammations with acute articular rheumatism, and invented the name endocarditis, which has been retained ever since. Dr. Ball goes most elaborately into the question of the exact proportion of cardiac complications in cases of rheumatism, and quotes the opinions of most writers of repute on this point.

Respecting the predisposing causes of cardiac complication in rheumatism, he says:—

"Le sexe féminin, l'état puerpéral, une constitution faible, un organisme débilité par les excès, par les maladies antérieures, ou par un traitement antiphlogistique intempestif, sont incontestablement au nombre des conditions favorables au développement des affections cardiaques dans le rhumatisme articulaire."—P. 17.

It was long ago observed by Sir James Simpson, whom Dr. Ball quotes, that "there exists in the blood of recently delivered women (*nouvelles accouchées*) a manifest tendency to intra-vascular coagulations, which predispose them to contract affections of the heart, especially when an efficient cause, such as rheumatism, aggravates the (existing) predisposition."—(Obst. Mem., ii., p. 68.) Another question which presents itself is—Has the *severity* of an attack of articular rheumatism much influence on the occurrence of the cardiac affection? That it has seems so likely that at first sight one would not be inclined to question it, and English authors seem to agree that it does, especially Fuller. Walshe, "sans précisément émettre une opinion," insists on the influence even slight rheumatisms have in developing affections of the heart; pericarditis, according to him, is almost always allied to some rheumatic condition; the joint pains may have been so slight and transient as to escape notice, but, as Dr. Ball has seen, distinct pericarditis has taken place which *might* have been classed as idiopathic. Without wishing to damage the doctrine of relative cardiac frequency with articular intensity and the number of joints affected, he thinks it has been somewhat exaggerated, and that "le rhumatisme *subaigu*, le rhumatisme *passager*," exercise a far greater influence than they get credit for. Rheumatism of one joint is allowed to be complicated but rarely with heart disease. This brings us to rheumatic affections which affect the heart first. Mathey, of Geneva, showed that in some cases the limbs and heart were simultaneously affected; Bouillaud ("Traité du Rhumatisme," p. 282) demonstrated this, and thus explains the occurrence of so-called rheumatic fever without affection of the joints. However, it is not rare to find persons attacked with pericarditis, but without joint-pains, who have been subjects of rheumatism at some previous time. "Mais il existe incontestablement des faits dans lesquels le cœur a été directement *la première* victime de l'influence rhumatismale."—P. 20.

In discussing the effect of cardiac inflammations on the valves, which is beautifully figured in plate ii. fig. 1, by M. Charcot, Dr. Ball puts the question whether "in endocarditis, and more especially in rheumatic endocarditis, these vegetations are of an inflammatory origin, or whether we should look on them as simple deposits of fibrin, consequent on the excess of that principle which we find in the blood of rheumatic persons, as well as on *l'inopexie* (Vogel's name for a special predisposition to the coagulation of fibrine—*ἰνός*, gen. of ἴς, and πῆξις, coagulation). That opinion, as old as Laennec, formally contradicted by Bertin and Bouillaud, as well as by most contemporary observers, has been revived of late years. Developed from a physiological and chemical point of view by Simon, adopted by Fuller, repudiated by Bellingham, it has never met with much favour in France. "Nous croyons, avec la plupart de *nos* auteurs classiques, que l'apparition de ces produits est une conséquence *de l'inflammation.* We do not find them only on the inner surface of the heart, but also on the inflamed pericardium, which has never been in contact with blood."—(P. 26.) "*Sans doute,*" says Dr. Ball, "c'est l'inflammation qui ouvre la scène." The endocardium thickens, roughens, is covered with plastic exudation, and offers resting-places, especially about the valves, for fibrinous depositions.

Independently of vegetations, the valves in some cases may be distinctly vascular. According to Luschka, vessels ramify in the mitral valve in its normal condition, but their existence in the semilunar valves is still disputed ; nevertheless, in endocarditis distinct vessels may be seen on the aortic as well as on the left auriculo-ventricular valves (pl. i., fig. 1). Dr. Ball describes the case of a washerwoman, aged thirty, who died in her third attack of acute articular rheumatism. In none had she shown any cardiac symptoms, but most of the large joints were involved, and the fever was intense. In her the vascularity of the aortic sigmoid valves was very apparent. Dr. Ball gives a minute account of the distribution of the delicate vessels, which seemed to be chiefly on the ventricular aspect of the valves.

The author now discusses the chances of cure of valvular lesions. "We may observe the physical signs and functional disturbances amend by degrees and completely disappear. Unfortunately the cure is not always permanent, and too often symptoms of insufficiency and contraction appear sooner or later." The symptomatology of cardiac rheumatism is discussed at length, then arterial and capillary embolisms as they obstruct the vessels of different organs, rheumatic nephritis being nothing else than the result of arterial obliteration dependent on heart disease.

In a second section Dr. Ball treats of pulmonary affections having their origin in rheumatism. They seem to be more common in France than England. In several cases reported by Ormerod there were found splenisation and pulmonary collapse. A case is given (p. 57) of acute articular rheumatism of middling intensity, with pneumonia supervening on the thirteenth day, abrupt resolution of the pulmonary inflammation on the third day, and rapidly fatal cerebral symptoms. The relations of rheumatism to phthisis are also noticed.

A third section treats of rheumatic affections of the nervous system, under the three heads of cerebral, spinal, and neuralgic, including chorea, hysteria, contracted extremities, tetanus and the Indian malady beri-beri, infantine paralysis, and asthma.

We wish we could do justice to the fulness and clearness with which this most important and yet little regarded class of rheumatic affections is treated by Dr. Ball. He gives an elaborate table of fifty-two cases of rheumatism of the encephalon in its meningitic form, and a second table of twelve cases of the *mania rheumatica*, and yet another table of five cases of rheumatic apoplexy.

A fourth section describes rheumatic affections of the digestive, urinary, and genital organs.

In a second division Dr. Ball treats of the visceral complications of *chronic rheumatic arthritis*, and in a third he treats of muscular rheumatism—of the voluntary muscles first, then of the womb, stomach, tongue, diaphragm, etc.

The last ten pages of the book are occupied with an instructive parallel between rheumatism and gout, as regards their visceral complications, at the conclusion of which the author (like Dr. Barclay) displays his scepticism as to the theory that the presence of uric acid in the blood is the prime cause of gout, and his unmitigated contempt for the lactic acid theory of rheumatism and the alkaline treatment.

We have said enough to show the high sense we entertain of Dr. Ball's work. Rheumatism will probably be rife after the late wet, sunless summer, and there are few Practitioners who might not add to their knowledge of it by studying Dr. Ball's thesis.

Our readers are already acquainted with Dr. Ball's researches on pulmonary embolism, and we shall look with great interest for the future works of one who has shown such sterling industry and ability, and has attained so good a position.

Albuminuria with and without Dropsy. By G. Harley, M.D., F.R.S., Professor University College and Assistant-Physician University College Hospital. London: Walton and Maberly. Pp. 61.

The little work now before us consists essentially of that portion of his lectures on Urine, published in the *Medical Times and Gazette,* which the author devoted to albuminuria. The many expressions of the value of these lectures which have reached our ears show that nothing need be said on behalf of a worker so well known to the Profession as Dr. George Harley.

The Elements; an Investigation of the Forces which determine the Position and Movements of the Ocean and Atmosphere. By W. Leighton Jordan. Vol. I. London: Longmans. Pp. 104.

A new theory of the tides and currents, aquatic and aërial, founded upon astral attraction as a substitute, or rather a name, for centrifugal force. Contains a good deal of sound sense with what we might almost call nonsense. Some parts, especially the analysis, read something like Oken's well-known Physio-Philosophy.

Atlas of Surgical and Topographical Anatomy. By B. J. Beraud. Translated by R. T. Hulme, M.R.C.S. London: Baillière. Part I. To be completed in ten monthly parts.

The Nervous System. By Ludovic Hirschfeld, Professor of Anatomy, Warsaw. Edited in English by A. M. Macdougal, F.R.C.S. With illustrations by J. B. Léveillé. London: John Churchill and Sons. Part I. To be completed in twelve monthly parts.

The above-mentioned works on anatomy have reached us almost simultaneously. It would scarcely be just to compare the one with the other, seeing that the plates are in one limited to a special department of anatomy, whilst the other includes the whole. Both are, however, beautifully got up—which the more so it would be difficult to say. One advantage the plates of Hirschfeld and Léveillé possess in their greater size, those of Beraud being so small that we fear they will not be of so much use to the Surgeon as to the student. To the latter, however, they will no doubt be of great value, furnishing a complete series of anatomical illustrations of the parts *in situ* at a cheap rate and in small bulk. We think there is room for both, and we wish them both every success.

GENERAL CORRESPONDENCE.

INJECTION OF ACETIC ACID INTO OVARIAN CYSTS.

Letter from Dr. W. H. Broadbent.

[To the Editor of the Medical Times and Gazette.]

Sir,—The results of the experiment made by Dr. Junker, for the purpose of showing the probable consequences of injecting acetic acid into an ovarian cyst, were exactly such as I should have anticipated, the conditions being given. I intend repeating it with the substitution of a portion of recent stomach for the cyst-membrane, and hoped to have done this already, but I have not had the opportunity. I will give the details next week, but I venture in the meantime to predict that the result will be similar; and it would be equally reasonable to conclude that taking vinegar as an article of diet is attended with danger to the integrity of the coats of the stomach, and involves the risk of dialysis into the peritoneal cavity, as that like consequences would attend the employment of dilute acetic acid by way of injection into ovarian cysts.

In the first place, the strength of the acid used in the experiment is altogether disproportionate to that of the acid which would act on the walls of the cyst if employed in the way I suggested. I did not, it is true, specify the degree of dilution or the amount to be injected, but I think no one will fail to see that I should begin with small quantities of weak acid, which again would be diffused in the entire contents of the cyst.

Then, also, for dialysis, fluid is required on both sides of the membrane—a condition which would be met only by the presence of peritoneal fluid—an exceptional occurrence. But, supposing the acid to diffuse into the peritoneal cavity, experiments of Dr. Richardson on the synthesis of disease with lactic acid furnish grounds for belief that no ill effects would follow. But Dr. Junker forgets entirely the important fact that during life blood is circulating in the walls of the cyst, and that the dialysis takes place into it. This would prevent alike the diffusion of the acid into the peritoneal cavity and the gelatinisation of the cyst, just as it prevents the gastric juice from digesting the stomach. The risk of peritonitis from contact of acid or rupture of the sac would thus not arise. On the other hand, the acid injected into the cyst would be gradually taken up by the blood-vessels, slowly because of its admixture with so much organic matter, for which it has affinity. Dialysing through the inner layer of the cyst towards the blood, it would have on them, and only on them, an effect analogous to that described by Dr. Junker; and as these secrete (so to speak) the fluid contents, and retain more or less of the cellular character, it seems probable that the change of structure produced would modify their nutrition, and arrest their activity.

If a favourable opportunity offers, I shall certainly put this hypothesis to the test of experiment; and though I should take all precautions for the safety of the patient, I should entertain no fear of the consequences predicted by Dr. Junker.

I am, &c. W. H. Broadbent.

Upper Seymour-street, November 20.

THE QUESTION OF A MEDICAL DEFENCE FUND.

Letter from Dr. Richardson.

[To the Editor of the Medical Times and Gazette.]

Sir,—Your article on the trial of Absolon *v.* Statham in the last number of your journal leaves nothing that could be honestly and properly spoken in regard to that particular case. But the suggestion you make for the organisation of a defence fund is one to which I feel bound, at present at all events, to object. The suggestion, I know, is supported by many members of the Profession whose opinion is of value, and after the case of Rudman *v.* Armstrong, it was formally proposed to me to organise such a fund. I objected then, as I object now, to the proposition, and for the following reasons:—

(*a*) The fact of the fund would only make scoundrel lawyers more vicious. If a known and public bank were under their noses holding costs safely, they would be ever assailing it when they wanted a new and promising speculation.

(*b*) If the fund were established, every member who joined it would naturally claim its protection. This might act injuriously in two ways: it might make some such members unduly careless in the performance of their highest duties, and it might pledge other members to support defences which they would consider undeserving of support.

(*c*) The fund, I believe, would not be sustained by the *personal* influence of the best men in the Profession.

(*d*) Lastly, the fund is not necessary. My experience of cases of prosecutions of Medical men is to the effect that, whenever there is a clear case of injustice, there are always plenty of good and hearty men ready to come forward at once with their moral and their substantial support. I have taken part in the organisation of many defence committees after such prosecutions, and more than once have known the sum of money raised on a first call to exceed the requirement. Already in Mr. Statham's case there is a large and powerful committee, including Physicians, Surgeons, Dental Surgeons, and laymen, in full operation.

You will pardon, Sir. I am sure, one of your oldest contributors for writing thus in opposition to your views—views always just, thoughtful, and in advance; and I hope the Profession will feel that I could not say anything that should be contrary to its best interests. I have expressed simply what I earnestly feel, and for one I am quite open even to take action on your side, if you, by force of better argument, can first bring to me the conviction that you are right.

I am, &c. B. W. Richardson.

12, Hinde-street, W., November 21.

⁂ We suppose that the managers of such a fund would not pledge themselves to defend every man indiscriminately, whilst really deserving cases would be better and more economically defended than at present.

"GOUT IN THE STOMACH"—"RISING OF THE LIGHTS."

[To the Editor of the Medical Times and Gazette.]

Sir,—What did our fathers and grandfathers mean by death from "gout in the stomach?" People are never said to die of it now-a-days; but the term was commonly employed down to the early part of the present century. A person who had long suffered from gouty inflammation in the joints, such as one is still familiar with, was suddenly attacked with severe internal pain, and after a few hours died. The gout, it was said, had "flown to the stomach." Now, what really happened in these cases? How would such fatal attacks be named at the present day? Were they really cases of spasm of the heart?

And what was the "rising of the lights," which used to figure in the bills of mortality as a fatal disease? So late as the year 1814 I find it mentioned as a cause of death. There must be Practitioners still living who recollect being called in to treat such a malady, and they could tell us what this rising of the lungs, or lights, really was. I can remember hearing the term used by nurses when I was a child—forty odd years ago. Among this class of persons perhaps it lingers still.

I am, &c.

November 21. J. D.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, November 13, 1866.

Dr. James Alderson, F.R.S., President.

Mr. T. Spencer Wells reported

A CASE IN WHICH OVARIOTOMY WAS TWICE SUCCESSFULLY PERFORMED ON THE SAME PATIENT.

The author commenced by alluding to three cases in which ovariotomy had been performed twice on the same patient. The first was by Dr. Atlee, of Philadelphia, sixteen years after the previous operation by Dr. Clay, of Manchester. The second was by the author, nine months after an operation by another Surgeon. The third was by Dr. F. Bird, fourteen years after one of his own operations. The first case was successful. The second and third were not. The case now related is believed to be the first in which ovariotomy has been performed successfully twice on one patient by the same Surgeon. In this case the author removed the left ovary of an unmarried woman, twenty-four years of age, in February, 1865. The tumour weighed twenty-nine pounds. The right ovary was then healthy. The patient recovered, and remained well more than a year. But, in about fifteen months, disease began in the right ovary, and advanced so rapidly that ovariotomy was performed for the second time eighteen months and a half after the first operation, and a tumour, weighing eighteen pounds, was removed with complete success. A full account of both operations was given, with a description of the tumours removed; and some remarks were added upon the comparative frequency of disease in one or both ovaries, and upon the appearance of disease in one ovary after the other had been removed. The author showed that the right and left ovaries are found diseased with equal frequency; and that in from one-third to a half of the cases where the disease has gone on to its termination in death, *both* ovaries are diseased. But he asserted that both ovaries are affected in much smaller proportion in the earlier stages of the disease. In the first 150 cases in which he performed ovariotomy he only removed both ovaries in seven, and in only three others was disease in an early stage suspected in the ovary not removed. In three the ovary not removed, but examined and found healthy, had become diseased afterwards. In two of these cases the disease was malignant. The rule appears to be established that after a successful ovariotomy the patient is restored to good health; and although there are occasional exceptions to this rule, it is satisfactory to know that if the remaining ovary should become diseased, the first operation need not add much to the difficulty of the second; and that of four cases in which a second ovariotomy has been performed, two have proved successful.

Dr. Althaus said the paper was a very important one, and the case was a great triumph to Surgery. He spoke of a Surgical feat almost as remarkable as the author's. A woman had been successfully operated on five times for Cæsarian section. Dr. Althaus asked Mr. Wells whether he thought Cæsarian section or ovariotomy the more formidable operation.

Mr. Baker Brown said that the case just narrated was important in many points of view. First, the actual cautery was used to the pedicle; secondly, it shows the inconvenience of securing the old pedicle by a clamp; the old pedicle was adherent to the abdominal walls. It was this very adhesion of the pedicle to the abdominal wall which caused him to discontinue the use of the clamp and to substitute the actual cautery to the pedicle, as first applied by Professor Clay, of Birmingham, to adhesions. Thirdly, it shows that the use of a clamp to the pedicle often resulted in its adhesion to the abdominal walls—a result which he had found extremely inconvenient in many cases. Mr. Brown said the case also taught the necessity for charity to our Professional brethren, as he (Mr. Brown) had been censured with regard to the first case now mentioned by Mr. Wells for having overlooked disease in the second ovary at the time of operating successfully on the first. Mr. Baker Brown, after passing an eulogium on the late Mr. Walne, who first performed ovariotomy in London, and who suffered severe censures from the opponents of the operation, said he hoped a Physician celebrated for his violence against this operation, and indeed against most other innovations, would really be taught that ovariotomy must now be looked on as a legitimate operation, recognised and practised by almost every Surgeon in London, and that he would no longer discredit our Profession by urging friends of sufferers not to allow them to submit to operation. Mr. Brown said that whilst giving every credit to Dr. Clay, of Manchester, who had been our pioneer in this country, credit was due to Professor Clay, of Birmingham, for the introduction of the actual cautery, and he (Mr. Brown) took credit to himself for adapting the actual cautery to the treatment of the pedicle; and by himself and others, as Mr. Samuel Hey, of Leeds, and Mr. Harper, it was found to be peculiarly successful. In his own hands, in less than two years, out of forty-one successive cases since he had used actual cautery, he had had thirty-six recoveries and only five deaths, and in all those five he had been obliged to use ligatures.

Dr. H. G. Wright asked whether it had happened in Mr. Brown's experience that so soon as the clamp was loosened the vessels of the seared pedicle burst out bleeding.

Mr. Brown replied that this had occurred.

Dr. Wright observed that it appeared that the employment of the actual cautery always implied the occurrence of subsequent hæmorrhage as a possible contingency—a point which Mr. Brown had neglected to mention when speaking of the use of the hot iron for burning through the pedicle.

Mr. Solly asked what statistics Mr. Brown had obtained, reckoning all cases.

Mr. Brown said that his results stood at present thus:—Completed cases, 107, with 72 recoveries and 35 deaths; whilst of incompleted cases and partial extirpation, 15 cases, only 3 recovered, and 12 died; and of 10 cases of exploratory incisions, where no further steps were taken, 6 recovered and 4 died; showing 132 cases in all, with 81 recoveries and 51 deaths. Mr. Brown said he had seen several cases where the second ovary was diseased with cystic growths, and that he had in most of them cut or burnt through the cysts, so as to empty them of their contents, and those cases did well. Mr. Brown was surprised to hear that in cases where actual cautery was used there had occurred, some weeks afterwards, peritonitis and death; in no one of his cases had there been any bad subsequent results; on the contrary, the patients were well in six or seven days, outside their beds, and made a rapid recovery—much quicker than by other modes of operation. Mr. Brown said he had now abandoned the clamp outside the wound, and either used the actual cautery or the long ligature of Dr. Clay.

Mr. Philip Harper (after thanking Mr. Wells for the valuable and highly important paper which had just been read) was very desirous to place upon record his own experience in the use of the actual cautery as a means of dividing the pedicle in ovariotomy. He had had many opportunities of observing its great value, for, in addition to the cases in which he had seen Mr. Baker Brown use it, he had resorted to it many times in his own practice, and the conclusion to which he had arrived was that in a large proportion of cases it was an unfailing means of preventing hæmorrhage, and conduced to the rapid recovery of the patient. He was surprised to hear that Mr. Wells had met with two cases in which some time subsequently peritonitis had come on and was imputed to the use of the cautery. It was the first time such effects had been brought to his notice, and he must conclude that they were dependent upon some constitutional peculiarity or accidental circumstance, more probably the latter. There were certain points in the use of the cautery which must be prominently brought forward. The character of the pedicle was of great importance. In some cases it was large and thick, and its vessels, though numerous, were moderate in size. In these cases the cautery was *always* efficient. In other cases the pedicle was broad and thin, supplying a tumour of simple secondary multilocular character, and with vessels of medium size. Here the cautery was *generally* efficient. In other cases the tumour was extremely multilocular, colloid or adenoid in type, and the pedicle thin and small, with one or a couple of vessels the size of the femoral or larger, and here the cautery *would not be* efficient. However carefully used, upon the removal of the clamp sharp bleeding arose. In a lady upon whom Mr. Harper operated a year ago the tumour was of this character, and the pedicle contained one large artery, which poured forth a large stream of blood upon the removal of the clamp. It was seized, a ligature passed around it, tied tightly, and the ends cut off closely. The pedicle was allowed to fall back into the pelvis. The lady made a rapid recovery, and was still in robust health. In another case there was a large artery at each side of the pedicle, which it was necessary to tie separately, and recovery was perfect. Another important point was that in burning through the pedicle it must be done slowly and without any sawing or half-cutting movements. The clamp must be removed very slowly, and the cauterised surface should not be touched even with the fingers, but allowed quietly and gently to drop into the pelvis. There were some other points which experience had taught were important, but not equally so with these. Mr. Harper must express his strong conviction that ovariotomists owed a debt of gratitude to Professor Clay for the application of the actual cautery to adhesions, and to Mr. Baker Brown for another advance and applying it to the pedicle. High as was the value to be attached to the simple clamp in certain cases, Mr. Harper believed that the cautery would entirely supersede it in the great majority of cases, and that the more its value was tested, the greater would be the reliance placed upon it, the more rapid and satisfactory the recovery of the patient, and, most important of all, the death ratio after the operation would be materially lessened.

In reply to Mr. Spencer Wells, Mr. Harper said that he had twice tied vessels after the use of the cautery in eight cases.

Dr. Routh would not have spoken on the subject but for Dr. Wright's remarks. He had been present now at over 200 cases of ovariotomy, complete or incomplete. He had seen very many operations of Mr. Brown, of Mr. Wells, and other London operators, as well as had operated himself. He must say, therefore, speaking from no small experience, he believed no system was so good and so safe as the actual cautery. An attempt was made to disparage the actual cautery because ligatures had to be used sometimes in addition. But ligatures were sometimes necessary even when the clamp was adopted. Moreover, what objection could be made to using a small silk or wire ligature where an artery in the pedicle was found very large? Where, however, the arteries were of the size of the radial or ulnar, the actual cautery quite sufficed; if as large as the femoral, it was safer to apply also a small ligature. No one would think of trusting to actual cautery in an artery as large as the femoral elsewhere. Again, in some cases, as in very fat subjects, it was inadmissible, the fat taking fire on the application of the red-hot iron. Mr. Wells had done well if by the clamp he managed to get his patients convalescent and able to enjoy a chop by the thirteenth or fourteenth day; but if the same result could be obtained on the sixth and seventh when the actual cautery was used this was a better cure. He had never seen or heard of any of those unfortunate results mentioned by Mr. Wells where the actual cautery was used after apparent recovery, and all he could say was that, using the *argumentum ad hominem*, if he had a relative affected with ovarian disease he would insist on the operator using first the actual cautery. Besides, he could conceive that a woman on whom ovariotomy had been performed and the clamp used might suffer in her pregnancy by the impediment in the way of its development offered by a pedicle adherent to the abdominal walls, and in Mr. Wells' case the operation was rendered more difficult, he admitted, by this very adherent pedicle, which would not have been the case if in the first ovariotomy he had used the actual cautery.

Mr. Spencer Wells, in reply to the question of Dr. Althaus, said that a second Cæsarian section performed on the same patient was not, like a second ovariotomy, more difficult or hazardous than the operation performed for the first time; on the contrary, it was a very much simpler proceeding. A Cæsarian section performed for the first time was a much more fatal operation than a first ovariotomy; but as the opening in the uterine wall often—perhaps generally when sutures are not used—remains unclosed, and the edges of the opening adhere to the abdominal wall, operators who had performed Cæsarian section twice or more on the same patient found that they had little more to do than cut through the integument and take out the child without any second opening of the uterus. He considered the observations made by Mr. Harper as to the use of the cautery of great practical value. Of eight cases in which this Surgeon had used the cautery to the pedicle, ligatures had also been required in two, or in one-fourth of the cases. This was about the proportion in which he (Mr. Wells) had also found the cautery ineffectual in completely suppressing hæmorrhage. He, nevertheless, thought it a valuable addition to our means of dealing with short thick pedicles, to which the clamp is not suited; but he very much preferred the clamp where a pedicle is small and long, so that its separation and all subsequent changes may go on outside the peritoneal cavity. He had seen two instances in which patients, after apparently recovering and going home three weeks after ovariotomy—the cautery having been used—had soon afterwards been attacked by peritonitis. One of these attacks had proved fatal, and Dr. Sutton, who examined the body, found very extensive adhesions of the intestines to each other and to the remains of pedicle. It was true that all this might be quite unconnected with the use of the cautery, as chronic peritonitis had existed before the operation; but he could not help thinking that there was some such connexion, as he had seen unpleasant effects in other cases where the ligature had been used and left within the peritoneum. He had never seen any such ill effects when the pedicle had been secured by the clamp, or the *extra-peritoneal* method had been carried out either by the clamp or ligature. The objections raised to the clamp on the ground of any interference with pregnancy or parturition must be imaginary or exaggerated, as ten of his patients had borne living children after ovariotomy—two of them had two children—and he had not heard of any unusual suffering or difficulty either during pregnancy or labour in any one of the cases.

WESTERN MEDICAL AND SURGICAL SOCIETY.

Friday, October 19, 1866.

Dr. Fuller, President, in the Chair.

The first ordinary meeting of the twenty-first session was held this evening. After a few words in connexion with the Society, the President made some observations

ON CERTAIN POINTS IN CONNEXION WITH CHOLERA.

Dr. Fuller began by expressing his belief that the outbreak of cholera which had occurred this year was only the prelude to a more severe and general epidemic of the disease next year. He grounded his opinion on the fact that in former epidemics the force of the malady had not been felt until the second year, and that although its influence had this time been chiefly in certain districts, still sporadic cases have shown themselves over the whole metropolis, and notwithstanding the cold weather it has spread over the whole kingdom in some cases with great malignancy; hence he drew the inference that the seeds of a virulent form of cholera are widely sown, and only require a certain atmospheric condition to develope it into an epidemic. Concerning the various theories of cholera, Dr. Fuller believes that the existence of a distinct *materies morbi*—a cholera germ, probably of fungoid origin—is alone capable of explaining the facts of cholera, such as its occasional sudden outbreaks, over at times a vast extent, over at others one of small area; its predilection for low and unhealthy localities; the immunity of localities above a certain level; the differences in its period of incubation; its uniformity of duration as an epidemic in any locality; its spread at times with, and at times in the teeth of, the wind; and also its apparent communicability by contagion in one case and not in another. He showed also how forcibly the experiments of Dr. Salisbury Flint and others in America pointed to the fungoid origin of ague and other en- and epi-demic diseases, which researches render it probable that all so-called zymotic epidemics have a fungoid origin. Dr. Fuller then, from well-attested facts, argued the question of the contagion of, and of quarantine for, cholera. With but few exceptions, experience shows us that, in the vast majority of cases, cholera does not evince a contagious character. The admitted failure of quarantine to arrest its progress is to the point. The sudden way in which a town may be affected without the disease being traceable to any human agency of contact, and the way ships may be attacked which have not touched land for weeks, shows how the atmosphere may be the means; also how one town may be full of cholera very near another which has none, notwithstanding hourly communication of people between them. Quarantine will not, therefore, stop cholera when due to an epidemic state of the air, nor will it when not due to that state of air; for cholera has no tendency to spread when proper sanitary precautions are observed. Dr. Fuller then proceeded to discuss the influence of sanitary arrangements in the case of cholera, and chiefly dwelt upon the agency of water. It is impossible to doubt the influence of defective drainage, of the emanations from sewers, gaseous exhalations from all kinds of decomposing filth, of impure water, of overcrowding, bad ventilation, and all other agencies of that kind, in promoting the spread of the disease; nor can one doubt but that intemperate habits, deficiency of food, depressing passions, etc., do so likewise, partly by lowering nervous power, and so lessening the resistance of the system to its poison, and partly by giving rise to a congenial nidus for the development of the cholera germ. Great praise is therefore due to all those who have exerted themselves in promoting sanitary measures during this epidemic, such as removing nuisances, procuring pure water, good ventilation, etc. All these measures will diminish the spread and the severity of the disease, but will not always attack the true cause of cholera. According to some, cholera is alone due to defective drainage, to others alone due to the water supply, but trustworthy cases have shown how some people have had the cholera never having drunk of the accused water. According to Dr. Fuller's experience, foul water acts, not by introducing the excreta of cholera patients, but as a vehicle for taking in the *materies morbi* it has received from the air, and also by lowering the system through its power to derange the stomach, etc. A purer water supply, as also other preventive sanitary measures, do good in some ways; but, however good, they have little if any influence in checking the progress and duration of the disease. The decline of the disease is often attributed to these so-called preventive measures, rather than, as it ought to be, to the natural decline of the disorder. The natural history of cholera shows that, as an epidemic, its duration is usually limited to three or four months, nor has stamping out diminished this period. The essential cause of cholera must be sought for elsewhere than in neglect of hygienic measures.

NEW BOOKS, WITH SHORT CRITIQUES.

Homœopathy and Hydropathy, etc. (*sic*). By Dr. E. Lee. Fourth edition, revised. London: John Churchill and Sons. Pp. 229.

*** The third volume from the pen of this indefatigable writer which has passed through our hands within a few weeks. We fear we can only reiterate the query we shortly before made as to another work on the same subject—*cui bono?*

An Essay on Dew. By William Charles Wells. Edited, with Annotations, by L. P. Casella, and an Appendix by R. Strachan. London: Longmans. Pp. 152.

*** A reprint of this famous essay has long been a desideratum. The present edition supplies it in an elegant and highly readable form, with the further advantage of adding to it some of the later results obtained by meteorological science, of which it may be said to have laid the foundation. The appendix also contains some valuable information.

Club Foot: its Causes, Pathology, and Treatment.—The Jacksonian Prize Essay. By William Adams, F.R.C.S., Surgeon to the Royal Orthopædic and Great Northern Hospitals. One hundred illustrations. London: John Churchill and Sons. Pp. 422.

*** A thorough treatise on the subject, by an author who has devoted much of his time to the investigation of this class of complaints. Beautifully illustrated and got up. Will be a valuable addition to the library of the practical Surgeon.

Photographs of Diseases of the Skin. By A. B. Squire, M.B. Second Series. Nos. 4, 5, and 6. London: John Churchill and Sons.

*** The three photographs now before us—viz., of keloid attacking a syphilitic scar, acneiform syphilide, and another illustration of lupus exedens—maintain the high character of the former plates of this series.

Fecundity, Fertility, Sterility, and allied Topics. By Matthews Duncan, M.D. Edinburgh: Adam and Charles Black. Pp. 378.

*** In the volume before us we have the collected results of all this well-known author's observations. Some of them have been published before, but being in journals not accessible to the mass of our Professional brethren, their collection in the present volume will be all the more welcome. By fecundity the author implies a capacity for childbirth as indicated by the possession of the conditions necessary for childbirth, but entirely without reference to the number of children born, which he refers to the head of fertility. Considering the interest which the subject has recently been exciting, we doubt not that the present contribution will be favourably received.

Do Small-pox and Cow-pox afford any Protection from Asiatic Cholera? By Ambrose Blacklock, Surgeon-Major H. M. Madras Army. London: H. K. Lewis.

*** From observations made in India, the author is inclined to answer the above inquiry in the affirmative.

Illustrations of Dissections. By Professor Ellis and G. H. Ford, Esq. Parts XXII. and XXIII. London: Walton and Maberly.

*** Two additional parts of this already well-known work. The plates exhibit the anatomy of the superficial parts of the thigh, and are of the same valuable character as those already noticed.

An Outline Sketch of Rainfall Investigations from 1677 to 1865. By G. J. Symons, Member of the British and Scottish Meteorological Societies. Reprinted from the Report of the British Association. 1865.

*** An outline of the history of the rainfall in this country from the date above referred to; highly interesting in itself, and especially so to those of our Medical friends who have taken to meteorological pursuits.

On the Relative Weight of the Brain and Outward Form of this Organ in relation to the Intelligence of the Animal; with other Papers. By Edward Crisp, M.D. From the Report of the British Association. 1865.

*** Valuable and laborious researches by a member of our Profession into the structure of some of the members of the animal kingdom.

On Exuberant Growth of the Tonsils. By James Yearsley, M.D. London: John Churchill and Sons. Pp. 64.

*** Reprinted from the author's larger work on "Throat Ailments."

Observations on the Military Hospitals of Dresden. By Alexander Bruce, M.D., F.R.C.S., Curator of the Anatomical Museum, University College. London: H. K. Lewis. Pp. 51.

*** This paper, without the appendix, originally appeared in the columns of a contemporary, and is a valuable addition to our knowledge of the Surgery of the recent war from the pen of a well-educated and highly intelligent English Surgeon. It is illustrated by a variety of engravings, chiefly of pathological specimens, and an appendix on the Surgery of the American War.

MEDICAL NEWS.

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UNIVERSITY INTELLIGENCE.—UNIVERSITY OF LONDON.—The following is a list of Candidates who passed the recent Second M.B. Examination:—

Pass Examination.

First Division.—Francis Bateman, St Bartholomew's Hospital; Francis John Buckell, University College; Stephen Wootton Bushell, B.Sc., Guy's Hospital; Henry Clothier, University College; Thomas Cole, St. Bartholomew's Hospital; George Eastes, Guy's Hospital; John Spencer Ferris, King's College; Ralph Gooding, B.A., King's College; Henry Greenway Howse, Guy's Hospital; John Pearson Hughes, University College; Chas. Kelly, King's College; Frederic Barham Nunneley, University College; Charles William Philpot, B.Sc., King's College; Thomas Claye Shaw, B.A., King's College: George Owthwaite Spencer, University College; John Kent Spender, King's College; George Christopher Tayler, St. Bartholomew's Hospital; Arthur Taylor, Guy's Hospital; Richard Thorne Thorne, St. Bartholomew's Hospital; John Burges Welch, King's College; John Williams, University College.

Second Division.—John Augustus Ball, Guy's Hospital; Clement Smith Barter, St. Bartholomew's Hospital; Julian Augustus Michael Evans, University College; John Grimes, B.Sc., King's College.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the Diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 15th inst., viz.:—

Messrs. Alexander Paterson, Edinburgh; William James Guthrie, Bedford, Sydney (King's College); John Frederick Plomley, L.R.C.P. Edin., Maidstone (King's College); Thomas William Jewison, Leeds; Henry Moon, Tottenham (Guy's); Robert Robinson, L.S.A., Preston (St. Bartholomew's); John George Randall, Portman-street (St. Mary's); William Brown Holderness, Windsor (St. George's). William Keen, King's-road, Chelsea (St. George's); Thomas Edward Stainthorpe, Hexham, Northumberland (Middlesex); George Frederick Maberly, Sudbury, Middlesex (St. Bartholomew's); John Green, Hull; William Appleton Creaser, Market Weighton, Yorkshire; Stammers Morrisson, Launceston, Tasmania (University College); William Naughtin, Tralee, Co. Kerry (Charing-cross); Alfred Trubshaw, Liverpool; and Richard Harris, Ashburnham-grove, Greenwich (Guy's).

The following gentlemen were admitted Members on the 16th inst., viz.:—

Messrs. Alexander Dyce Davidson, M.B. and M.C. Univ. Aber., Aberdeen: Thomas Howard Brocklehurst, Manchester (London); Thomas Docking, Sydney (University College); William Swan, B.A. Oxon, Lincoln (St. Bartholomew's); Charles Howard Orfeur, Norwich (King's College; William Fox Branch Pollard, Demerara (King's College); John Guest, Manchester; George Anderson Canton, Great Marlborough-street (King's College); Charles William Philpot, Cragdare (King's College); William Abbot Daniel, Ramsgate (St. Bartholomew's); Arthur Tudor Humphreys Trevor, Bangor (King's College); John Jefferson, Lisburn, Co. Antrim; and Frederic Andrew Allan, Newcastle-on-Tyne.

At the same meeting of the Court, Mr. John Noble, L.S.A., of her Majesty's ship *Cumberland*, stationed at Sheerness, passed his examination for Naval Surgeon. This gentleman had previously been admitted a Member of the College, his diploma bearing date August 4, 1852.

APOTHECARIES' HALL.—On Thursday, November 15, the following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise:—

John Davies Thomas, Bryn-villa, Swansea; Thomas Harrison Tidswell, Spalding, Lincolnshire.

The following gentlemen also on the same day passed their First Examination:—

Walter Wm. Inglis, St. Thomas's Hospital; Alex. Fox, London Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

DRUMMOND, Mr. A., has been appointed Resident Surgeon-Accoucheur to the Birmingham General Dispensary.

FOX, CHARLES JAMES, M.R.C.S., L.D.S., has been elected Assistant Dental Surgeon to the Dental Hospital of London, Soho-square, vice Mr. J. Walker, M.R.C.S. and L.D.S., resigned.

FRYER, Dr., has been appointed Assistant House-Surgeon to St. Mary's Hospital, Manchester.

LLOYD, R. R., M.R.C.S.E., has been appointed House-Surgeon to the Peterborough Infirmary.

McDONNELL, ROBERT, M.D., F.R.S., F.R.C.S.I., has been elected one of the Surgeons to Steevens' Hospital, Dublin, in the room of the late Mr. Symes.

NANKIVELL, A. W., F.R.C.S.E., L.R.C.P. Lond., has been appointed House-Surgeon to St. Bartholomew's Hospital, Chatham.

RICHARDS, J. P., M.R.C.S.E., has been appointed Assistant Medical Officer to the Devon County Hospital.

THORBURN, J., M.D., has been appointed Lecturer on Midwifery and Diseases of Women and Children at the Manchester Royal School of Medicine and Surgery.

BIRTHS.

DAVIDSON.—On November 19, at 28, Stafford-street, Edinburgh, the wife of Dr. R. H. Davidson, of Culross-park, Deputy-Inspector of Hospitals, Bombay Army, of a daughter.

EARLE.—On November 4, at Weston-super-Mare, the wife of E. Earle, M.R.C.S.E., of a son.

EASTON.—On November 16, at 20, Connaught-square, the wife of W. J. Easton, M.D., of a daughter.

FRODSHAM.—On November 19, at The Chesnuts, Streatham, the wife of J. M. Frodsham, M.D., of a son, stillborn.

HOLMAN.—On November 20, at the Royal Dockyard, Devonport, the wife of J. R. Holman, M.D., of a daughter.

JONES.—On September 19, at Dynevor House, Hyde-park, Sydney, New South Wales, the wife of P. Sydney Jones, M.D., of a daughter.

McDONALD.—On November 8, at Maryhill, Glasgow, the wife of Dr. W. McDonald of a son.

OWEN.—On November 12, at Totnes, the wife of T. E. Owen, M.R.C.S.E., L.S.A., of a son.

PICKTHORN.—On November 19, at Aberdeen, the wife of T. R. Pickthorn, Esq., Staff-Surgeon H.M.S. *Saturn*, of a daughter.

WILBE.—On November 14, at 24, Queen's-road, St. John's-wood, the wife of R. H. Wilbe, M.D., of a son.

MARRIAGES.

DAVIDSON—BROWN.—On November 15, at Kingsley, Hants, W. A. Davidson, M.D., Surgeon 65th Regiment, to Anne Emily, only daughter of the late G. Brown, Esq.

SMITH—THISTLE.—On November 14, at the parish church, Whitby, J. W. Smith, M.R.C.S.E., L.R.C.P., of Coxwold, to Martha Anne, eldest daughter of T. Thistle, Esq., of Whitby, Yorkshire.

DEATHS.

ARTHUR, JAMES, L.R.C.S. Edin., at Balcastle, on October 29.

FILSON, A. B., M.D., at Portaferry, County Down, Ireland, on October , aged 69.

HUTCHINSON, C. F., L.K. and Q.C.P.I., Staff Assistant-Surgeon 23rd Regiment, at Jubbulpore, on September 12, aged 28.

IBESON, R., M.R.C.S.E., of Barnsley, Yorkshire, on September 26.

ROBERTSON, JOHN, M.D., at Argyle-street, Rothesay, on November 11.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Ampthill Union.—Mr. J. F. Williams has resigned C District; area 7671; population 2861; salary £50 per annum.

Banbury Union.—Mr. Thomas J. Fitzpatrick has resigned the Hornton District; area 9740; population 3062; salary £61 8s. per annum.

Cerne Union.—Mr. Glover has resigned the Western District; area 17,834; population 3216; salary £70 per annum.

APPOINTMENTS.

Isle of Wight Union.—Herbert Taylor, M.D. Edin., M.R.C.S.E., to the Yarmouth District.

Knighton Union.—Thomas A F. Scott, M.R.C.S.E., L.M., to the Knighton District. Charles J. Corenton, M.R.C S.E., L.R.C.P. Edin., to the Beguildy District and the Workhouse.

Reigate Union.—Arthur Kelsey, M.R.C.S.E., L.S.A., to the Northern District and the Workhouse.

ST. JAMES'S PALACE, November 9.—Consequent upon the resignation of Henry Brown, Esq., the Queen has been pleased to appoint James Ellison and Thomas Fairbank, Esqs., jointly, to be Surgeon and Apothecary to Her Majesty's Household at Windsor.—*From the London Gazette, Tuesday, November* 20.

THE QUEEN *v.* THE TREASURER AND GOVERNORS OF ST. BARTHOLOMEW'S HOSPITAL.—(Court of Queen's Bench, Westminster, November 12. Sittings in Banco.) This was a *mandamus* to the governors to admit Alderman Rose to the office of president. The question was whether it was necessary that the president should be an alderman who had arrived at the dignity of Lord Mayor—or, at all events, an alderman. Judgment was given for the defendants—that is, for the Hospital. The result of the decision is that the governors of the great Hospitals have free choice in the election of their presidents.

CHOLERA IN SCOTLAND.—In 1832, Epidemic cholera broke out in Scotland towards the end of January, and then followed the law which seems to regulate its progress in all the warmer countries of the Continent—viz., increased with the rise of temperature, proved most fatal in the autumnal months, and died out in December. In its subsequent attacks, however, it followed in this country a different law—the law which seems to regulate the spread of fever and most of our epidemics—viz., it first manifested itself in the autumn, as the weather began to cool, increased with the fall of temperature, and died out in spring on the advent of the warm weather. It is well to be aware of these facts, lest we commit the mistake of trusting that the cold weather will arrest its course, while we neglect to employ those sanitary means which science has proved materially check its ravages.—*Scottish Registrar-General's Report.*

COLLEGIATE EXAMINATIONS.—It is stated that at the examinations for the diploma of membership of the College of Surgeons, which took place on the 13th, 14th, 15th, and 16th instant, and when eighty-eight candidates presented themselves, that no less than *twenty-one* failed to acquit themselves to the satisfaction of the Court, and were consequently referred to their Hospital studies for the full period of six months. The Professional examinations for the Fellowship of the College took place on Tuesday, Wednesday, and Thursday last, when twelve candidates presented themselves—viz., six seniors and six juniors. The following questions on Anatomy and Physiology were offered to both senior and junior candidates, viz.:—1. The whole of the pectoralis major being removed, mention the various parts exposed, and their relative position. 2. Describe the structure of the cortical part of the kidney. Describe also the urine of a healthy person, including its average daily quantity, specific gravity, chemical composition, and the principal diurnal changes it undergoes. Explain the influence which the excretion exercises in maintaining the health of the system. 3. Describe the course of the blood in the fœtal circulation; and state the physiological reasons for its peculiarities. 4. Describe the appendages of the eye, and their several uses. 5. Describe the structure and functions of the medulla oblongata. 6. What is "accommodation" of the eye? Give proof of its existence. State the changes which occur in the eye during the act of "accommodation," with the methods by which they are ascertained. Mention also the most probable explanation of its mechanism; and the evidence on which the explanation is founded.—On Wednesday the junior candidates had to dissect, and on Thursday the questions on Pathology and Surgery were submitted.

THE CASE OF MR. STATHAM.—At a meeting of the Medical and Dental Professions, held in the rooms of the Literary and Scientific Institution, Edwards-street, Portman-square, at 4.30 p.m., on Tuesday, November 20, 1866, Dr. Richardson having been called to the chair, it was proposed by Mr. Erasmus Wilson, seconded by Dr. Cholmeley, and carried unanimously—"That this meeting expresses its warmest sympathy with Mr. Statham, and its entire approval of his practice in the treatment of the plaintiff Absolon; and that it looks upon actions of this nature with the extremest anxiety, as tending to embarrass every Practitioner in the conscientious performance of his duties." Mr. Gant, one of the witnesses at the trial, spoke warmly in support of the resolution. It was then proposed by Mr. Clover, seconded by Mr. Walker, and carried unanimously—"That this meeting do form itself into a General Committee for considering the best method to be taken to sustain Professional honour in the person of Mr. Statham, and that the following gentlemen—Dr. Anstie; S. Bailey, Esq.; Dr. Buzzard; Dr. Cholmeley; C. J. Fox, Esq.; W. A. Harrison, Esq.; Christopher Heath, Esq.; R Hepburn, Esq.; G. A. Ibbetson, Esq.; G. Laurie, Esq.; Dr. Leared; W. H. Michael, Esq.; Dr. Richardson; Arnold Rogers, Esq.; C. Rogers, Esq.; Edwin Saunders, Esq.; and Erasmus Wilson, Esq.—constitute an Executive Committee to consider—1. Whether it be advisable to raise a fund to defray the legal expenses of Mr. Statham, or otherwise to make him an honourable recompense. 2. Whether it be well to move for any new action in the case, and, if necessary, take opinion of counsel. 3. Whether to draw up a statement inviting the attention of the public to the present unsatisfactory and dangerous relationship between Professional men and their patients, based on the recent vexatious trials for malpraxis. 4. Whether it would be advisable to take steps for the organisation of a defence fund." Proposed by Mr. Harrison, seconded by Dr. Sansom, and carried unanimously—"That Dr. Richardson be requested to act as chairman; Arnold Rogers, Esq., as honorary treasurer; and Charles James Fox, Esq., as honorary secretary to the Committee." Proposed by Dr. Buzzard, seconded by Mr. Kempton, and carried unanimously—"That the Executive Committee be empowered to call the next meeting of the General Committee, and to invite to the meeting every gentleman who may wish to take part in the proceedings."

LOCAL ANÆSTHESIA APPLIED TO VETERINARY SURGERY.—Professor Tewson gives the following cases:—*Case* 1.—Brown mare, of very nervous temperament. Suffering from bursal enlargement in front of the off fore knee, which was fired in forty spots after the local application of anæsthesia. The mare was not cast, neither was the near fore leg removed from the ground; in fact, her legs were perfectly free. The mare submitted to the whole operation without flinching or otherwise manifesting the slightest uneasiness. *Case* 2.—Black horse. Had splints on off fore leg below the knee. Anæsthesia applied locally, and then the diseased part fired in three places. The horse, though his legs were free from restraint, stood perfectly still throughout the entire operation. *Case* 3.—The experiment made in this case was suggested by curiosity, and was performed for the purpose of ascertaining whether the mere application of intense cold would diminish or in any other way affect the lameness of a horse that had sprained the flexor tendons of the near fore leg immediately below the knee. The patient experimented upon was decidedly lame. The hair was removed from a space of about five inches by four, and the ether spray applied over the region of disease until the part was frozen. The horse, directly after this operation, was trotted, and it was found that the lameness from which he had been previously suffering had almost entirely disappeared. About an hour and a half after this experiment was conducted the horse was trotted once more, when it was noticed that the lameness had returned, apparently with its original intensity. The effect of cold on the patient's lameness was doubtless due to the temporary suspension of nervous sensibility, and was as striking as that observed after the operation of neurotomy. How far Dr. Richardson's mode of applying low degrees of temperature may be substituted for the methods at present resorted to by the Surgeon, future experiment must determine. In concluding these exceedingly brief remarks, I deem it but proper to state that the Messrs. Mavor conceived the notion of applying local anæsthesia in veterinary Surgery simultaneously with myself, and that to these gentlemen, I believe, is due the credit of first giving the process a trial. Their early experiences, to which I shall hereafter refer, are recorded in the *Medical Times and Gazette.*

CONSANGUINEOUS MARRIAGES.—There is in France a sort of chronic warfare going on as to the effects of these marriages upon the progeny. An eminent Physician, Dr. A Voisin, has just been adding his mite of observation to the common stock, this being to the effect that no such terrible results follow repeated intermarriages, provided always the external conditions of open air, plenty of food, etc., be present. We confess that our own experience—founded on a tolerably intimate acquaintance with the inhabitants of the fishing villages along the coast of Scotland, who are altogether a race apart, seldom if ever intermarrying with the peasants of the surrounding country, but to such an extent among themselves that it is nothing unusual to find only one or two family names in a village, the deficiencies being made up by nicknames—leads us to agree with Dr. Voisin, for a hardier or more robust set of men and women than these people do not exist.

In the State of Massachusetts the percentage of strictly American marriages—that is, marriages in which both men and women were of American birth—rose from 59·61 in 1853 to 63·93 in 1862: according to the law of population, we would naturally look for a preponderance of births from such a source; but year after year the number of births from foreign parents living in the State preponderates, and in 1863 the births stood thus:—13,066 were purely of American parentage; 14,540 were of foreign parentage; and 2144 were of mixed parentage; the natives marry—the foreigners get the children, and in 20 years it has been calculated Massachusetts will be an Irish colony with a slight infusion of German. "The philanthropic women of Massachusetts," writes one familiar with the subject, "devote their attention to the interests of humanity in every way but the simple old-fashioned right way—they give out their babies, like their washing and ironing, to the Irish 'to be done.'" The *Nation* ascribes this unwillingness on the part of the American women to have children to the trouble of bringing them up, and to the unruly nature of American children. Whatever be the cause, national degeneracy is sure to follow, and it becomes a matter of vital interest to suppress, and that speedily, opinions and practices revolting to Christianity. The *Radical*, in a recent number, asserts that American women have too many children—in our opinion, nothing can be more destructive to national life than the prevalence of such an idea. You cannot school and drill nature into any such politico-economic theories, and the utterance of such sentiments only tends to throw a gloss and a cloak over what is criminal.—*Trübner's American and Oriental Literary Record.*

PROGRESS OF SCIENCE.—WHY THE SKY IS RED AT SUNRISE AND SUNSET.—The invention of spectrum analysis is daily receiving wider extension, and by Janssen has just been applied to meteorological researches. This investigator was led, from some observations made on the Faulhorn, to believe watery vapour had something to do with the absorption of solar rays in passing through the atmosphere. More exact research subsequently showed that aqueous vapour had the power of absorbing certain red and yellow rays, but is very transparent for the majority of these. From this it follows that aqueous vapour, when seen by transmitted light, should possess an orange colour, and the thicker or denser the layer of this, the redder the colour assumed by it. Now, it is just when the sun's rays are passing through the dense layer of vapour which surrounds the earth—that is, when the sun is rising or setting—that the red colour is observed; and in the explanation given above we have probably the key to the phenomenon.

WHAT IS RÖTHELN?—In an article in the November number of the *Edinburgh Medical Journal*, Dr. Veale, of the Royal Artillery, describes what he has seen in India of the above disease. This appears to be a sort of compound of measles and scarlatina, and is sometimes termed rubeola notha. There is the eruption and coryza of measles, and the inflamed tonsils and submaxillaries of scarlatina, with occasional stomachic disturbance before the appearance of the eruption; the kidneys do not, however, seem to be subsequently affected. Dr. Veale believes that the disease is due to a specific morbid poison similar to those which produce the other eruptive fevers.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

The Microscope.—On Tuesday evening Mr. W. Parker, M.R C.S., delivered an instructive lecture in St. Mark's Schoolroom, Bath, "On the Beauties of Creation; or, Nature illustrated by the aid of the Microscope and Chemical Objects." The lecture was illustrated by Mr. Smith, optician, of Broad-street, with six microscopes. An auditor, who writes to the *Bath Journal*, gives very great credit to Mr. Parker for his scientific investigations, and for the zealous and philanthropic spirit which induces him to make them known for the good of the public.

Dr. Muspratt's Chalybeate.—The following extract from a letter of Dr. Kennion has been forwarded to us for publication:—

"Late as it is in the season, there are many people here, and many drinking 'Dr Muspratt's chalybeate,' as I now invariably call it; for I do indeed feel that both the place and society at large are under the greatest possible obligation to him for having discovered the invaluable properties of this spring. Of the immense amount of good which it has done to numbers I cannot say or write too much. At this moment one of the most distinguished officers—perhaps the most distinguished of the present day, who has been out of health for years, is drinking the chloride of iron water, and, under Providence, by its use he is 'renewing his youth.' '

DR. JOHNSON'S THEORY OF CHOLERA.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—As the above subject has excited a good deal of attention, many of your readers must have been much interested in a letter from Dr. Moxon in your impression of October 20. The concluding paragraph promises an "examination of the basis of facts on which Dr. Johnson founds his hypothesis of spasm of the capillary pulmonary arteries."

I trust Dr. Moxon has not forgotten his promise, and that we shall shortly be favoured with another communication.

I am, &c.
London, November 20. EXPECTANCY.

FALLING OFF OF THE HAIR.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Can any of your readers suggest a good remedy for the falling off of hair from the scalp, as a whole family of my acquaintance is so afflicted? After attaining the age of puberty, the hair, previously thick, immediately commences to thin and fall off.. There appears, from careful examination, to be no disease of the scalp or hair-bulbs to account for the above circumstance. Stimulating unguents and lotions containing ammonia, tinct. lyttæ, have been tried in vain. By kindly inserting the above in your valuable journal you will greatly oblige

Dunfermline, Fifeshire, November 15. A CONSTANT READER.

PUBLIC VACCINATORS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Can you tell me if an Act of Parliament was recently passed in which it was enacted that "only the public vaccinators for the districts to which they are appointed shall be able to claim payment from the Guardians?" It is the custom in this neighbourhood for all Medical men to vaccinate out of their districts and send in a claim per case, and obtain payment as if public vaccinators. A reply in next edition will much oblige your constant subscriber,

November 14. FIAT JUSTITIA.

[*$_*$* There is no statute containing such an enactment. The Acts regulating vaccination at the expense of the public are the 3 and 4 Vict., c. 29; 4 and 5 Vict., c. 32; 16 and 17 Vict., c. 100; 21 Vict., c. 25, sect. 7; 21 and 22 Vict., c. 97, sect. 2; and 24 and 25 Vict., c. 59. The first empowers guardians of the poor to contract with their Medical officers or with any legally qualified Medical Practitioners for the vaccination of all persons resident in the respective Unions or parishes, and the other Acts contain further regulations on the subject of public vaccination. It follows from these statutes that no one can establish a claim upon a Board of Guardians for gratuitous vaccination of the poor who has not entered into a contract with the Guardians under 3 and 4 Vict., c. 29.

ANIMAL MAGNETISM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—With reference to the brief critique of my work in the last number of the journal, I beg to observe that it is not likely that one of the principal scientific bodies of Italy would have offered a prize for promoting the solution of a question that would be calculated merely to afford amusement; nor that several of the first Physicians of Milan, composing the commission appointed to report upon the merits of the competing essays, would have expressed themselves in such flattering terms respecting mine unless they had perceived that the numerous authenticated facts recorded involve important principles, the application of which, when further investigated, will lead to important beneficial results. I certainly should not have undertaken to treat of the subject unless I was convinced that such would be the case. The question, I need scarcely remind you, has for many years past given rise to animated discussion in the scientific and Medical world, and having no personal interest in the propagation of magnetism, it was my object in competing for the prize to present an impartial view of the matter. There is in the volume no question of table-turning, which constitutes altogether a different subject for consideration.

I am, &c.
St. Leonards-on-Sea, Nov. 19. EDWIN LEE

$_*$ We have read Dr. Lee's work with some care, and we can only reiterate our opinion that it is a collection of amusing stories of clairvoyance, etc. The kindred subject of table-turning is not touched on. The book, however, appears to us to possess no claim to be considered scientific in the real sense of the word. But the subject is so shadowy and illusory that we doubt if it admit of scientific treatment.

OFFER OF WINE TO MEDICAL INSTITUTIONS AND PRACTITIONERS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—A few months ago I addressed a letter to the *Medical Times and Gazette*, in which I had the honour to offer on behalf of a friend, M. du Lac, of La Gauphine, a dozen casks of wine to as many metropolitan Hospitals.

One of the results of that letter was that very many gentlemen in the Profession wrote to me requesting particular information about the wine, the price of it, and whether it could be had for private use, and on what conditions. Several non-medical readers of your journal also wrote to me in the same sense, and a good deal of correspondence has since passed between me and Gauphine on the subject.

Will you now allow me through your journal to make it generally known that M. du Lac will, from the present time, send wine direct from the Gauphine vineyards to any (registered) Physician or Surgeon in the United Kingdom?

The price for red dry Gauphine—the wine given to the Hospitals—will be 65s. per hogshead of 50 English gallons, and M. du Lac will take sea risk, and also allow the freight to be deducted from this price. Duty, one shilling per gallon, and all charges on the English side, will have, of course, to be paid by the purchaser. It is, however, a strict condition that not less than one tun of wine—viz., 200 gallons or four hhds.—can be sent on these favourable conditions; and, further, if the freight from Bordeaux to the port of entry should be in excess of London rates, London rates only can be allowed on the invoice; nor can shipments be made to other ports than those between which and Bordeaux regular steam service plies.

Payment will be due on receipt by consignee of the bill of lading per post, and can be made by draft or order at sight on a French bank, or by French bills at thirty days, or a letter of advice authorising M. du Lac to draw on consignee or his banker at home.

In favour of some of my correspondents, M. du Lac consents, where requested, to send a smaller quantity, even a single hogshead; but in that case he cannot take any part in the risk or expenses of transit. The price for a hogshead, or hogsheads fewer than four, will be 55s. per hhd. only, but all expenses of transit from Gauphine and sea-risk will concern purchaser alone, and he must ascertain them for himself. M. du Lac will, in such cases, send off the cask or casks by the usual carriage, but cannot be further concerned with the same.

My correspondents who may order the wine will thus find that it will cost them, when stowed in their cellars, after all expense of bottling, etc., about 8d. per bottle; and all I can say is, that the excellence of the quality will very much surprise and delight the hitherto uninitiated. I am sorry du Lac will not send wine to my non-medical correspondents, but he will not, and the reason of this decision it is easy to see from a glance at my former letter. I have had great pleasure in obtaining this advantage for members of the Profession, and I only ask them, when they quaff their cups of pure and generous Gauphine at a less price than that of retailed small beer, to do their best to get this, or similar wine, introduced into all charitable institutions, so that the shivering English poor may share a little in the glorious sunshine of the South of France. M. du Lac's address is "Monsieur D. du Lac, La Gauphine, près Béziers, Hérault, France (*Franco*)."

I am, &c.

London, November 13. JOHN BONUS.

AN APPEAL TO THE CHARITABLE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Allow me to solicit, through you, the kindly assistance of the Medical Profession—always so ready to relieve distress—for a poor young woman, suffering severely from epileptic fits. She is the daughter of a Medical gentleman named Shaw, long since deceased, and her mother (married again) is utterly unable to assist her. Her immediate relatives are also unable to help. Under these circumstances I am trying to raise a few pounds to pay for some clothing, and for her admission into Miss Twining's Home. Any small sum will be gratefully acknowledged by

Yours, &c.

Shacklewell, N.E. ALFRED J. MARSDEN.

P.S.—If my City address will be more convenient, I beg to say anything sent to 11, Lombard-street, City, will reach me. ,

COMMUNICATIONS have been received from—

Dr. THOMAS; J. D.; Dr. MACCORMAC; Mr. SPENCER WELLS; Dr. HUGHLINGS JACKSON; Mr. E. BELLAMY; Mr. STONE; Mr. J. CHATTO; Dr. B. W. RICHARDSON; Dr. SOELBERG WELLS; Dr. LIVEING; Mr. J. H. JAMES; Dr. T. DOWNIE; Dr. HOGGAN; Mr. A. J. MARSDEN; Dr. EDWIN LEE; Dr. MUSPRATT; Dr. A. SAMUELSON; Dr. BROADBENT; Mr. JOHN BURTON; Dr. CARTER; INQUIRER; Mr. HAYNES WALTON; Mr. F. W. COOPER.

BOOKS RECEIVED—

Harley on Albuminuria—New York Medical Journal, No. 19—Yearsley on Exuberant Growth of the Tonsils—Report on the Sanitary Condition of the Whitechapel District—Jordan on the Elements—Bruce on the Military Hospitals of Dresden—Journal of the Scottish Meteorological Society, New Series, No 12—Lee on Homœopathy and Hydropathy—Voisin and Lionville's Etudes sur le Curare—Wells on Dew—Duncan's Fecundity, Fertility, and Sterility—The Walsall Cottage Hospital Reports.

NEWSPAPERS RECEIVED—

L'Union Médicale—Gazette Médicale de Paris—The Sunday Gazette—Gazette des Hôpitaux.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 17, 1866.

BIRTHS.

Births of Boys, 1035; Girls, 953; Total, 1988.
Average of 10 corresponding weeks, 1856-65, 1842·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	727	701	1428
Average of the ten years 1856-65	704·4	676·2	1380·6
Average corrected to increased population..	..	..	1519
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West ..	463,388	3	1	10	1	3	1	3	—
North ..	618,210	3	2	3	4	4	7	9	1
Central	378,058	—	2	4	1	—	10	2	5
East ..	571,158	8	9	12	..	11	11	8	14
South ..	773,175	4	6	16	6	14	13	5	12
Total ..	2,803,989	18	20	45	12	32	42	22	32

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·693 in.
Mean temperature	45·6
Highest point of thermometer	58·5
Lowest point of thermometer	30·8
Mean dew-point temperature	40·2
General direction of wind	W.S.W.
Whole amount of rain in the week	0·58

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 17, 1866, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending Nov. 17.	Deaths.		Temperature of Air (Fahr.)			Rain Fall.	
				Corrected Average Weekly Number.*	Registered during the week ending Nov. 17.	Highest during the Week.	Lowest during the Week.	Weekly Mean of the Mean Daily Values.	In Inches.	In Tons per Acre.
London (Metropolis)	3067536	39 3	1988	1400	1428	58 5	30·8	45·6	0·58	59
Bristol (City) . .	163680	34·9	127	73	‡163	57·4	32·1	47·0	1·21	122
Birmingham (Boro')	335798	42·9	268	163	128	58·0	30·4	45·4	1·26	127
Liverpool (Borough)	484337	94·8	368	281	266	..	..	..	..	..
Manchester (City) .	358855	80·0	202	203	‡205	54·0	27·0	44·3	3·48	351
Salford (Borough) .	112904	21·8	86	57	62	53·0	28·9	44·9	3·73	377
Sheffield (Borough) .	218257	9·6	162	115	106	52·6	29·5	43·6	2 01	203
Leeds (Borough) .	228187	10·6	236	116	122	54·0	29 0	44·2	2·57	260
Hull (Borough) .	105233	29·5	67	49	39	..	..	..	..	..
Nwcastl-on-Tyne, do.	122277	22·9	102	65	87	53·0	29·0	41·2	1·29	130
Edinburgh (City) .	175128	39·6	93	84	95	49·7	29 0	40·6	1·40	141
Glasgow (City). .	432265	85·4	319	252	253	54·6	27·1	41·8	1·58	160
Dublin (City and some suburbs) .	318437	32·7	116	†156	226	53·5	30·0	44·5	0·63	64
Total of 13 large Towns . . .	6122894	34·4	4134	3014	3080	58·5	27·0	43·9	1·79	181
					Week ending Nov. 3.	Week ending Nov. 3.				
Vienna (City) . .	(1863) 560000	..	..	..	397	..	..	§ 47 5	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·693 in. The barometrical reading increased from 29·06 in. on Friday to 30 18 in. by the end of the week.

The general direction of the wind was W.S.W.

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* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 49·2°.

APPOINTMENTS FOR THE WEEK.

November 24. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p.m.

26. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

MEDICAL SOCIETY OF LONDON, 8 p.m. Dr. Tilbury Fox, "The Study of Dermatology in England."

27. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8½ p.m. Mr. Solly, "Case of Fracture of the Ribs, with peculiar Tympanitic Resonance." Mr. T. Holmes, "Sequel to his Case of Colotomy for Vesico-Intestinal Fistula."

28. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

HUNTERIAN SOCIETY, 8 p.m. Dr. W. Dickson, "Scurvy in the Mercantile Marine."

29. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

30. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.

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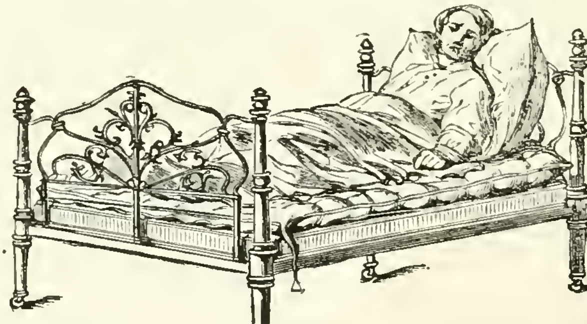

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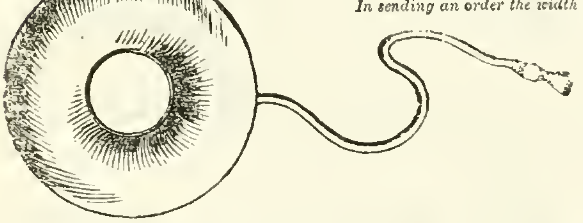

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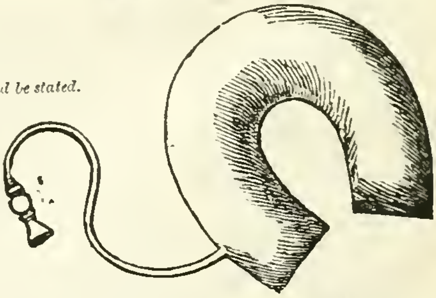

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ORIGINAL LECTURES.

ADDRESS ON

THE STUDY OF OPHTHALMOLOGY IN ITS SIGNIFICANCE TO MEDICINE.(a)

By Professor A. VON GRAEFE.

(Translated by A. Samelson, M.D., Manchester.)

Whilst in the irrestrainable progress of Medical research it is our everyday duty to collect facts and establish them by observation and experiment, we fitly employ the leisure of a festive day in pondering their inward connexion and refreshing the mind by a survey of the culture attained. Let us, then, in this hour of commemoration, briefly examine in what measure the cultivation of ophthalmology in recent times has tended to fertilise the mother soil of our common Medical science.

It bears a selfish stamp, no doubt, when we appear to put forward a special claim on behalf of a branch of inquiry to which we are ourselves devoted by preference. The comprehensive and penetrating view for which we are indebted to a particular study but too easily interferes with a condign appreciation of other pursuits not less momentous. But, readily as we admit that it is one and the same pabulum which circulates through the entire body of natural science, and that everywhere the same method is needed to animate and fructify, it is yet a fact that in certain periods of growth particular branches may acquire a preponderating influence upon the whole, and consequently special distinction. If, precisely in this sense, ophthalmology has lately attained to a distinguished position, it is essentially owing to the nature of its subject.

It has been felt by the thinking Physician at all times that morbid tendencies and processes remain but too often hidden under indistinct and fallacious symptomatic appearances, and that, respecting inward diseases, we are therefore placed in this dilemma—either, if too forward in our assumptions, of meeting with many deceptions, or, if too reserved, of confining our judgment almost entirely to the products of disease. These, however, once formed, leave us but little scope for treatment, the progress of change being at this period immutably predetermined. The latter truth has in fact become a deeply rooted conviction in modern Medicine. It has led to the adoption of the expectant method in many of the gravest conditions of disease. It is the same conviction, indeed, that has stimulated the true disciples of the healing art to confront the obstacles to an early recognition of morbid states with all the weapons of acute observation and searching analysis, and triumphant sagacity has achieved many a glorious conquest for the benefit of mankind. Yet it is only now and then that such propitious results are vouchsafed; in many places the dark remains impenetrable. The truly pathogenetic Medicine, the living art clothed with the power of healing, dawns on the horizon as it were, but there are yet immeasurable spaces of knowledge to traverse before it shall see its day as a natural science, with the absolute—*i.e.*, the mathematical method, for its luminary.

The barriers to progress are, on the one hand, the imperfect accessibility of the organs; on the other, our insufficient acquaintance with their functions. Anomalies, the connexion of which with remote causes is rendered indistinct by intervening links inconstant and often unknown, are frequently our only diagnostic guides, and the yieldings of physical exploration, much as it has accomplished, hardly ever outstep the sphere of the coarser products of disease.

It is evident that we may push our study into higher regions where the obstacles to observation and deduction are less powerful, and in this respect the eye, of all the organs of the body, affords us the most extraordinary advantages. Not only superficially situated like the skin, but transparent to some depth, and, since Helmholtz, to the very bottom, whether we inquire after the first inklings of disease, those slighter aberrations from the equilibrium of health, or we search for important therapeutic facts—when wearied, perhaps, by observation and meditation on many a circuitous and misleading road—the eye presents to us an open field where correct analysis is speedily rewarded and error as readily set right.

In the eye the most different structures are laid open before us which elsewhere we find but enwrapt or concealed. In the conjunctiva, and, in morbid conditions, in the cornea also, the vascular channels appear with unparalleled distinctness, and even the application of the microscope is permitted to the pursuit of the most subtle study of vascular processes, partly physiological, partly and especially pathological or medicinal. But a still richer source presents itself in the vascularisation of the retina, which from trunks to capillaries, owing to the perfect transparency of the anterior structures, appears more than twenty times magnified in the direct ophthalmoscopic examination by means of the erect image. Here, and here alone, our observation disposes of a patent and complete piece of circulation from artery to vein. This piece, however, is nothing else than a peripheral offshoot of the cerebral circulation, and hence of particular significance. For here the processes of venous stagnation, arterial ischæmia, embolism, and extravasation, may be studied most directly, and followed up through all their phases. Hence, information may here be obtained free from the blemish of inadequacy either of facts or interpretation, so often the cause of variance between the clinical ward and the dissection-room.

Yet more characteristic still than the aspect of the vessels is the appearance of the optic nerve which presents itself not with its surface only, but even transparent to a certain depth, the only nerve in the whole organism, which we have the satisfaction of beholding face to face, and in which the most important types of disease, especially nerve-inflammation and various forms of atrophy, delineate themselves from their first beginnings. Withal the optic nerve bears a far more direct relation to the central organs of the nervous system than belongs to the ordinary sentient and motor nerves. The optic nerve and the retina, as we know from the history of development, are in reality portions of the brain projected to the surface; nothing then more intelligible than that cerebral alterations frequently mirror themselves on the optic papilla, accessible to our view. Of suchlike reflections already a variety are recorded in the annals of ophthalmology as so many contributions to the still obscure diagnostics of cerebral disease; and yet this mine has only just been opened, its more thorough working being still in abeyance.

Again, the observations on the optic nerve have shed a profusion of light on groups of disease, which so long had been wrapt in obscurity. The peculiar excavation of the optic papilla, consequent on excessive intraocular pressure, furnished the key to the understanding of the heretofore incurable glaucomatous affections. Morbid conditions of the most various aspect came to be recognised as intimately allied to each other through their analogous effect upon the optic nerve. By the novel and yet unassailable pathology and therapeutics of these disorders even enlightened ophthalmologists were struck with surprise, and but reluctantly recorded their acquiescence.

Besides the vessels and nerves, however, the parenchymatous structures also exhibit their characters in the transparent eye with a distinctness unknown anywhere else. Inflammatory and nutritional disturbances, as a rule, mar the optic homogeneity, and hence the transparency of the elements. Those disturbances, therefore, whether they affect the cornea, the lenticular system, the vitreous body or the retina, become manifest even in their lowest degrees; but just these are pathogenetically and therapeutically the most interesting. Here we do not meet with that latency of structural alteration which so frequently confounds us when dealing with internal disease that almost every autopsy enables the pathological anatomist to discover anomalies unrevealed during life—that latency in particular of the first beginnings of disease, to meet which we are for the most part so sadly incompetent.

Under so favourable diagnostic circumstances the disorders of the structures just referred to could not fail to invite the elucidation of general pathological questions. In reference to the doctrine of inflammation we are indebted to the study of the cornea for the most important lights, but also the diseases of the vitreous body, the proliferations of the intracapsular cells, etc., have strengthened the conviction that the inflammatory process does not for its formation indispensably require the direct influence of the vessels, but simply the presence of cellular structure.

The tissue of the retina, anatomically one of the most delicate fabrics within the human body, appears also among the nervous organs to be endowed with an extraordinary measure of vulnerability which causes it to resent by visible anomalies the most various affections of the blood or other organs. Thus, in renal and heart disease, in arterio-sclerosis, anæmia, leucæmia, syphilis, hæmorrhagic diathesis, and diabetes mellitus, we find the retina sometimes affected in a manner characteristic of the fundamental cause. As a very striking example in this respect, we may mention the retinal affection dependent on chronic disease of the kidneys. Whilst the primary disorder often carries on its work of destruction in a very disguised manner, the patient and perhaps even a less attentive Medical adviser being yet unaware of its existence, the secondary affection reveals itself at once so strikingly in the eye, that perhaps hundreds of times already the renal disorder was, if we may say so, first detected in the retina. But this example is still in another respect instructive. The weakness of sight attending renal disease was known before the advent of the ophthalmoscope, but it was thought, not without a show of reason, that the cause of the amblyopia was the action on the cerebral substance of a blood overloaded with urea. Since, however, direct examination proves that in the vast majority of cases there exists a characteristic affection of the retinal structure, the question, we think, very naturally suggests itself—What might become of many other blood diseases if we could but watch the organs as we do here? Less frequent, though not less instructive, are the embolic processes occurring in the retina, as they again direct our attention to their effecting causes in the organs of circulation. And these conditions have, besides, a particular pathological value in that the sequential effects of vascular obstruction, as to which much yet remains to be cleared up, exhibit themselves likewise in the retina. In regard to syphilis also the retina has afforded us valuable intelligence, and more particularly the strict proof that specific structural alteration in the more recondite organs may take place without any intervention of mercury, and that even within a very short time from the primary seizure. Examples of this kind might be multiplied if the pressure of time on this occasion did not forbid us to enter more fully into the subject.

(a) Delivered August 2, 1865, the seventy-first anniversary of the Medico-Chirurgical Frederick William Institute in Berlin (the training school of the Army Medical Officers of Prussia).

The principal advantages accruing from the transparent nature of the eye we comprehend, then, to be the intimate concurrence of clinical and pathologico-anatomical observation—that very object for which modern Medicine is striving with every effort, it is true, but with very unequal success in its various disciplines.

As the second circumstance which hinders pathology from developing itself to a natural science, we have before adduced our imperfect insight into the functional relations of the organs. In this respect, again, ophthalmological studies place us on favoured ground. Already in the external motor apparatus we meet with an arrangement singularly accessible to mechanical analysis. We have a sphere with an immovable point of rotation, which three pairs of muscles rotate in conformity with their own axes of rotation. The resulting traction, the force, the weight, and the resistance are susceptible of measurement and calculation. The positions of the eyes require to be effected with peculiar accuracy, for they are purposed always to confront particular districts of the retina with the external objects, and the very smallest departure forthwith results in sensible perturbation of the visual act. But this precision becomes yet wondrously enhanced when we consider the postulates of the co-operation of both eyes. For the accomplishment of binocular vision it is necessary not only that each eye by itself command all the required positions, but that both eyes realise their correlative positions under a constant distribution of the will. Hence if the least disturbance come to affect either the muscular action or the nerve conduction, a faulty effect will be the consequence. Therefore, in regard to either of these, we have here so delicate a gauge as nowhere besides exists in the human body. For elsewhere it is but too difficult to distinguish between the slighter degrees of paresis and the physiological variations of muscular force. Under the same disguise muscular affections of the most various descriptions often escape our attention until they have attained to a very high degree. With the ocular movements the exigencies of symmetry are absolute, the regulating act of vision equalises the action of nerves and muscles on both sides with the most exacting accuracy, and thence it becomes possible also for the share of what is pathological to be exactly determined. In this way the doctrine of the motor disturbances of the eyes is grown to be a chapter of Medicine, which, in regard to precision, as well as to thorough consonance of physiological, pathological, and therapeutical notions, may be esteemed a pattern to all doctrine. Whoever has attended to these studies earnestly, must have felt deeply impressed by the observation what accuracy is here required from the Physician in his measurements, what certainty in his calculations, and what prudence in his combinations, in order to effect a cure characterised itself by so much precision.

This study, however, carried to such perfection, has also exercised a great influence upon the chapter of cerebral and nervous disease on the one hand, and upon general pathological and therapeutical questions on the other. The capacity of demonstrating to a certainty disturbances of innervation within the territories of the third, fourth, and sixth cerebral nerves could not fail to affect the diagnostics of intracranial disease, the symptomatology of which in its commencement is often so vague. The mere deviations from the equilibrium of antagonism, which had been so apt to be mistaken for disorders of innervation, were definitely disassociated from the latter. The question which has caused so much discussion, whether the affection occupied the muscle or the nerve, was here, with regard at least to the majority of the respective morbid occurrences, definitively settled. Furthermore, the inquiry into the dynamic equilibrium of the muscles has established the fact that if the positions of the eyes are, though to all appearance correctly, effected by an excessive expenditure or an unequal distribution of muscular force—for which excess we are able throughout to find a numerical expression—the endurance of the visual act, or, as the case may be, the circulatory and nutritive functions of the organ will suffer. It is especially the deficiency in perseverance of many myopic eyes, and the rapid increase of myopiæ, that have through the proper treatment found their explanation in such derangements of the dynamic equilibrium. Conversely, by the operative removal of these derangements, we have become enabled to remedy their evil consequences just referred to, which place the organ in serious jeopardy.

In reference to the thoracic and abdominal organs, it has always been admitted that abnormal muscular action operating from without injuriously affects their functions. The same fact, however, which elsewhere can only be conceived and explained in a most complex manner, the muscular mechanics of the eye enable us to express with perfect exactness, and a most important object for prophylactic Medicine is thus secured. Lastly, the controversy which has so long been carried on in Surgery, whether the effect of tenotomy is merely mechanical or partly dynamical, was here soon decided in the former sense; whilst, moreover, in a manner pathologically most instructive, the reasons were laid open why, with the conditions of weight altered, the judgment becomes apt to err in regard to the innervation.

(To be continued.)

ORIGINAL COMMUNICATIONS.

◆

ON DR. JOHNSON'S THEORY OF CHOLERA.

By W. MOXON, M.D.

My former letter undertook the criticism of the first two chapters of Dr. Johnson's work on Cholera. Stated concisely, the objections I advance are these:—To Section I.: That the difference between escape of liquid from the vessels and escape of liquid from the bowel is entirely overlooked, while we know that a vessel may bleed to a fatal extent into the alimentary canal, and yet no blood make its escape externally; he thus ignores the fact that the bowels will contain an amount of liquid which it is death to lose. To Section II.: That in comparing choleraic collapse with the effects of hæmorrhage, the fact that what escapes in cholera is not blood, but the watery part of it, is entirely overlooked; and in comparing choleraic collapse with the effects of leucorrhœa, etc., the difference between loss of liquid during weeks or months and loss of the same during hours or even minutes, or else the difference between loss in drops or drachms in the one and loss in pints or quarts in the other, is overlooked, as also is the fact that the little known condition of spanæmia complicates all cases of leucorrhœa.

In Section III. Dr. Johnson continues what he terms the sweeping away of what he calls orthodoxy. The chapter is entitled "an examination of the question whether the effects of various and opposite modes of treatment on the symptoms of collapse afford any support to the theory that a drain of liquid from the blood is the essential or the chief cause of choleraic collapse." The supporters of such a theory, if there are any such people, would be right in objecting to the way in which they are treated. *Why does Dr. Johnson in his examination examine the effects of castor oil, and leave out the examination of the effects of astringents?* Are the beneficial effects of the action of castor oil so much better attested than the beneficial effects of the action of astringents, that the first should be made a cardinal point in argument upon cholera, and the second left wholly out of account? Is the experience of Dr. Graves with acetate of lead and opium in true cholera with rice-water stools, supported as it is by vast numbers of observers, not worthy of remark, when Dr. Johnson's cases "of vomiting, *bilious purging*, and cramps," and their recovery under "castor oil without opium," are made much of? Why does Dr. Johnson, in an examination which ought to be a fair one, only take the cases he thinks in favour of his view? I am tempted to ask, Is the reason hinted at on p. 16 of his book, where he says "it is incumbent on those who maintain," etc., "to explain, *if they can*," etc. (the italics are mine)? Now, does this indicate, as would appear, that Dr. Johnson does not hold it incumbent on himself, as supporting a theory, to explain also *if he cannot*, and is kind enough to extend this fancied exemption to his supposed opponents? Bilious diarrhœa, vomiting, and cramps do not prove cholera at all. I know well a gentleman who suffered this year from bilious diarrhœa, vomiting, and cramps, and got better after a compound rhubarb pill. He did not thank Dr. Johnson for this. He learnt it from his mother when he was young. This misconception of true cholera is too common among the supporters of Dr. Johnson's theory. One of them writes a very glowing account of the wonderful success of the castor-oil at some Infirmary, talks of many cases cured by it, and favours us with one only. It is worth reading; the patient was *relieved of cholera with constipation by an enormous fœtid stool!* Is there any community of soul between writers of such matter as this, and the projector of the pulmonary artery theory of cholera, that he should attract to himself such support? In to-day's *Lancet* an abstract of the 21 cases which have come under Dr. Johnson's care at King's College Hospital is given; of these 13 died; it says seven of them after reaction. Nothing is said about the six who died collapsed, and I think any one reading the account would add to these latter the seven who are said to have died after reaction, as no evidence of reaction is shown, and they die very soon after admission. What I, however, want to know is how many of the eight who were so fortunate as to recover had "bilious diarrhœa?"—how many of the 13 who died had rice-water stools? I remember seeing in the *Lancet* an account of four or five cases, which I suppose form some of the 21, and of these the two who recovered had brown diarrhœa, the two or three who died (I forget which, and have not the paper now by me) had rice-water stools. This I read thus—"*The diarrhœa cases recovered, and the cholera cases died.*"

To proceed, however, to what Dr. Johnson does examine. First, he takes the effects of alcoholic stimulants, contrasting their usefulness in syncope with their inefficiency in choleraic collapse. Now, as I have shown that the two states he contrasts differ entirely—the first being bloodlessness, the other thickbloodedness—it is quite to be expected that remedies will act differently in such diverse conditions. Secondly, Dr. Johnson examines the effects of venesection. Now, surely the very glowing account of the effects of venesection which Dr. Johnson adopts is a little overdrawn. Whatever its supporters say of its usefulness, the world will rightly judge of it by the effects obtained in general experience and the test of these effects is the generality of its adoption. Who bleeds in choleraic collapse? What we have to explain is not the usefulness of venesection, but the assertion of its usefulness, which is a very different thing. We might as well be called upon to explain the usefulness of spine-bags, or of chlorodyne, or camphor, or any other of the futilities that in their little day have just the same positive support from experience as the bloodletting plan which Dr. Johnson selects. By the way, Dr. Johnson might be a little more charitable to Dr. Chapman in the matter of the said spine-bags. We have just as much reason to trust Dr. Chapman when he argues up to the application of cold during coldness as we have to trust Dr. Johnson when he argues up to the exhibition of purges during purging. When Dr. Johnson prays our patience while he makes his way out of *primâ facie* absurdity, why should he go forth and seize Dr. Chapman for the like *primâ facie* absurdity, refusing to hear his explanation, though offered as urgently as was his own? But Dr. Johnson casts Dr. Chapman away with "the theory which suggested this practice is a speculative web spun from the projector's brain. To thoroughly *chill must* be a painful," and such like. When Dr. Johnson himself shows us cholera patients being "made new men" under the great loss of blood he speaks of, then let him call upon us to explain the fact; but if bloodletting sets the engorged heart a-going again, why do they die in certain wards of King's College Hospital without its beneficial influence? Why does he bring us this faith without works? Surely practice is the test of belief.

Passing to consider the effects of purgatives, Dr. Johnson says—"If the symptoms of collapse *were due to* the drain of liquid from the blood and its escape by the intestinal canal, it would seem to be impossible that the symptoms of collapse should pass away, while the drain of liquid by vomiting and purging is continually going on; it would seem, too, that the action of purgatives during the state of collapse must greatly increase the mortality."

Truly it is attested by many observers that purging and vomiting sometimes continue after warmth has begun to return; but before we concede on such ground that "if the theory that the drain of liquid from the blood is the essential or the chief cause of collapse had a basis of truth, the cessation of the intestinal discharges must always and of necessity precede the recovery from collapse"—before we concede this, there is much to be said. I will say it in two divisions. First, I will make five comparatively trifling reflections, which will take from the force of his arguments as bearing against such a theory as that Dr. Johnson describes; and afterwards I shall show that if Dr. Johnson means what he says, he makes a curious philosophic error in a very rudimentary part of philosophy, whilst if he means what he does not say, but what is the only meaning which will set him safe from the said philosophic error, then he means what is not said by anybody, nor even asserted by him to be said by anybody—what, therefore, is altogether out of the question.

First, then, the said cessation need *not necessarily precede* the recovery from collapse, because no one will suppose that the escape of liquid from the blood into the bowel will not take place, at least some time before the escape of it from the bowel Now, during that time, should the power of absorption resume its play, the loss of water would be rapidly made good from the liquid which is drunk, and so recovery would be commenced before the discharge of the stool.

Secondly, as I have before said, it does not follow that all the liquid which comes from the bowel in cholera necessarily comes from the blood. A great deal is taken, and none appears to be absorbed; so that what is not vomited must be purged away. It certainly does not make urine.

Thirdly, in most cases that have purging after warmth begins to return the purging is not in greater quantity than would be accounted for by the discharge of liquid which had already been withdrawn from the blood in the upper bowel, and took such time in its passage to the rectum.

Fourthly, the reaction alluded to is very far from being a complete restoration. Warmth returns, but the features remain pinched, and the pulse small.

Lastly, even if it were certain that the liquid discharged during the reaction is all withdrawn from the blood, then it would not be an unexampled thing that one should nevertheless believe the collapse to have been due to earlier and more sudden and violent discharge of liquid from the blood. Not unexampled, I say, because, as every Surgeon knows, when a state of shock has occurred from sudden hæmorrhage, reaction may be fully established notwithstanding that during its progress the hæmorrhage recurs to some extent. In such cases one might argue, on Dr. Johnson's method, that the faintness was not caused by the loss of blood, because the person showed reaction whilst loss still continued; in short, the effect of suddenness of change from the normal state to that of collapse is overlooked, whereas the element of what we know as shock is important in all sudden seizures, and has this quality essential in the present point, that it is temporary, and if it fails to kill outright tends upwards to recovery.

Thus much, at least, may be said against the conclusiveness of this argument of Dr. Johnson against the theory that loss of liquid is the sole cause of collapse, if anybody holds such a theory. But all this, I must hasten to profess, is so much mere matter of argument, for the sake of refuting argument, and *not intended to substantiate the proposition that loss of liquid is the only cause of collapse, a proposition which I do not myself believe nor think any one else believes.* In other words, what I have shown is that if the drain of liquid *from the blood* is the *only* cause of collapse, the cessation of the *intestinal* discharges need not always and of necessity precede the recovery from collapse.

But what I want to direct especial attention to is the logical, or rather the philosophical, error which is made by Dr. Johnson in supposing that the argument under consideration has any trace of value whatsoever. Let us take it again. He asks, Does the effect of treatment on collapse support the theory "that a drain of liquid from the blood is *the essential* or *the chief* cause of that condition?" In reply, he says the purging may continue and collapse yield, and then he infers that this last fact is a complete destruction of the said theory. Dr. Johnson is constantly appealing to logic. Let us examine his argument by the rules of logic. First, let us put it in the form of a syllogism; it resolves itself thus:—

Major.—The chief cause continuing, the effect cannot cease.

Minor.—Purging continuing, collapse ceases.

Conclusion.—Purging is *not the cause* of collapse.

Dr. Johnson may object to this as a true syllogism of his argument, but he must hold to it or take one of the alternatives I shall subsequently state.

First, let us deal with this syllogism while it is before us. The conclusion will be seen to be just what Dr. Johnson wants, what he states, and what, in his subsequent proceedings, he assumes to have been proved. Yet it is at once evident, on comparing it with the major premise, that the terms are different, and with little reflection it is seen that the difference is all-important. Meanwhile, the major premise is also the very statement he uses, put in his own terms, as to what he openly states, and for the rest only stating clearly what he covertly suggests, assumes, and supposes as his basis.

I need not dwell further on the above syllogism, which I will call Syllogism 1. Any one will see that when the major affirms something of the chief cause, the conclusion must be also of *the chief cause*, not of *the cause*, for of *the cause* the major said nothing at all, and the conclusion cannot extend its scope beyond the major.

Now, if Dr. Johnson objects to Syllogism 1, he has his choice of the following:—

Syllogism 2.—*Major.*—The chief cause continuing, the effect cannot cease.

Minor.—Purging continuing, collapse ceases.

Conclusion.—Purging is not the chief cause of collapse.

Or Syllogism 3.—*Major.*—The only cause continuing, the effect cannot cease.

Minor.—Purging continuing, collapse ceases.

Conclusion.—Purging is not the only cause of collapse.

Now, suppose that Dr. Johnson selects Syllogism 2. This is a perfect syllogism, there is no escape from it logically, but it serves admirably to show how dangerous logic is in physical inquiry. The major premise is all wrong. It is not true, as Dr. Johnson covertly asserts, that the chief cause continuing, the effect cannot cease. It is much more true that the chief cause *alone* continuing the effect is sure to cease. For a chief cause cannot be an only cause; that of course stands on the face of the matter, for there must be some fellow-causes for it to be chief over. Now, if any of these fellow-causes cease, the effect may—(or, indeed, I may leave the potential mood)—it must cease, in spite of the continuance of the chief cause. Let us take an instance. Suppose we say that General Moltke's genius was the chief cause of the series of Prussian victories, must I, then, hold that so long as Moltke's genius energises the Prussian victories must continue? Why, suppose his army suddenly lost its Medical staff, and the soldiers would not fight for fear of not having their wounds properly attended, where would the victories be? Yet General Moltke's genius may be the chief cause of Prussian victories. Or, to take a simpler instance, suppose we say the wind is the chief cause of the ship's sailing, must we hold that as long as the wind blows she will sail? Suppose she furls her canvas or casts her anchor. Yet the wind may be the chief cause of the ship's sailing. So also, suppose we say purging is the chief cause of choleraic collapse, must we hold that as long as the purging continues the collapse must stay? Suppose the stomach takes to absorbing liquids again, yet purging may be the chief cause of choleraic collapse.

Thus Syllogism 2 is invalidated by the falsity of the major. There remains for Dr. Johnson's last retreat Syllogism 3. This, again, is a good syllogism, like number 2, but it is equally unfortunate in its components, as far as Dr. Johnson is concerned in it. For, first, the conclusion, even if it were ever so valuable generally, is out of the question, because no one ever said that purging is the *only* cause of collapse. Even Dr. Johnson does not affirm that any one ever did say so. The most prominent amongst those who have urged the necessity of checking the purging in cholera is the great Dr. Graves; but he says ("Clin. Med.," pp. 318-319)—"Every function of the digestive mucous membrane seems to be totally extinguished, except that of exhalation." This last is the proposition which Dr. Johnson has to combat; but he never fairly faces it. Secondly, the major of Syllogism 3 is wholly inapplicable to any physical inquiry, inasmuch as nothing has an only cause, and nothing is the only thing that has an only cause, and that only cause is the nothing out of which nothing comes —*ex nihilo nihil*—and that is a beginning and an end of *nihil;* but no other thing can be so easily begun and ended. *Every existing thing or succeeding change has causes as numerous as are its components and its circumstances.* Let us again take an instance. Surely, says the man of common sense, opium is an only cause of poisoning. To reply No! is to be laughed at; for such is the common way of communicating a well-known fact; but it is all-essential that physical inquirers should know that such a statement as "opium is an only cause of poisoning" is only a short conventional way of communicating, and must not be allowed to limit his thought on the operation of opium. In the causation of any particular case of poisoning by opium, which is what the said inquirer has to deal with, every circumstance in the ingestion, solution, absorption, and operation of the opium, every affinity which induces such sequences, and a host of other things which were necessary to the occurrence—these all are parts of its causation, every one essential to the effect; and this is the practically useful way of viewing the fact, for the phrase A is the cause of B helps us little in the prevention of the effect except towards keeping away A; but if we are to interfere in checking what is coarsely called the effect of A, this must be done by entering minutely into the actual changes, and their physical antecedents, and destroying the latter that the former may be averted. Opium is to be resolved into its elements, these neutralised, the stages of coma intercepted. To apply all this to the case in point, if any one were to say "Purging is the *only* cause of collapse," the thing asserted would be, on the very face of it, vain. As a matter of physical inquiry, its only use is for mere communication. The mode in which the purging operated must be analysed. The conditions that make the purging thus "cause collapse"—which conditions are, each of them, as much a cause of collapse as is the purging;—all these must be considered; and when they are considered purging is seen not to be the only cause of collapse, but to have an innumerable host of other causes nearly or more remotely aiding or allowing the collapse. Such, for the most striking instance, is, in the particular case, the check to absorption of liquids to replace those which are purged off— an additional cause which, as I have shown in the quotation from Dr. Graves, is recognised by that philosophic Physician. Thus I have shown that Syllogism 3 is unavailable to Dr. Johnson because the conclusion is out of the question, and the major premise is true only of nothing; and thus the logical examination of Dr. Johnson's argument proves that the syllogism (1) he actually uses is logically bad, and that of the syllogisms which he might shift to one (2) is hopelessly wrong in point of philosophy; the other (3) is inapplicable, and, if it were not, is utterly empty from the futility of its major.

The remarkable effects of injecting warm saline solutions into the veins may be left to their natural bearing in favour of a view holding that the condition they relieve is due to the need of the liquid injected.

In Section IV., Dr. Johnson draws an ingenious parallel between small-pox and cholera. This may help his view of elimination when it is shown that the recovery of the patient from small-pox is due to the elimination of the poison rather than to its destruction, or to the evident fact that as the disease progresses the patient becomes indifferent to the poison.

Dr. Johnson's essay is in two divisions, and I have now come to the end of the first. Before proceeding to discuss the second, I will stay to report progress. This first division embodies Dr. Johnson's effort to clear the way for his own theory. All this is natural and proper enough. Before unfolding his own view he must show in some way that it is necessary, or, at least, that there is room for it. No objection can be raised to the procedure, but it is of the utmost importance that we should take a comprehensive view of the plan of his attack. I have shown that the attack is misdirected against a position which is not held, and that it fails to take even that. The proposition which Dr. Johnson assails is that loss of liquid is the *sole cause* of collapse; for though Dr. Johnson never plainly states this as the view he is attacking, but uses such terms as "*the essential cause*," "*the chief cause*," "*due to*," "*results from*," and the like, yet, as I have shown, his argument, if it is not curiously based on an obvious error, does assume that he is opposed by maintainers of the doctrine that loss of liquid is the only cause of collapse. Now we must see clearly that there are no such people, as I have said before, and have quoted Dr. Graves to show that the position which Dr. Johnson had to attack is that "every function of the digestive mucous membrane seems to be totally extinguished, except," &c. He never alludes to this position at all, so that I have not had to defend this, which is my own belief; and in refuting the arguments Dr. Johnson adduced I have been prompted only by the native repugnance to inconclusive argument.

The truth is that no one attributes all the trouble in cholera to loss of liquid alone, so that it appears that the opponent whom Dr. Johnson sets himself, in the first division of his book, to overthrow, is as visionary as I shall presently show to be the machinery which he brings in the second part of his book to the contest.

But what I want here to remark is upon the plan of the work, that it takes a full, though unconscious, advantage of a habit of mind common to "average readers," which habit so managed serves well to further a new theory. No way of establishing your position is more successful than that of *attributing the opposite* view to your opponent. This plan has a double advantage. 1st. It creates in the mind of the said average readers the assumption that one or other of the alternatives offered is true. 2nd. It throws the *onus probandi* on the opponent, with the risk that if he take it up and fail, his failure with his alternative goes to the credit of yours (this serves equally well if you take it up and fail for him). By this means the attention is diverted from any other theories which perchance have equal claims. A good example of the clever use of this is found in what I will call the trick of the homœopathists, because it is consciously done, when they invented the name of "allopathists" for inductive Physicians, and, by thus attributing the opposite of their own dogma to those who hold no exclusive dogma on the subject, gain by every argument against the imputed dogma so much force for their own supposed as the alternative. Dr. Johnson has in the plan of his book followed this course. He assumes that "orthodoxy," as he terms it, affirms that the symptoms of collapse are due *only* to loss of liquid in course of proving that the said symptoms are due *in no degree* to the loss of liquid; should he show that they are not due only to the loss, then this plan puts him in the way of profiting as to the concurrence of the average readers for his own hypothesis by the assumption natural in such readers that if orthodoxy is wrong in the one alternative that is so much in favour of the opposite. Dr. Johnson will excuse me—I do not say for a moment that he does this knowingly, but I wish to state plainly that supposing he had shown ever so conclusively that purging is not the only cause of collapse, that would not go the least step towards showing that the need of purging is the cause of collapse, which is the position which Dr. Johnson founds his practice on.

The setting up of a theory excluding all causes except the purging, and the naming this by the rather invidious and exclusive term "orthodoxy," are measures which, I believe, do, however unintentionally on Dr. Johnson's part, conduce to start and favour by their downfall the assumption that the purging has nothing to do with the collapse at all. The generality of minds deal most fondly and freely with moral inquiries, and in these extremes stand in opposition—if a thing is not good, it is in some degree bad—if an act (which might be charitable) is not charitable, it is somewhat uncharitable. This dwelling of the mind mostly on these alternative moral qualities engenders a disposition to apply the same *method of alternatives* in physical inquiry, where it is out of place. If a thing is not black it need not be in any degree white—it may be green, or blue, or yellow. Of course this is all very plain and rudimentary, but so much are minds liable to misuse a disposition to regard the alternative which is not the false as the true one, that I believe the suggestion of alternativeness in argument must always be treated with the utmost suspicion, and never allowed covert way.

I shall next examine Dr. Johnson's positive statements.

AMPUTATION AT THE SHOULDER-JOINT FOR THE REMOVAL
OF AN
EPITHELIOMA OF THE ARM.

By J. FAYRER, M.D., F.R.C.S.,
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T. D., a Hindoo peasant, aged 30, was admitted into the Medical College Hospital, Calcutta, on June 18, with an extensive epithelioma, occupying the greater part of the left arm and forearm on its outer aspect, and causing great suffering and constitutional disturbance, from the pain and discharge which are constantly present. It appears that when he was a child of two or three years of age he suffered from a severe burn of the left arm and shoulder, owing to his clothes having caught fire. This resulted in a dense cicatrix on the outer and anterior surface, which produced complete contraction of the forearm and general atrophy of the limb, which throughout his life appears to have been of very little service to him. He is now a delicate, rather cachectic, and anæmic person, worn and reduced by suffering and the constant offensive discharge, and probably also from imperfect food, but he is not the subject, so far as I can detect, of any malarious visceral complication. The cicatrix has probably ulcerated on former occasions, but appears to have recicatrised until the last attack—the commencement of his present trouble—which, he says, occurred about six months ago, the cicatrix giving way, ulcerating, and the ulcer spreading until it involved the whole of the cicatrix in the arm—that part of it which extended to the shoulder not being involved, and evidently showing that the original injury had not been so severe as that on the arm. On admission, the entire cicatrix on the arm was an open sore, of a red papillary granulating appearance, and discharging a fœtid ichor. There was no tendency to heal, and the red granulatory irregular surface was evidently an epithelial degeneration of the tissue. The microscopical appearances strengthened this opinion, and after watching him for some time in Hospital, whilst, by good food, tonics, and care, we tried to improve his general health, it was confirmed. During his sojourn in the Hospital, before the operation, he had several slight attacks of intermittent and perhaps irritative fever. He also had constant pain, sometimes of an excruciating character, in the arm. No very manifest improvement taking place in his general health, and the epithelial ulcerations extending, with so much suffering, it was decided that the limb should be removed at the shoulder-joint without any further delay. Accordingly, on August 10, I amputated at the shoulder-joint by antero-posterior flaps. He bore the operation well, under chloroform, and lost very little blood.

August 15.—He has been doing well since the operation. Some of the ligatures have come away. The discharge is healthy. He eats and sleeps fairly.

19th.—Doing well. The last of the ligatures—that on the brachial artery—has come away.

23rd.—Has a slight attack of dysenteric diarrhœa, for which astringents and sedatives were prescribed. The stump doing very well.

25th.—Much better, and the stump rapidly cicatrising.

30th.—Nearly well. On pressing over the glenoid cavity, a small quantity of healthy pus oozes from one corner of the stump. His general health is much improved.

September 1.—He is quite convalescent.

Remarks.—As an amputation at the shoulder-joint there is nothing new or remarkable in this case. The operation itself is frequently performed, and meets with a large proportion of success. But the pathological interest of this true epithelial growth, occurring on the scar of an old burn, is great, and shows that local degenerations of tissue may have an influence in inducing or favouring the production of malignant disease. That this was true epithelioma there can be no doubt; the appearance of the sore and the microscopical structure were equally confirmative of its nature. It appears to me to be evidence of the fact that, without hereditary tendency or other special predisposing cause, a tissue, such as a cicatrix already degenerate, may so much further change its structure that it becomes, if not the originator, at least the ready recipient of the cancerous growth; for although it is probably most true, as it is important to know, that such epithelial growths are the least active and formidable expressions of the so-called malignant type of organisation, yet I believe, as Mr. Paget says, that "in a large survey of them none of the features of malignant disease will be found wanting." Among epitheliomata, no doubt, there are many degrees of malignancy —from the simple warty growths to the most rapidly spreading epithelial cancer of vascular tissues, which spreads as rapidly, and kills as surely, as medullary carcinoma itself; and it is important to bear this in mind when the question of removal by a Surgical operation is mooted. Though it may be impossible to draw any precise line of demarcation between one variety and the other, yet I think it is of the greatest importance that all circumstances in their history, as well as their actual structure and appearance, should be considered, and I am inclined to believe that in cases like the one under consideration, where the morbid growth is primarily attributable to the local degeneration in structure, and where no appearance of infiltration or glandular complication is manifested, that we have, notwithstanding the general appearance and microscopical structure, however indicative they may be of epithelioma, much to hope from early and perfect removal of the disease. In this case the suffering and debility caused by it, and by the constant discharge, were sufficient reason, had no other existed, for attempting relief by an operation, and I trust the result will prove that with the local exciting cause the disposition to recur has also been removed. It is satisfactory to know that beyond slight induration, probably from irritation, there was no glandular complication either in the axilla or elsewhere, and I think we may, in such a case, fairly hope that the disease has been entirely removed, although the cicatrix still in the shoulder will be naturally watched with anxiety for some time.

Report on the Limb by Professor Ewart.—Several portions of the epithelial prominences were submitted to microscopical examination, and they were found to be composed of long fusiform cells with nuclei, many free nuclei, and a great number of the best marked laminated capsules I ever saw.

Calcutta.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

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SAMARITAN HOSPITAL.

CASES OF OVARIOTOMY.

(Under the care of Mr. SPENCER WELLS.)

(Continued from page 342.)

We continue our reports of all the cases of ovariotomy performed by Mr. Spencer Wells in the Samaritan Hospital in the order in which the operations were performed. The following case is of unusual interest, from the fact of iodine injections having been used with temporary success, and the injected cyst not having enlarged afterwards, although other cysts in the same ovary did so:—

Case 84.—Adherent Multilocular Cyst—Six times Tapped—Twice injected with Iodine—Ovariotomy Seven Years afterwards—Recovery.

In August, 1864, a married woman, then 35 years of age, was sent to Mr. Wells by Dr. Drage, of Hatfield, who had watched the case for nearly ten years before. She had been married ten years, and had three children, the youngest of whom was three years and a half old. Her first labour was a very severe one, and she was but little smaller after it than before. She even got larger, but became pregnant again, and suffered so much from pressure on the bladder that the catheter was frequently required during the early months. She went into the Metropolitan Free Hospital, and was tapped there three times during her second pregnancy, a bucketful of fluid being removed each time. Dr. Drage attended her in her second confinement, in October, 1857, and turned the child, an arm having presented. Five weeks after the confinement she returned to the Hospital, and was tapped for the fourth time—twenty-nine pints of fluid being removed. Three months after this tapping she was again in the Hospital, and was tapped twice in February, 1858, the cyst each time being injected with iodine. Some account of these injections may be found in our number of June 12, 1858, page 602. A scruple of iodine and half a drachm of iodide of potassium dissolved in an ounce of water were used and left in the cyst. She did not fill again after the second injection, though she became subject to frequent attacks of severe abdominal pain and tenderness, lying with her knees drawn up.

In May, 1860, she became pregnant again, and Dr. Drage attended her in her third labour in February, 1861. It was perfectly natural. A month after her confinement he examined her carefully, and detected a little fluid in the cyst; but she did not increase much in size till April, 1864. During the four months after this till Mr. Wells first saw her in August, 1864, increase had been considerable. She menstruated regularly, and was certain she was not pregnant. A moveable semi-solid ovarian tumour occupied the lower part of the abdomen, extending upwards half-way between the umbilicus and sternum, and further backwards on the right than on the left side. The uterus was central, freely moveable, unaffected by movements of the tumour, inclined a little to the right side, the os open, the cervix large and soft, the cavity measuring 3½ inches. No tumour could be felt by the vagina below the brim of the pelvis. As there was no urgent symptom, she was advised to wait. She was in the Samaritan Hospital for a week in October, 1864, and was advised to return for ovariotomy when seriously oppressed by the tumour. She was admitted again in December, 1864, after a severe attack of pain and vomiting. Then she went to the seaside, and was again in Hospital in January, 1865. At this time she suffered so much from pain, tympanites, and frequent vomiting, that ovariotomy was not proposed, especially as the tumour scarcely increased in size. She remained at home from March, 1865, till September, 1866, enlarging slowly, and occasionally suffering a good deal. She was readmitted October 2, 1866, when it was found that the tumour was not much larger than before, but that it was surrounded by a large quantity of fluid free in the peritoneal cavity. Then, although the general condition was far from favourable, ovariotomy was decided on after a consultation with Sir Wm. Fergusson. The measurements on the day before the operation were—girth at umbilical level, 52 inches; from umbilicus to ensiform cartilage, 13 inches; to symphysis pubis, 10; and to each anterior superior spine of ilium, 13 inches.

Ovariotomy was performed on October 10, 1866. Sir W. Fergusson, Dr. Drage, Mr. Tegart, and Dr. Poulsen, of Copenhagen, were among the visitors. Dr. Junker gave chloroform. A small opening was first made below the umbilicus, and seven pints of ascitic fluid were allowed to escape. A semi-solid tumour was then exposed. There were no adhesions to the abdominal wall. It was evidently useless to attempt to lessen the tumour by tapping; and as the appearance of the tumour and of the peritoneum were suggestive of possible malignancy, rather than break up the tumour Mr. Wells enlarged the incision and removed the tumour entire. The incision extended from 3 inches above to 6 inches below the umbilicus. A piece of adhering omentum was separated, and a long thin pedicle on the left side was secured by a small clamp and divided. Then a piece of intestine and mesentery which adhered behind the pedicle were separated. Six vessels in the separated mesentery and three in the omentum were tied with fine silk, and the ends were cut off short. One vessel was stopped by torsion, and one in the abdominal wall tied, the end of the ligature being left outside. The right ovary and uterus were healthy. On closing the wound the aspect of the peritoneum again excited suspicion, the membrane being dotted over at small intervals with hard white granules, like grains of uncooked sago. This led to an unfavourable prognosis, but the progress after operation was much more satisfactory than was expected. The temperature only varied between 98 and 100·2, the pulse was never above 102, and the respirations were always about 22 or 24. There was a good deal of sickness on the first and second days after operation, and the urine was scanty, of high specific gravity, 1034. On the third, fourth, and fifth days there was free metrostaxis. The stitches were removed on the sixth day. The clamp came off, and the bowels acted on the tenth day, and the patient was discharged twenty-four days after operation. Her future progress will be observed with interest, on account of the suspicious appearance of the peritoneum.

The following description of the tumour is by Dr. Junker, who examined it carefully to observe the traces of the iodine injections, and also as to any evidence of cancer. It will be seen that the peritoneal coat of the cyst did not exhibit any such appearance as was noticed during the operation on the peritoneum lining the abdominal wall:—

"A large irregular tumour, 11 lb. 13 oz. by weight, which had been surrounded by seven pints of ascitic fluid. It consisted of one large cyst-chamber, into which seven hard spheroid masses, varying in size from that of a cocoanut to an egg, bulged, and which formed two-thirds of its outer wall. The other third of its circumference (posterior portion) consisted of a firm cyst-wall of one-eighth of an inch in thickness. It presented a fibrous structure. The lining membrane of the large chamber was of pale yellow colour, with numerous minute darker depressions, similar to those caused by thrusting pins into moist leather, arranged in equal distances over its whole surface. It presented much the appearance of fresh pig-skin. Besides, there were numerous patches of varying size and shape, with raised borders and a rough, dull ochre-coloured depressed ground, surrounded by a delicate network of injected vessels. No epithelium could be discovered. This chamber contained half-a-pint of thick, viscid, turbid, salmon-coloured fluid, in which flakes of coagulated lymph were floating. The hard masses which partly surrounded this chamber consisted of a coarse trabeculated structure, forming small irregular loculi, some of which contained a white, opaque, curd-like, others a yellow pus-like, substance; most of them, however, a yellow semi-transparent colloid fluid. The peritoneal coat of the tumour was pale yellow, smooth, and shining, except in the neighbourhood of the adhesions which had taken place between the tumour and portions of the omentum and small intestines. Around and into these adhesions small tortuous vessels, arising from the broad and short pedicle, distributed their numerous ramifications. The Fallopian tube, of normal diameter, was closely united to the tumour."

(To be continued.)

THE NATIONAL HOSPITAL FOR THE EPILEPTIC AND PARALYSED.

THE ELECTRICAL ROOM.

A special feature of this Hospital for diseases of the nervous system is the treatment of cases of paralysis and spasm by electricity on a large scale. We believe this is the first Medical Institution in which an electrical room so fully representing, so to speak, the present state of Medical Electrisation, has been set apart for treatment of poor patients. We must not forget, however, that a room has been set apart at Guy's Hospital for electrical therapeutics many years ago. It may, we trust, serve as a model for other Hospitals, and it is to be hoped that, in accordance with the earnest recommendations of the committee of the Medical and Chirurgical Society, our large general Hospitals will endeavour to carry out as fully as possible electrical as well as drug therapeutics. Indeed, we have reason to believe that the example so well set by the National Hospital is now being followed. The room, with its appliances, owes its origin to the earnest desire of the Physicians that the Hospital should give their patients every probable and possible advantage which may be derived from Science. But these Physicians are indebted to Mr. J. N. Radcliffe, the Medical Superintendent of the Hospital, for the proper working out of their wishes. Indeed, to this gentleman great praise is due for the excellent way in which, thanks to his exertions through many months, an important branch of Medical Therapeutics has been brought to bear on the treatment of a class of diseases which incapacitates an immense number of poor patients.

The apparatus used in the electrical room of the Hospital may be thus briefly described:—

1. For the continuous galvanic current, a Muirhead's battery of 100 cells, especially arranged for Medical purposes by Messrs. Elliott Brothers. This battery is charged with a saturated solution of sulphate of copper and water; it gives off a large quantity of electricity of low tension, and acts efficiently without the necessity of recharging for three months. The cells are connected in groups of five up to eighty, the remaining twenty being arranged in two groups of ten; and by means of two revolving discs, most ingeniously conceived, any number of the cells thus connected can be brought into action without the necessity of moving the conducting wires.

2. For the induced galvanic current, Stöhrer's larger volta-electric and Gaiffe's and Duchenne's magneto-electric instruments are chiefly used. The term magneto-electric is applied to the form of inductive apparatus which is set in action by a voltaic cell or cells; the term magneto-electric to those instruments of which the exciting power is a permanent magnet.

The peculiarity of Stöhrer's induction apparatus consists in the arrangement of the voltaic cell. This is so constructed that the instrument acts well and efficiently, without the necessity of cleansing or recharging the cell for about three months, and it is always ready for immediate use. No other Medical induction apparatus appears to be so well adapted for Hospital purposes and for private practice where electricity is much used for diagnosis and treatment.

In addition to Stöhrer's induction apparatus (of which it may be said in passing that there is a large and small size[a]), Mr. Radcliffe also frequently makes use of Duchenne's large induction coil—or rather a modification of this instrument, as efficient but less cumbersome than the original, made for him by Mr. Pratt, of Oxford-street, and set in action by a single Grove's cell.

3. For static electricity a two-foot plate instrument is used, and in addition to the ordinary insulating stool, a very ingenious method of insulating a sofa or bedstead, devised by Dr. Radcliffe, is adopted.

As our present object is simply to give our readers an outline of what is doing at the Hospital, we report the following cases in outline only, and as they were supplied to us.

Cases treated by Electricity.

The first case of paralysis of the portio dura was, at the time of our visit, of eighteen days' duration. The patient was a female, 29 years of age. The paralysis had occurred suddenly, without assignable cause. She was first seen ten days after the attack; at this time the electro-motility of the muscles of the affected side, tested by the induced current (Faradisation), was but slightly, if perceptibly, defective as compared with the sound side. Now Duchenne (de Boulogne), Mr. Radcliffe remarked, has shown that, after the first week, the probability of rapid recovery from paralysis of the portio dura is, as a rule, proportionate to the degree of electro-motility of the paralysed muscles. Guided by Duchenne's observations, Mr. Radcliffe prognosticated a rapid recovery of the case in question, and its subsequent progress has justified the prognosis. The mouth soon recovered its proper position, and the patient was able to close the eye on the paralysed side, but she was still unable to frown and to screw up the lips firmly when the last report was made.

The depressor anguli oris and corrugator supercilii muscles of the affected side, and they alone of all the paralysed and healthy muscles of the face, Mr. Radcliffe tells us, contracted under the influence of the interrupted galvanic current of the continuous current battery. Of the effects of this current more will be said presently; the significance of the fact is not yet clear.

In the second case paralysis of the portio dura occurred in a young female, and the paralysis followed exposure to cold at the time of menstruation, the menses also being partially suppressed. She was first seen thirty days after the attack, the paralysis then being most complete. The most powerful induced currents failed to produce a trace of contraction in the paralysed muscles; but all contracted energetically under a feeble interrupted galvanic current.

This susceptibility of paralysed muscles, Mr. Radcliffe remarked, to the action of a continuous current, when modified in tension, or when contact is made or broken, the same muscles being indifferent to the most powerful induced current, is not peculiar to, although first observed by Baierlacher, Meyer, Ziemssen, and others in, paralysis of the portio dura. Mr. Radcliffe has observed the same phenomenon in certain cases of paralysis of the deltoid, infantile paralysis, and lead palsy. This he illustrated by reference to a case of paralysis of the deltoid under the care of Dr. Reynolds, and to four cases of lead palsy under the care of Dr. Ramskill and Dr. Sieveking. The significance and therapeutical value of the phenomenon have yet to be determined. When present it is found (speaking generally) that the influence of the interrupted galvanic current in causing muscular contraction declines in proportion as the muscles recover their voluntary power, or their power of reacting against the induced current.

In the case in question the interrupted galvanic current was used thirteen times over the paralysed muscles. At the end of this period the muscles had manifestly recovered some portion of their tone. The mouth deviated less, but there was no return of voluntary power; and although the muscles had become less sensitive to the interrupted galvanic current, powerful induced currents still failed to affect them. From this period the paralysed muscles rapidly passed into a state of spastic contraction, giving rise to much distortion on the paralysed side of the face. The electrical treatment was now discontinued. After persisting six weeks the spastic contraction of the paralysed muscles began to diminish, but some distortion of the face (exaggerated at the menstrual periods) still persists, and the patient has recovered sufficient voluntary power to close the eye, to screw up the mouth, and to frown slightly, but the contractility of the muscles under the will is still very defective. An induced current now causes contraction of the corrugator supercilii; but an interrupted galvanic current of sufficient strength to excite contraction of the healthy muscles of the opposite side of the face, does not produce the least effect upon the paralysed muscles.

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[a] Mr. Pratt, of 420, Oxford-street, supplies these instruments in England.

From a careful review of the circumstances of the case, Mr. Radcliffe believes that the course of this case was unaffected by the electrical treatment.

The case of paraplegia above referred to is of interest in this respect. While voluntary power has been recovered over all the muscles of the lower extremities, except the right peronei, electro-motility, whether tested by the induced or by the interrupted galvanic current, is entirely wanting in the gastrocnemii. The presence of voluntary power over a muscle, and absence of electro-motility, has been recognised as yet only in cases of lead palsy and in the paralysis of hysteria. Mr. Radcliffe tells us that, so far as he knows, no cases of any other form of paralysis have been recorded in which this combination of phenomena has been observed. The paraplegia, we were told, followed ordinary myelitis, with which the patient (a male) was attacked nine months ago. He has now so far recovered as to be able to walk with the assistance of a stick.

Notes on the Investigation of the Action of Electricity on Muscles and Centres.

A full knowledge of anatomy is absolutely necessary for the proper application of Medical electricity. Moreover, it is desirable that the Practitioner should know as much as can be known of the Medical physiology of muscles and centres for muscles. A great deal has yet to be done in ascertaining the precise mode of action of electricity on muscles paralysed by disease of nerve trunks and centres, and in experimenting it is most desirable to obtain "known quantities" on which to experiment. Let us illustrate by a common form of local palsy—paralysis of the portio dura. It may be fairly said that this symptom is but an incident. To say that a patient has paralysis of the portio dura is almost as loose as it would be to say he has a cough. It may mean very much or very little. It may pass off without treatment, or it may never pass off at all. We have seen it in infants and in old men. It may be due to disease in the pons Varolii, to tumours within the skull, to disease of the petrous bone, and to swelling of the parotid gland. The nature of the disease damaging this nerve-trunk is most various. When in the pons Varolii it is frequently blood-clot, but sometimes tumour. We have seen it due to syphilitic disease of the pia mater, fracture of the base of the skull, inflammation of the mucous membrane of the tympanum, to external wounds, and to many other causes. We may just add, however, that in our experience this form of paralysis has rarely seemed to have been caused by exposure to cold, although it is very frequently attributed to that cause by the patient. We would suggest, then, that some cases of paralysis of the portio dura in which, from the presence of paralysis of the sixth nerve and hemiplegia of the opposite side of the body —all coming on suddenly together—there can be no doubt the disease is central, and other cases in which the nerve-trunk has been damaged from external injury, should be taken for first trials of the effects of galvanism on muscles. It would be interesting in this way to compare and contrast precisely the behaviour under different kinds of electricity of muscles paralysed by disease of a nucleus and by disease of a nerve-trunk. We must carefully bear in mind—we speak of recent cases—that when paralysis of the muscles supplied by the portio dura nerve passes off, we cannot be sure that it has passed off because galvanism was used. For we know that paralysis of the portio dura from central disease—we do not say from disease of its nucleus—will sometimes pass off without any particular treatment. Indeed, we scarcely know how it will be possible to estimate precisely the therapeutical effect of galvanism in recent cases of paralysis due to central disease. The persistence of hemiplegia from disease of the corpus striatum seems to be nearly altogether a question of the size of the clot effused, and not a question of the Doctor's therapeutical skill. If the clot be a very small one, the patient will rapidly recover; if a very large one, he will certainly remain paralysed. Before passing to further illustrations, we may remark that each of the various forms of spasm of the face, and they are not few, should be carefully considered in an inquiry as to the therapeutical and physiological effects of galvanism.

We think that the muscular region which the corpus striatum commands is one in which it is most desirable that experimental investigations should be first made, with a view to obtaining a more complete knowledge of the physiological action of galvanism on muscles in various states. Disease of the corpus striatum is frequent, and causes hemiplegia—from numbness to paralysis of the limbs, the arm being frequently quite motionless. But there are other conditions of muscles of this region—the region of the limbs our chief voluntary organs—viz., irregular movements (chorea), and convulsive spasms (epileptiform seizures). One Physician has expressed his conviction that to disease of the corpus striatum or of convolutions near it unilateral chorea is due, and that to disease of the hemisphere near the corpus striatum, and perhaps of this body itself, certain epileptiform fits are owing. At all events, the various *conditions of muscles and muscular groups* of this region—let us limit ourselves to the arm, which seems to be the limb over the intelligent movements of which the corpus striatum chiefly presides—should be compared and contrasted. For besides permanent paralysis, continuous or intermittent irregular movements, and occasional spasm of the muscles of the limbs on one side (which symptoms might be called hemiplegia, hemichorea, and hemiepilepsy), there are to be found other conditions which have obtained special names—*e.g.*, the contracture of the arm and leg (which form of muscular disorder seems to occur only in the hemiplegia of children), tremor, and rigidity. Besides, there are to be met with a few cases in which spasms, jerks, irregular movements, and contractures are so varied or mixed that it is not easy to put in words what sort of muscular disorder is the most striking phenomenon. We should, however, study from health all variations of muscular life, without undue adhesion to any views and theoretical explanations the terms epilepsy, chorea, and contracture may be supposed to carry.

It seems not improbable that age has much to do with the condition of muscles which enervation of the corpus striatum or its region brings about. With few exceptions profuse irregular movements are not seen before voluntary movements are learned, nor after they have been fully acquired. Then, as we have said, contracture (which seems to be halfway betwixt irregular movements and spasm) very rarely begins after early childhood. These differences are possibly due to incomplete physical development—the young corpus striatum not being sufficiently equilibrated with the rest of the organism. But the exact position, nature, and degree of the disease must have much to do also in determining the sort of muscular disorders of the limbs in young children. But on most of these points, although there are speculations, we have no positive information. We can only study with precision the outward phenomena —the muscular disorders in what we may safely call the limb region, if not the corpus striatum region. We may almost say that from paralysis, through chorea, to occasional spasm, there are different degrees of muscular life in time— first time in the common sense of the age of the patient, and, second, in the sense of the time of the whole organism. The one may be supposed to account for the differences in the nature of the *permanent* condition of muscles, and the other for variations of movement from almost *constant* rigidity through nearly *continuous* irregular movements to *occasional* attacks of spasm—attacks sometimes occurring with an approach to periodicity easily stated in solar time. In one sense we live in time; but in another, time—the relation of nutritive changes of tissues to the possibilities of the functions of organs—lives in us. No doubt, the movements of the muscles in chorea, epilepsy, etc., are rough indications of the degrees of changes in the organ impaired in relation to the general nutritive changes of the body. We can, however, at present only state roughly how the movements vary by hours, days, or weeks.

This part of the inquiry would be chiefly physiological. In cases of occasional unilateral convulsive seizures, the muscles could rarely be caught by the operator in the midst of their fault. Yet, in some cases of unilateral epileptiform seizures, the patient is subject to local spasm—so called warnings or partial fits—which last for a long time—*e.g.*, half an hour. Then it is believed by some that the galvanism influences the nutrition of the centres, on affection of which centres the disordered muscular actions depend.

Now, of course it is undesirable to have to make physiological experiments on muscular disorders when we are not satisfied—for most people do not admit that the seat and nature of the changes in cases of chorea and epilepsy are known—as to the nature and place of the central disease. But let us estimate so far as we can, taking health—not chorea, contracture, epilepsy, etc.—as a standard, the varying nature of muscular disorders, according to region affected, the age of the patient, etc., the time of the part and the time of the organism, and thus we shall get a valuable, although maybe a provisional, kind of order for our investigations of electrical physiology. This can be done without any theory. It may give order to our work to give names (if we can do so without sacrificing too much freedom) to the different states of muscular disorders—(1) in region affected, (2) in evolution of movement, (3) in age, and (4) in the changes of movement in time, etc. In most of the cases of disordered functions of muscles just spoken of, the damage to structure is slight, but probably widespread. Cases of palsy, loss of function, in which nervous structure is coarsely and largely damaged, are met with in plenty, as in hemiplegia in adults. In adults, too, we may often infer the condition of nerve-tissue on which hemiplegia depends—at all events, betwixt the two things, tearing up by blood-clot, and softening by plugging of the middle cerebral artery.

So far we have spoken of cerebral centres, but the rest of the arm-nervous-system—from the corpus striatum to the ending of nerves in muscles—presents an excellent field for studying at once the evolution of movement and the action of galvanism on muscles paralysed, or impaired, by damage at various points of this nervous system. We often speak of paralysis of particular muscles when probably we should speak of loss or impairment of power to execute complex movements, in which movements single muscles are only partly engaged.

The physiological effects of galvanism on muscles paralysed by section of nerve-trunks, when sensation and motion are both lost together, can often be tried in the arm, as the ulnar nerve is not unfrequently divided by accident. This we would call a geographical paralysis. Then in the arm we meet—besides such random mischief as division of the ulnar nerve-trunk leads to—defect in a higher evolution of motion, a loss of a *physiological movement*, such as one for moving the shoulder. This sort of paralysis can rarely be shown to be due to defect in any one nerve-trunk, on the peripheral side of the brachial plexus at least, and seems to us to be most probably owing to disease of some centre, possibly vasomotor, in the spinal marrow itself; yet it may be due to disease of a nerve-trunk of or above the brachial plexus; but, strange to say, there is no evidence whatever, so far as we know, to show what effect section of any *one* of the spinal nerve-roots, or of *one* of the cords of the brachial plexus, would have on the movements of the limb. This kind of knowledge, moreover, it is most desirable to obtain, and, to get it, it is needful for the student of the evolution of movement to work with the Medical electrician at all sorts and degrees of local loss of power of the arm. The application of galvanism might enable us to decide more certainly on the exact degree and place of paralysis of muscles. As a matter of speculation, one would suppose that the higher disease was placed in the increasing complexity of movement; the more general and the wider would be the loss of power in the limb. The corpus striatum would seem, from pathology, to be made up of Physiological Units, each representing the whole of the movements of the limbs.

We trust these remarks may not be out of place. It is not by merely arranging our work into sections that progress is made. Each differentiated part of the organism is—to use again the term we have borrowed from Spencer—a physiological unit; and thus each Doctor, although differentiated to be an electrician, an ophthalmologist, a laryngoscopist, should be, in Spencer's sense of the term, a physiological unit of the whole organism of Medical Science.

It is quite clear that to obtain scientific evidence to show what Medical electricity can do, it is a mere waste of time to apply galvanism to paralysed muscles without careful consideration as to the seat of the disease and as to the nature and degree of the damage to the nervous centres. In this, as in therapeutical investigation, our anatomy and physiology must largely influence us. The wide meaning of facial paralysis from damage to the portio dura nerve fully illustrates this. It is quite true that in not a few cases of this form of local palsy we cannot get to know to what it is due. We must, then, be content to be ignorant, and seek for instances in which the cause is less doubtful. From a broader basis we must study how *nerve-trunks can* suffer, and this study is best begun by watching changes—the two kinds of atrophy—in the optic disc. We may then with more certainty consider how *particular* nerve-trunks are damaged from the peculiarities of their geographical position and functional connexions.

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Medical Times and Gazette.

SATURDAY, DECEMBER 1.

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THE NEW FRENCH CODEX.

Contrasting this with our own much decried British Pharmacopœia, two things will at the first glance strike the reader, the one being the great size of the French volume compared with our own, the second the fact of its being published by a private firm, Messrs. J. B. Baillière et Fils. While we have been waiting the French have been working, and the result of their labours is now before us.

The work of revising the old Codex was intrusted into the hands of a committee numbering among its members men whose reputation is worldwide; of these we may cite Dumas (President), Bouchardat, Grisolle, Regnauld, Mialhe, and Guibourt. The new volume is ushered in by a somewhat prolonged preface, explaining the actual position of therapeutics, the preparations made for the new Pharmacopœia, and the objects aimed at by its compilers. Now-a-days, as the commission point out, it is a matter of no little importance that those whom the increased opportunities for travel induce to leave their native country should have an opportunity of renewing their stock of medicine ordered according to the Pharmacopœia of one country, in any other to which they may direct their footsteps. To this end the new French Codex contains not only the relations which the weights of other countries bear to their own, but also in a sort of appendix some of the principal medicaments prescribed in foreign Pharmacopœias. There is one good feature in this edition—that is, the equitable tendency shown to call preparations by the names of their inventors, or some other particular apart from their composition, as Pilules de Belloste, Pilules de Blaud, Emplâtre de Nuremberg, Laudanum de Rousseau, Laudanum de Sydenham, etc. There is certainly one advantage in so doing—which is, that patients avoid the danger should preparations going by the same common name in different Pharmacopœias, and having a very different composition, be substituted the one for the other. We have heard complaints of the trouble involved in ascertaining the exact nature of such a preparation as the Pilules de Sedillot, prescribed for a patient by a French Physician of high standing, when the remedy had to be obtained at a spot where no French Codex could be got at. But had the preparation been designated anyhow, the Codex must have been consulted by the dispenser.

The French Pharmacopœia, like our own, begins with an account of the various articles employed in Medicine, arranged according to their source—whether from the animal, vegetable, or mineral kingdom. The supply of information with regard to the two former groups is of the most limited character, being merely the name of the plant in the vernacular and in scientific language, the name of the natural family, and the part of the plant employed. There is no description of the drug as it comes into the druggist's hands, nor any reference to any illustrated work in which a good representation may be seen, such as we have in our own Pharmacopœia; neither is there any list of the pharmaceutical preparations got from the raw material. Thus,

"Cascarilla officinalis, *Croton Eluteria* Swartz; Euphorbiaceæ.

"Bark."

And again:—

"Cantharides, *Cantharis vesicatoria* Geoff., Melos vesicatorius L., Coleopterous insect.

"*Observation.*—One should choose cantharides that are dry, new, whole, green, of a peculiar penetrating odour, and not putrid. Those should be rejected which are yellowish, bruised, mixed with elytra and detached limbs, with dust and *acari;* finally, it is useful to estimate the cantharidine which they contain. 100 parts of powdered cantharides should yield at least ·50 of cantharidine."

In these respects it resembles the United States' Pharmacopœia, but differs from it inasmuch as the vernacular name is put before the scientific, the reverse being the case in the American work. Occasionally a few remarks are appended to the name of the substance, even in the organic portion; but as a rule this is not the case, except in the inorganic division, where short notices, somewhat similar to our descriptions and tests combined, are appended to the titles of the drugs.

The Pharmacopœia, properly so called, is arranged not in the alphabetical order, as are ours and the American, but after a certain arbitrary plan, whereby, first of all, the elementary bodies used in Medicine are described, then acids, oxides, alkalies, ammonia and its compounds, chlorides, bromides, iodides, etc. The second group comprehends vegetable acids and alkalies, the salts of vegetable acids, and salts containing vegetable bases, soaps, alcohols and their derivatives, and so on. But the enormous number of formulæ involved in this second part will be better understood when it is taken into consideration that directions are given for preparing syrups, simple and compound, honeys and oxymels, conserves and chocolates, electuaries, confections, and opiates, jellies, pastes, oleo-saccharates, sugars, tablets, and pastilles; in short, all the combinations adopted by the experienced Physician for preventing the patient from becoming disgusted with one particular form of remedy are here made officinal. Many ancient formulæ of great complexity are retained, presenting a strong contrast to the simplicity of prescription commonly observed at the present day: witness the *vinum scilliticum amarum,* which contains no less than a dozen different ingredients, whilst the *acetum antisepticum* is composed of fifteen, the *balsamum tranquillans* nineteen, and the officinal *theriaca* so many as *fifty-nine* different substances. In strong contrast with this complexity of composition stands the comparative inactivity of some of the substances employed, as *Ajuga reptans, Anchusa italica,* a variety of ferns, cucumber seeds, butcher's broom, frogs, snails, etc. Moreover, we find numbers of substances having similar actions, as three species of *Anemone,* five of *Aristolochia,* and so on in many other instances. The following is the style in which their recipes are drawn up:—

"*Compound Cinchona Wine.*
(Vin de Quinquina Composé.)
Vinum de Cinchona Compositum.

Yellow Bark	100 grams.
Bitter Orange Peel . . .	10 ,,
Chamomile Flowers	10 grams.
Alcohol at 80° (Baumé) . . .	100 ,,
Generous White Wine . . .	900 ,,

Bruise the cinchona, cut up the orange peel, macerate with the chamomile in the alcohol and wine for ten days, shaking from time to time; percolate and filter."

It will also be noticed that the French chemical nomenclature is founded on the old instead of on the new system, and there is no double system of symbols as is proposed for the British Pharmacopœia. In the American Pharmacopœia we have a neater volume than either our own or the French, the Materia Medica being arranged in two lists, a primary and a secondary, the former containing the most important articles used in Medicine, the latter those less frequently employed. But neither of these two foreign works is arranged in as convenient a manner as our own, even although this may be capable of improvement. Ours does not supply the Physician, as the French one does, with so many ready formulæ, on the one hand; and there is no separation of drugs into a primary and a secondary set, as in the American, on the other; it is easy of reference, especially in the form in which we expect to see it in the new edition, and it does not contain such a multitude of obsolete and obsolescent articles. It is a noteworthy fact, that neither the French nor the American Pharmacopœia contains any account of the doses of the various medicaments prescribed. The authors of the French Codex give utterance to the hope that the work issued under their auspices may become the basis of a universal Pharmacopœia to be used by all nations, but we fear they will be doomed to disappointment. Notwithstanding that the Codex is not faultless, there are many useful things to be learnt from it—for instance, unlike our Pharmacopœia, the powdered drugs are enumerated under a distinct head, and directions given for reducing the crude drug to this form. These cannot fail to be useful in districts where the powder cannot readily be obtained or will not keep well. One little peculiarity of nomenclature we would notice as being convenient—which is adopting the nomenclature of protochloride and deutochloride of mercury for calomel and corrosive sublimate, this terminology neither inferring the 100 nor 200 theory as to the numerical equivalent of metallic mercury. The excessive richness of this Pharmacopœia in processes may be illustrated by this very subject of calomel, for we find no less than three plans for obtaining it in the pulverulent form. We think, in conclusion, we may safely say of this French Codex, that whereas there can be no doubt but that we may learn a good deal from it, still we may be excused for thinking that its authors might have learned much more from our abused publication than they seem to have done. We sincerely hope that the day is not far distant when we shall have an opportunity of comparing the British Pharmacopœia in its new and improved form with this the French Codex of 1866.

THE WEEK.

EXTRAORDINARY OUTBREAK OF CHOLERA AT CAMBERWELL.

ALTHOUGH cholera may now be looked upon as having almost ceased in London, it is still very unwilling wholly to depart from us, and, as an example of this, we give the following particulars of an extraordinary outbreak which has recently taken place in Camberwell, in the southern part of the metropolis.

The house in which this outbreak took place is situated in the Lyndhurst-road, Peckham, in Camberwell parish. It was occupied by the family of a miller, who had five months previously deserted them. The inmates of the house at the time of the outbreak consisted of the deserted wife, and seven children aged from 14 months to 15 years. In consequence of the desertion they had been reduced to poor circumstances, and had been obliged by degrees to part with their furniture in order to procure the necessaries of life. On November 10 the baby was attacked with diarrhœa, but was not sufficiently ill to alarm the mother, who looked upon the child as suffering from teething, and did not send for a Medical man. She took the baby to bed with her that night, and on the following morning found it dead by her side. On Monday the mother went to the Registrar for the purpose of registering the death, but he referred her to the Coroner's officer, and it was arranged that an inquest should be held on the following Friday. In the meantime, however (on the Tuesday), the mother was herself attacked with diarrhœa, and was on Wednesday sent by direction of her Medical man to Guy's Hospital. On Thursday two of the children were also sent to Guy's Hospital, these likewise suffering from diarrhœa. We are informed that all three have died. It was not until Thursday evening, the 15th, that the sanitary authorities became acquainted with this outbreak; but they at once (that evening) sent an inspector to the house, who took the four surviving children to the workhouse, leaving the dead body of the infant in the house. On Friday the inquest was held, and the eldest two children (a boy and a girl) attended to give evidence. During the holding of the inquest the boy was attacked with choleraic symptoms, and the girl was also attacked later the same evening at the workhouse. The former had a slight attack, but the latter had a very severe one, though, we believe, both are now doing well. The remaining two children have escaped the infection. The house, though small, was not one which would have come under parochial inspection unless special notice had been directed to it on account of defective sanitary conditions. It had a good and sufficient water-supply, and was properly drained, and, though it would not perhaps have been considered a model of cleanliness, still the dirt was only such as would naturally result from the straitened circumstances to which the family had been reduced by the desertion of the father. There had been no cholera previously, and there has been none since. The body of the infant could not, of course, be removed until after the inquest, but all the things were immediately taken out of the house by the inspector and either burnt or disinfected, the house itself being also subjected to a process of thorough disinfection. What renders this outbreak the more extraordinary is that no assignable cause can be discovered for its occurring. In connexion with this case it is gratifying to be able to state that the master of the boy went down from town two or three times, and, we believe, paid money to procure comforts for the sufferers.

HUNTER *v.* SHARP.

The principal Medico-legal event of the week is the action brought by the notorious advertiser, Dr. Hunter, against the *Pall-mall Gazette* for libel. The Court of Queen's Bench is, at the time of our going to press, crowded with our Medical brethren, many of whom are undergoing examination for the defence. We must defer any comments on the case until next week. We would only add that it is gratifying to find that the *Pall-mall Gazette* was not, as alleged, one of the papers which inserted Dr. Hunter's notorious letters on consumption as an advertisement.

A GEM FROM ST. PANCRAS.

At a late meeting of the St. Pancras Vestry, a Mr. North made a long speech, the sting of which deserves to be preserved in our pages. Referring to the expenditure of something less than 1600*l.*, rendered necessary by the precautions against cholera and the treatment of patients, he said that "there would have been no necessity for so heavy an expenditure of money, if the Doctors of London had not leagued together in a conspiracy to frighten the people and cajole them out of their money." So, at least, runs the report of Mr. North's speech in the *Marylebone Mercury*. If true, it only shows that the human mind has certain stages to pass through in its upward path towards civilisation, and that Mr. North must have arrived at the stage at which the people of Marseilles were in 1719, and the people of Sicily at the present day, in so far as they believe that pestilences are "got up" by the Doctors for their own purposes. Were it not for local representative assemblies, such as that of St. Pancras, and for the fact that they represent the sensible men of the district and the others too, a good deal of information, valuable to the historian and the psychologist, would be lost, as to the extent of popular superstition in the nineteenth century.

REWARDS TO MEDICAL OFFICERS OF HEALTH.

It is said that most of the parishes in which cholera has prevailed are behaving with a creditable degree of liberality towards the Medical Officers of Health, who have laboured at great risk to themselves, and with entire loss of the usual autumn holiday. Dr. Hillier, of St. Pancras, it is said, is to receive £200; the people of Shoreditch and Whitechapel each give their Medical officer £100; the Poplar people £120, and the Bermondsey £50. This instance of just liberality deserves its meed of praise.

ABSOLON *v.* STATHAM.

We believe that Mr. Statham has absolutely refused to receive any pecuniary assistance from the Profession towards defraying the costs of the defence in the late most iniquitous action. In doing this, we think that he has taken a very high and honourable standing. Mr. Statham will have, however, what we are sure he will value much more than any pecuniary testimonial —the sympathy and moral support of a large number of his Professional brethren and of the public. We hope that the Committee, of which Dr. Richardson is President, will find some way that may be consonant with his feelings of publicly conveying to Mr. Statham the unanimous verdict of the Dental and Medical Professions on his conduct.

SYSTEMATIC INSULT TO PUBLIC MEDICAL OFFICERS.

The Medical Profession occupy an anomalous position. They hold a vast number of important and responsible offices —for performing the duties of those offices in the interest of the public they receive not a single penny—and yet they are not only rarely thanked for their services, but they often seem to be surrounded in the performance of them by an atmosphere of suspicion and distrust, which would be explicable only on the suspicion of the Medical Practitioner having private ends to serve, which ends were inimical to the due performance of his accepted duties. The attendance at Hospitals and Dispensaries given by the Medical Profession is worth to the public in Poor-law Medical attendance many thousands a year—for it the Profession get absolutely no payment—and any future or distant reward that may in former times have waited on the successful performance of Hospital duties, is becoming year by year more doubtful and shadowy; yet we are informed that in certain institutions it is the practice to establish over the Medical officers in the performance of their public duties a system of espionage to which no gentleman can submit without being lowered in his own and other people's estimation. It is bad enough, as is the rule at some London institutions, for the Medical officers to have to enter their names in a book on the days of their visits, but that an entry should be kept by a clerk, for the benefit of the committee, of the hours and dates of the Medical officers' attendance, is a system of implied insult to which no gentleman, we should think, could submit. This, however, is the treatment to which the Medical officers of the Leamington Hospital are to be subjected. We are very glad to see that Dr. Samuel J. Jeaffreson has resigned his post of Physician rather than brook such indignity.

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CHARGES AGAINST MEDICAL STUDENTS.

The alleged riotous behaviour of the Medical students of London has occupied during the past week a large space in the daily papers. An exaggerated and untrue statement in the *Pall-mall Gazette*, which has since been contradicted, and the foolish proceedings which were in some sense due to Miss Mary Walker's ill-advised exhibition of Medicine and millinery, have been made the ground of very sweeping charges not only against the great body of Medical students, but against the professors and lecturers at the Hospitals and Medical schools. As usual, the daily and not the Medical papers are made the channel through which charges are brought and reproofs administered by writers who profess to belong to the Medical Profession. If the linen be so dirty, would it not be wiser to wash it at home? But we deny the whole of the allegations. For instance, a person signing himself "A Medical Tutor," writes to the public through the *Times* to inform them that the above occurrences "indicate that there exists a tendency to return to the old type of Medical student, which all those who wish well to the Medical Profession were beginning to hope was extinct." After specifying the alleged impropriety at St. Mary's Hospital, and the "most ruffianly scene at St. James's Hall," the writer goes on to say that "it is not difficult to point out the cause of this increasing demoralisation of the Medical students of the present day." The cause is, "the management of our metropolitan Medical Schools and the carelessness or timidity of the teachers in those schools." He charges the professors of certain schools, which, however, he does not specify, with habitually signing false certificates of students having "regularly" and "diligently" attended lectures when the opposite has been the truth, and then he asserts that the spirit of competition is so strong between some Medical professors "that the grossest misconduct, the most open impertinence, and the lowest ruffianism are tolerated, for fear of driving men away to other schools." We might think ourselves excused from noticing this tirade, were we not under an impression that silence might be construed into an acquiescence in "A Medical Tutor's" view of the moral, or rather immoral, condition of professors and students. We leave the former, if they think it worth while, to answer for themselves; but there are certainly sufficient data to enable us to answer for the students, and to give the lie to their accusers. Considering that there are in round numbers a thousand Medical students in London, the vast majority of whom are "at a loose end," under no restrictions of collegiate discipline after lecture hours, and separated from the good influences of home, we assert that their behaviour deserves a high meed of praise.

There is no doubt that it is common for foolish lads who get into a row, and are taken before a police magistrate, whatever be their calling, to represent themselves as students of Medicine; but, even with these additions, how very seldom during the last half-dozen years have Medical students figured in the police reports, whilst during the whole of that time the machinery of Medical teaching in London has gone on without the faintest threatening of a disturbance on the part of the students at any school. In all respects their general conduct will certainly bear comparison with that of young men at Oxford and Cambridge, and of subalterns in the public services. We regret that a Medical tutor—if the signature be not a mere *nom de plume*—should allow himself in a public print to stigmatise a class of young men who, exposed to no ordinary trials, are, in general good conduct, below no body of equal size in the kingdom. The letter ends with a sketch of dissecting-room porters throwing about bodies as if they were bags of sawdust, which seems to us equally in good taste and worthy of credence.

Since the above was in type we have seen another letter in the same journal bearing "A Medical Tutor's" signature, which reiterates the charges made in the former. The second letter is in answer to a temperate rejoinder to the first which appeared in the *Times* from the Dean of Faculty of St. Mary's. The writer now states that his remarks do not apply so much to the smaller as to certain of the larger schools. We can only say that, if his allegations be true, we should be glad to see the evidence laid before the Profession whom it chiefly concerns. But we may be allowed to look with reasonable suspicion on anonymous accusations made in the columns of a general newspaper.

MORTALITY OF TROOPS IN CHINA.

It is now some months since information reached this country as to a very large amount of mortality and sickness that had occurred among the European troops of the Imperial army stationed at Hong Kong. A Select Committee of the House of Commons, ordered in March last, sat on this subject, and the inquiry did not conclude before the latter end of July, the particulars of which have appeared in a Parliamentary paper published a few days ago. More than twenty witnesses were examined, including H.R.H. the Commander-in-Chief and Earl de Grey and Ripon, the then Secretary of State for War. The evidence and appendices, which occupy a Blue Book of 450 pages, give important information as to the number of troops normally required to garrison Hong Kong, and the amount of barrack accommodation then in existence for those troops. During the period to which the attention of the Committee was particularly directed (from March, 1865, to March, 1866), the 2nd Battalion of the 9th Regiment lost one-tenth of its strength by deaths, and 200 by deaths and invaliding home, out of a strength of 838 men; the 2nd Battalion of the 11th Regiment lost, during a period of nine months, 258 men (or more than a third of its strength) by deaths and invaliding; and the 99th Regiment was sent to the Cape in a very shattered and debilitated condition. The direct cause to which these deplorable results were due was, as shown by the evidence, an insufficiency of barrack and Hospital accommodation for European troops. The necessity for an extension of barracks here was fully known to the home authorities five years ago, when Lord Herbert, the then Secretary for War, decided that a barrack should be built at Kowloon capable of holding 1000 men. Claims to the site proposed were, however, raised by the Colonial Government, delays took place, and in April of last year, when the 2nd Battalion of the 11th Regiment were expected to arrive, 889 men were quartered in barracks which, at regulation tropical scales of 1000 cubic feet per man, should only have been occupied by 582. This normal deficiency was, of course, seriously supplemented by the arrival of the last-named battalion, and was met by overcrowding the already swarming barracks, by hiring buildings, by quartering 250 men, married and single, in mat huts at Kowloon, and by occupying the ship *Hercules*, which had some time before been condemned by the admiral of the station as unsafe and useless. The sanitary deficiencies of the buildings hired need not be epitomised, but it appears that their united rents amounted to £18,610 per annum. The indirect causes of this sickness and mortality appear to have been some misconception among the authorities at home as to the barrack capacity at Hong Kong and the neighbourhood, partly founded on the idea that sufficient room could be found for the Imperial reinforcements by the withdrawal of the Asiatic troops and a battery of the Royal Artillery; by official delays at the Admiralty as to the removal of the marines then serving in Japan, and by the inadequacy of one battalion of European troops for the performance of requisite garrison duties at Hong Kong and Kowloon, which compelled General Guy to retain in China the reinforcements that were originally designed by the War Office for Yokohama. It also appears that the presence of this number of troops in China is considered necessary merely for the performance of sentry duty, which, at night, is very detrimental to the health of Europeans, and might, in most cases, be as easily performed by hired watchmen. It was proved before the Committee that the employment of Asiatic troops to aid the Imperial forces would not only be of great advantage to the latter in a sanitary point of view, but would cause a decrease in the military estimates. This course, however, has been objected to by successive War Secretaries for many years, on questions of policy and constitutional government. This recapitulation of official blunders is in itself startling enough, but it is terrible to think that imperfect knowledge at head-quarters can produce results that will reduce regiments serving abroad to as helpless a state as though decimated by war and famine.

STATUS OF CONSULTING PRACTITIONERS.

We have received the following note in reference to this matter:—

"Sir,—*Apropos* to your leader on 'Change of Doctor' in the *Medical Times and Gazette* of last week, will you be so good as to define the exact status of a Consulting Practitioner irrespectively of meeting his brethren in consultation—*e.g.*, what practice is he accustomed to take and at liberty to take, *per se?* And, more especially, can he, without breach of propriety, see and prescribe for, or give an opinion to, the patient of another Medical man, unknown to him, and therefore without his sanction? "I am, &c.

"Clifton, November 26." "Medicus.

To the last question we must ask what is meant by *the patient of another Medical man?* Do the words "patient," etc., mean one who habitually consults Dr. A., but who in a fresh illness, without sending for A., consults Dr. B.? If so, we can only say that a patient has *primâ facie* a right to consult whom he pleases, and that if he should send for B. instead of his habitual attendant A., B. is at liberty to take the case whether A. knows it or not. If by "patient" is meant a person actually attended by A. at the time for acute illness, we should think B. could not without breach of propriety go and advise, or give an opinion, unknown to A. It is a thing which the instincts of a gentleman would rebel at, because there must be, or may be, a conflict of opinion which might put either party in an embarrassing or false position. The other part of the letter requires an answer longer than is convenient to give now, forasmuch as the only answer worth giving is to say what are actually the modes of practice extant in London amongst Consulting Practitioners of good position. This, however, we will endeavour to do soon. We shall thus be spared from the charge of dogmatism, because we shall be historians rather than critics.

THE PARISIAN MEDICAL SCHOOL.

The famed Medical School of Paris does not seem to be in a very satisfactory state at present. Many of the members of the Faculty have recently resigned, and the names of the *agrégés* who take their places are scarcely so well known as to excite any very great anticipations of future glory. There is a great cry for the re-establishment of the *concours*, but the recently published report of a Portuguese commissioner, who had been deputed to visit the principal physiological schools in Europe (it is a speaking fact that he did not come to England) shows that something more is wanted. Robin, the famed professor of histology, delivers his lectures in the public theatre at the School of Medicine without any special preparation of the place for histological research; no microscopes are to be seen in the lecture-room, and of course practical demonstrations are unknown; all that the pupils learn of the appearances of tissues is from chalk drawings or from large designs displayed at one end of the hall. Any really practical instruction as to the preparation of objects for the microscope is, of course, impossible, so that what the student acquires from such a distinguished man as M. Robin must be obtained from the lectures he hears him deliver; nor does M. Longet seem to be in a much better position. We are glad, however, to learn from the *Gazette Hebdomadaire* that there is a prospect of speedy improvement.

FROM ABROAD. — REMUNERATIONS FOR ATTENDING CHOLERA PATIENTS AT BRUSSELS—THE PARIS SOCIETY FOR THE PROTECTION OF INFANTS.

During the recent visitation of cholera few cities, taking its size into consideration, have been tried more than Brussels, and on all hands the devotion of the Medical Profession during the three months the pestilence lasted, and the value of its services, have been loudly acknowledged. The scourge having entirely disappeared, the municipality has undertaken the grateful task of compensating those Medical men who so readily devoted themselves to the service of the poor, trusting to the generosity of the burgesses for that remuneration which the exigency of the moment prevented their previously stipulating for. Unfortunately, they do not seem to have been aware that the corporation had a still more sacred duty to perform than to acquit themselves honourably of an implied debt. They had to husband the resources of the civic purse, for did not poor and rich alike contribute to this? The consequence is that they have determined to pay for the devotion, labour, and abnegation lavished in their service, the fabulous sum of one and a half francs per diem, just as they pay any of the street-sweepers or other *employés* whose services have been put into requisition. The Doctors are invited to send in specifications of the time they have employed, which, after due verification, will at once be paid for. We need not say that the entire Profession is indignant at this conduct. "Take our services if you cannot pay for them," they say, "and we will even give them with pleasure; but do not insult us with an offer of so derisive a remuneration." M. Vleminckx, President of the Academy of Medicine, has constituted himself the mouthpiece, in the *Indépendance Belge*, of the Medical body, and in no measured terms characterised the proceedings. The *Cercle Médical*, or Brussels Medical Club (to which we drew attention in our number for April 28), in the hope that a similar institution might be established in this country—a hope that will be very imperfectly realised by the projected Medical Club now in process of organisation, which seems to be intended as a mere imitation of the ordinary West-end club), organised for the protection of Medical interests, has had a meeting and issued its protest, and while acquitting the civic administration of a deliberate desire to insult those who have but just ceased their dangerous devotion, point out the injurious effect such a procedure must have on the public estimation in which the Profession ought to be held. We believe the Profession intends declining all payment in favour of the unfortunate beings it has already done so much to assist.

In reference to the discussion at the Academy of Medicine upon the deplorable condition of nurse-children in France, M. Barrier, formerly Professor of Medicine at Lyons, furnishes some account of the proceedings of the Society for the Protection of Infants, of which body he is the President. He says that attempts having been in vain made by it to organise superintending committees in each canton of the departments in which the nurse-children are for the most part located, the Society has had recourse directly to the Medical men of these localities, and from them has received a very ready response, "and it gives it great pleasure to proclaim the eagerness which these gentlemen have shown to place at its service a zeal and disinterestedness which, however frequent their occurrence in our Profession, are none the less worthy of eulogium." Already by their aid the Society has organised a Medical surveillance in 340 communes or hamlets—67 Practitioners having lent their aid to this end. The Society endeavoured to interest the private nursing *bureaux* in their schemes for ameliorating the condition of the children provided through their agency with nurses; but in this quarter, as might be expected, it has met with little or no response. But the most melancholy obstacle to success is the indifference of the families of these little unfortunates. "In spite of all the publicity which has been given to its labours, the Society has not yet attracted to the extent it is desirous of doing the attention of the numerous artisans and small dealers, who, compelled (?) to send their new-born infants to a distance, would, under its auspices, have additional chances of preserving them in health. Doubtless this indifference will diminish with time, for it is too saddening to believe that it can be calculated, even among a small number of those we have to reproach with it." One great cause of the mischief is the carelessness observed in respect to the characters of the nurses—ministers, mayors, and others testifying to these with a dangerous complaisance. This is an abuse the Society has set itself to correct, insisting that no nurses shall be employed whose characters and capabilities have not been well scrutinised. We fear that the great difficulty the Society will have to struggle with is the selfish indifference of parents.

TREATMENT OF CHOLERA ON BOARD THE "BELLEISLE."

(From a Correspondent.)

In recording any and all particulars of cases that have been admitted on board the *Belleisle* Hospital Ship during the epidemic of this year, no classification has been made under the somewhat confusing heads of diarrhœa, cholerine, and choleraic diarrhœa, but all have been arranged under the single term cholera, dividing this disease into three stages, those of premonitory diarrhœa, collapse, and consecutive fever. Of the twenty-two deaths recorded below, twenty occurred in the second, and two in the third stage of the disease.

(1) The quinine treatment consisted in the hypodermic injection of twenty grains of quinine in solution, this being effected by means of a large syringe, manufactured for the purpose by Messrs. Weiss. As this plan of treatment was new, the worst cases were selected, all but two being in a pronounced state of collapse on, or soon after, admission. A saturated solution of quinine was also rubbed into the thighs and body of the patient. The skin injections were followed by no serious local results in any case.

(2) The calomel system consisted in the administration of four grains every fifteen, or five grains every twenty minutes, until the stools became green or greenish black. It was observed that under this treatment there appeared to be a somewhat unusual tendency to severe consecutive fever.

(3) The carbolic acid plan consisted in giving to the patient a very dilute filtered solution of carbolic acid as a drink, *ad libitum*, and one or two injections (per anum) of the acid with a little starch.

(4) In the *nil* plan, nothing was given except small quantities of beef-tea, water, and milk.

(5) The five cases classed under the "mixed" plan include—three to which calomel and carbolic acid were given, one quinine and carbolic acid, and one general astringent remedies.

Post-mortem examinations were made in nineteen out of the twenty-two fatal cases. The appearances common to seven-eighths of those examined were:—Congestion of the lungs, varying in degree, but never reaching the state of non-crepitancy; presence of dark, fluid, tarry blood in *all* the cavities of the heart, with clots, variable in size, and often fibrinous; ecchymoses about the outer surface of the heart, particularly round the root of the aorta; congestion of the inner coat of the small intestine, varying in degree of intensity; the presence of a large quantity of gruelly and sometimes pinkish fluid in the alimentary canal; the total absence of urine in, and contraction of, the bladder:—

Treatment.	Total number of cases.	Slight.	Severe.	Deaths.
1. Quinine	19	3	16	12
2. Calomel	12	5	7	2
3. Carbolic acid	12	5	7	3
4. *Nil*	37	28	9	1
5. Mixed	5		5	4
Total	85	41	44	22

QUARANTINE.

(From a Correspondent.)

Scarcely has the order of the Privy Council been despatched for the release of the *Atrato* from quarantine at Southampton when we are apprised of the arrival at that port of another ship, *The Tyne*, infected with yellow fever, and this, like her sister ship, has had to be subjected to detention for quarantine.

As the question of quarantine has been brought so very prominently before the public, and has been the subject of much criticism in the public papers, we intend this week to make some remarks on its expediency, especially with reference to the passengers who arrived by the *Atrato*.

The diseases *par excellence* against which at the present day there is any reason for enforcing quarantine in England are cholera and yellow fever, as these appear to be the only diseases which are at all likely to be introduced into England by ships, and as most, if not all, other infectious and contagious diseases are always to be found prevailing here to a greater or less amount. But to what extent is protection likely to be obtained by a recourse to a system which some of us had begun to consider as numbered with the things which were, and which has been stigmatised as barbarous? For, as Dr. Russell says in a quotation in Gooch's unanswerable article on Quarantine, "a disposition to repeal the quarantine laws is a periodical mania which comes round after a term of years." Necessary, however, though quarantine may be, it may be enforced in a barbarous way, and there are accusations against the manner in which it has just been imposed in this country, which we may shortly consider.

First, with reference to the usefulness of quarantine as a preventive of cholera. It may here perhaps be as well to give a short account as to how this disease may have been brought to this country last year.

In May, 1865, cholera was prevailing to a great extent among the Mahommedan pilgrims who had gone to Mecca to perform the rites peculiar to their religion, which are carried out in the valley of Arafat. The principal "function" of the pilgrims is to hear the sermon on Mount Arafat; and, to show the importance which attaches to this particular portion of their duties, Mr. Radcliffe, in his report last year to the Privy Council on the diffusion of cholera in Europe, states that "the pilgrim who is too late for the sermon on Mount Arafat loses his labours for that festival irretrievably;" hence the immense congregation which is annually gathered on that day, and which in some years has been estimated to reach the enormous number of from 700,000 to 800,000 people; and these—many of whom are exhausted by fatigue and privation, and without proper clothing—are huddled in confined districts and are devoid of protection from the weather, being subjected to a burning sun during the day, and to the cold and heavy dew at night.

After the ceremonies of the pilgrimage in 1865 were finished many of the pilgrims arrived at Alexandria, and on June 2 the first recognised case of cholera was noticed, and about the 14th vessels leaving that port did not have clean bills of health. On that day the deaths from cholera in Alexandria were 34, and they increased daily to the 28th, when the deaths amounted to 214; they then slightly decreased on the succeeding four days, but again, on July 3, reached 228, the highest number recorded. On the following day they fell again to 176, and then decreased daily until, on the 27th, 4 deaths only are stated to have occurred.

About the middle of July vessels, which were looked upon with some suspicion, arrived at Southampton from Alexandria and other places in the Mediterranean, and of course continued periodically to arrive. But it was not until the 22nd of September that the first case of undoubted Asiatic cholera occurred, though there had previously been cases of sickness which were not totally devoid of choleraic symptoms. A little epidemic of cholera then took place, the result being 60 cases and 35 deaths.

Asiatic cholera was thus fairly in England last year, and in a place in which it had not usually been first noticed; the ports whence, in previous epidemics, it had developed itself being situated on the East coast.

And not only so; but with the exception of a slight outbreak at Epping (which, by the way, might probably be traced to Southampton), no other place was that year infected with cholera; and there is no doubt but that the epidemic of this year has sprung from the seeds which were last year scattered from Southampton.

But no quarantine was enforced at Southampton against the cholera, because we believe the authorities look upon it as utterly useless in the only way in which it would be possible to enforce it in England. As Mr. Simon says (in the last annual report of the Medical Officers of Privy Council), "If we translate into practical language what this would mean, if England had quarantine against the Continent, it would be, that ten days would be the minimum time in which any person, sick or healthy, could enter England from the Continent—that, for instance, our present ninety minutes between Calais pier and the Dover railway station would become an affair of at least ten days, and that no national advantage from quarantine could be promised, if this rule were in any single case relaxed or evaded."

Let any one try to realise the details in his own mind, and he will soon see that quarantine against cholera is simply impossible when the disease is raging in France or Belgium. Still, when the cholera is not prevalent in this country nor in France, but confined, as it was last year, to Mediterranean ports, it is a pity that some kind of efficient protection is not afforded.

We will now consider the question in relation to yellow fever. It will not, however, be necessary to recapitulate at any length the particulars which gave rise to the recent detention of the *Atrato* at Southampton, as they are still fresh in the public mind; but we will inquire into the necessity of quarantine in this and similar cases.

The *Atrato* arrived at Southampton on the 12th, and had a case of yellow fever on the previous day, spite of a letter which appeared in the *Times* stating that there had not been a fresh case since the 5th. The vessel was sent to the Motherbank to perform quarantine, and the passengers, after some detention on board, were removed to the *Parana*, the crew having been sent to the *Menelaus*. The vessel, passengers, and crew were released from quarantine late on Thursday, the 22nd, or early on Friday, the 23rd, though a fresh case had occurred among the crew on board the *Menelaus* on the preceding Friday. This is a short history of the matter.

Quarantine may be enforced for two reasons—to keep out disease from ourselves, and to avoid interruption to commerce. Now, if persons infected with yellow fever were allowed to land without let or hindrance, the consequence would be that all quarantining countries—such as Portugal, for instance—would in all probability subject all ships from this country to an indiscriminate quarantine, either of observation or otherwise. This would be a severe blow to a commercial country like this; and it is to avert this evil we are compelled to impose a quarantine on infected arrivals. With regard to the ship itself, it is undoubtedly right that she should be subjected to a process of complete purification; for the general view of this part of the question has found expression in the last annual report of the Medical Officer of the Privy Council, wherein he states that "in proportion as the belief is untenable that the disease is personally contagious, in such measure the alternative must be accepted, that infectiveness is in the body of the ship;" and, again, "that the ship which spreads infection does so irrespectively of the persons who are in it, whether they be healthy or diseased." So far, then, as concerns the ship at least, quarantine may be looked upon as necessary.

Of course, a government worthy of the name felt no difficulty in dealing with this yellow fever arrival. There was sure to be an outcry raised whichever way action was taken in the matter. If the passengers and crew had been allowed to come on shore, the Southampton authorities would undoubtedly have been up in arms, and that portion of the commercial interest of the country which is mainly concerned in the Mediterranean traffic would also, in all probability, have lent its voice to the local outcry, more especially as Southampton is in constant and almost direct relations with Alexandria, the medium of communication with India. Here, then, was a question of immense importance which the Government was in a moment called upon to decide—viz., whether the *Atrato* passengers and crew should be compelled to perform quarantine, and so run no risk of the Mediterranean commerce being subjected to interruption; or whether, on the other hand, the passengers and crew should be allowed to land at Southampton, and so run the risk—which we fear would be little short of a certainty—of quarantine being imposed upon British arrivals in the Mediterranean and other ports.

Under such circumstances, the Privy Council—the department of the Government charged with administering the quarantine laws—could feel no hesitation in adopting the principle which is generally held to be right, that individual interests must give way to the public weal.

Now for the hardship of which the passengers complain—of being detained in the very midst of the infection, and then being sent to the *Parana*, where they were subjected to further detention on account of a fresh case occurring on board the *Menelaus*, to which ship the crew, as we have before stated, had been removed.

First, with regard to the detention on board the *Atrato*. Surely the passengers would not have wished to have been sent along with the crew to the *Menelaus*, for it does not appear that their quarters on board the *Atrato* were not comfortable. And as there was not another ship in readiness to which they could be sent, it was an absolute necessity that they should remain where they were; more especially as there did not seem to be much fear of their contracting the disease. As soon as a ship was procured they were removed to her.

Secondly, with regard to the other portion of the complaint, we hardly see how the Government could have acted differently, considering the conflict of opinion which there is as to the length of the incubation period of yellow fever, and the consequent uncertainty which there is as to the time which it is absolutely necessary should elapse after the last attack before persons who have been subjected to the influence of the contagion should be looked upon as free from infection. The difficulty of fixing a period was exemplified in the case of the outbreak at St. Nazaire in 1861. On that occasion it appeared that the first case on board the *Anne Marie*, one of the infected ships, was seventeen days after leaving Havana, and on board the *Arequipa*, another ship connected with the outbreak, the "first case (says the Medical officer of the Privy Council when speaking of this outbreak(a) of yellow fever) occurred on August 5; but her next case did not occur till seventeen days afterwards; nor did her fifth case occur till twelve days after her fourth case; nor her sixth case till ten days after her fifth." And he goes on further to say—"What limit of days, then, could M. Mélier have fixed as proving the non-infectedness of a ship? And in the absence of sufficient data for reasonably fixing such a limit, could he have done better than apply his regulation to every suspected ship? It is at least evident that the ten days' limit which France and Sardinia had adopted on the Report of the Sanitary Congress, and *à fortiori*, the six days' limit which England has deemed sufficient for her own purposes, would, under the circumstances, have been valueless."

(a) Eighth Report of Medical Officer of the Privy Council, p. 471.

We are inclined to think that the Government did what was best, both for the protection of commerce and for the protection—to a certain degree—of our community from the chance of adding a new member to our already too full list of zymotic diseases. No doubt now that the detention of yellow fever ships and their passengers and crews is considered to be a national necessity, more ample arrangements will be made for the comforts of those who may have to be detained, so that their temporary imprisonment may be made as slightly irksome as possible, and they may not be able to complain of anything but the detention itself.

NOTES OF A VOYAGE TO AND FROM AUSTRALIA.

LETTER No. II.

(From a Correspondent.)

WE arrived in Australia in the late summer, the season corresponding with the middle of our August, and the weather reminded me of that of the summer of 1864 at home, excepting that there is something in the quality of the atmosphere that counteracts the depressing effects of the heat. On February 26 we had a fine specimen of a real "hot wind." The first breath of air on deck was like the draught near the mouth of a furnace, and as the day grew on the whole sky was pervaded with a dull angry-looking reddish haze, the horizon all round blurred and rendered indistinct by clouds of dust and smoke, hurried along by the strong north-west wind, which blew so hard that as we lay on the lee side of the pier the vessel lay over, in spite of an extra cable to steady her, as if we had been in a good breeze at sea, though the wind had nothing but the masts and yards to act on. In Melbourne the thermometer stood at 105° in the shade. After sunset the wind suddenly shifted in about three minutes from north-west to south, and, though the sky was red with the light of the bush fires, the contrast of the bitter south wind (which sent the thermometer down to 61°) to that which had been blowing all day was considerably too strong to be pleasant. The great heat of this day did not cause the feeling of languor that a far smaller degree does elsewhere. I had occasion to go up to Melbourne, and was walking about there during some of the hottest parts of the day without feeling at all distressed. The dust was far more annoying than the heat. It seems that new comers usually feel the heat less than those who have been some time in the country. The sudden change of temperature in the evening was only an exaggerated example of that which occurs very frequently and constitutes a serious drawback to the climate. I made many inquiries as to the course of phthisical cases arriving in the colony, and as to the origination of cases there. At the Hospital I was told that a large number of advanced cases of phthisis are received there from England, and that, as a rule, they all die in a few weeks. The amount of this disease originating in the colony is so much in dispute there that I can say nothing more than that it does exist as a colonial disease. It is, of course, very difficult to determine how many of those who fell victims to it brought its germs with them from England. I made many inquiries also of those who had had opportunities of seeing the course of more favourable cases, where the disease was in an early stage and the patient was in favourable circumstances. The evidence was somewhat conflicting, but I must say that the testimony of those who seemed to me to have considered the matter most fully and most scientifically was decidedly that the climate is of very questionable benefit in cases of phthisis. It is very much to be desired that some of those who have had several years' experience in the colony would give us its results in reference to this important question. My own brief experience of the climate was, with the exception already mentioned, very agreeable, and especially so at Geelong. This pretty little town is built on land that slopes upwards from the north-west side of Hobson's Bay, which a few years since was covered with pathless bush. It has passed with wonderful speed through its period of active money-making life, during which its streets gained those noble banks and offices, and its suburbs the pleasant villas, that still adorn it; but the current of business has been diverted to Melbourne. The grass is now growing in streets once filled with bustle, and one solitary Dutchman discharging a cargo of gin was the sole representative that I saw of the merchant ships that used to crowd the piers. But these things make no difference to its genial atmosphere, or to the beauty of the bay with the great plain that sweeps in a graceful curve round its western side, and then swells into a mountainous ridge, crowned with the three peaks of the "Yon Yongs" beyond, and to the west of which may be seen the distant outline of Mount Macedon. If I had to choose a home from the places I visited in Australia, I should fix it at Geelong. In the gold-mining districts I found many objects of interest which would, however, be somewhat out of place in a Medical communication. The romance of digging has in most places been superseded by regular prosaic and scientific mining. Rheumatism and dyspepsia were the diseases I heard most of, and among those who have risen rapidly into wealth, without principle or culture to keep them steady, there is a good deal of delirium tremens. The drinking habits of the colony are, I was told, far more moderate than in the wild times of the gold fever; but still there is a vast class with whom a "nobbler" of brandy is the inevitable accompaniment of every bargain, and the indispensable pledge of friendship.

With regard to the Medical institutions, the Hospitals which I saw at Melbourne, Geelong, and Ballarat remind one forcibly of home. At Melbourne the General Hospital is well situated, surrounded by pleasant gardens, very clean, and well ventilated. Almost the only peculiarity in connexion with it is the extraordinary mincemeat system upon which its honorary appointments are made, there being no less than sixteen honorary officers, besides four House-Surgeons, for four hundred patients. There is a fine lying-in Hospital: but the most remarkable building in our line is the Medical School. It stands within the University grounds, and is handsomely built of stone. It forms three sides of a square, the front being occupied by two large lecture theatres—that on the right anatomical, the other chemical. The right wing contains a splendid dissecting-room, lofty, well lighted, its walls covered with anatomical plates. There are separate rooms for injecting, putting up preparations, etc., a lavatory for students, and a large room for the Professor, with microscopes, books, chemical apparatus, and materials—everything, in fact, that could be desired for preparing illustrations or conducting original researches. In the other wing are a laboratory, with every needful appliance, a library and reading-room for the students, the anatomical museum, and the porter's residence. Altogether, I doubt whether, even in London or Paris, any school would be found to exceed this in the completeness and usefulness of its arrangements. The plan was suggested by Dr. Halford, the Professor of Physiology, and carried out by the Government.

The number of students at the school is as yet small; but as the colony grows the school will increase. The University recognises the lectures, etc., of the European schools, so that where a student happens to have been obliged to emigrate with an unfinished curriculum, he may complete it at Melbourne.

From all I heard and saw I should judge that our Professional brethren swarm as thickly in the colony as at home, if not more so. It is no rarity to find Medical men in other pursuits, from farming downwards. I saw an M.D. of Paris acting as porter at the Melbourne Hospital. Homœopathy reproduces itself in the colony with pretty much the same characteristics that it possesses at home. The same forms of quackery that infest us here turn up, some in an aggravated type. For example, almost every railway station that I remember was polluted by an immense placard with the words "Impotence and Sterility" in coloured letters about a foot long, the manifesto of a quack of the "manly vigour" school, who disgraces by his membership both the Apothecaries' Company of England and the Legislative Assembly of Victoria. Holloway's pills and ointment are in high repute, and the colony must swallow annually some millions of the former and smear itself with some tons of the latter.

Before I turn to the beginning of my homeward voyage, let me say that one point in the natural history of the colony, as far as I saw it, was the genial and hearty hospitality which I met on every hand, in circles Medical and non-Medical, from some to whom I had been more or less known before, and from many to whom I had been an utter stranger. Among the pleasantest remembrances of my journey are the reminiscences of the days thus passed on shore.

THE MEDICAL HISTORY OF ENGLAND.

By B. W. RICHARDSON, M.A., M.D., F.R.C.P.,

Senior Physician to the Royal Infirmary for Diseases of the Chest.

THE MEDICAL HISTORY OF NOTTINGHAM.

(Continued from page 567.)

THE GENERAL HOSPITAL, NEAR NOTTINGHAM.

THIS Hospital was built in the year 1782. It stands on Standard-hill, and is admirably placed, being in every sense out of the town from its elevation, although now, as regards the surroundings, within the town.

RULES FOR ADMISSION OF PATIENTS.

Benefactors of one hundred pounds or upwards and subscribers of five guineas or more annually have the privilege of recommending six in-patients and twenty out-patients in the year, but not more than two in-patients in the house at one time. Benefactors of sixty guineas and subscribers of three guineas or more annually may recommend three in-patients and nine out-patients in a year, but can only have one in-patient in the house at a time.

Benefactors of forty guineas or upwards and subscribers of two guineas or more annually may recommend two in-patients and six out-patients in a year, but can have only one patient in the house at a time. A proportional privilege is allowed to all who are both benefactors and subscribers.

Benefactors of ten guineas are entitled to recommend two out-patients in a year for the term of ten years; and subscribers of one guinea annually have the same privilege during the continuance of such subscription.

The chief magistrate of any body corporate, the overseers of any parish, or the person appointed by any society giving a donation or subscription annually to the Hospital have the same power to recommend patients as a benefactor or subscriber to the amount, or of equal value.

No person can recommend a patient whilst his subscription is in arrear, nor can any persons be admitted patients who are able to subsist themselves, and pay for medicines; every person is discharged by the Committee within two months after admission, unless the Physicians and Surgeons have reason to believe the patient may receive some considerable benefit by a further trial.

No person can be admitted a patient (except in case of accidents, which are taken in any hour of the day or night, beds being always kept ready for that purpose), without a recommendatory letter, signed by a subscriber or benefactor.

In case of death, the person, etc., who recommended the deceased, must either remove the corpse or defray the burial expense; and if a distant patient be not removed on his discharge, the Governors send such patient home at the parish expense, by an order from a justice of the peace.

Governors who recommend patients at a distance from Nottingham are desired to send beforehand a letter directed to the Resident Surgeon Apothecary, with a short statement of their case, drawn up by some Physician, Surgeon, or Apothecary, that some judgment may be formed whether they are proper objects of the charity.

The following descriptions of persons are held to be disqualified for admission as in-patients, unless by special permission of the Weekly Committee—viz., women big with child; persons of disordered intellects; such as have incurable ulcers; cancers not admitting operation, nor the hope of relief from other means; confirmed epileptics, consumptives, or dropsical persons in their last stages; children under 6 years of age, except in cases requiring operation, or chirurgical skill, such as could not be obtained at home; any who appear in a dying condition, or evidently incurable; any whose cases admit of equal relief as out-patients.

RULES FOR NEW WARDS FOR CONTAGIOUS CASES.

Any patient affected with continued, remittent, or scarlet fever, measles, small-pox, or other contagious disease, may be admitted on any day of the week, and without the recommendation of a governor, by the Resident Surgeon-Apothecary, either on his personal inspection or on the certificate of a regular Medical Practitioner, stating the particular disease; but notice must be given to the Resident Apothecary, and his instructions followed respecting the time and manner of the patient being brought to the Hospital.

The wards for the reception of persons labouring under the disease mentioned in the former rule are open to domestic servants of all orders of society, and to the assistants and apprentices of manufacturers or tradesmen; but no patient of this description is admitted until the representatives of the family in which such patient is living have entered into a written agreement to pay a fee of one guinea to the Medical officers, and the further sum of ten shillings and sixpence weekly to the funds of the Institution, during the stay of the patient, and also to remove the body immediately, in case of death.

The Weekly Committee have the power of remitting any payment made in compliance with the preceding rule.

MR. WHITE'S STATISTICS OF THE GENERAL HOSPITAL.

My very good friend and, in "lang syne," fellow-student Mr. Joseph White, Surgeon to the General Hospital, prepared, for the last meeting of the British Association for the Advancement of Science, a most elaborate paper on the statistics of this Institution. I have the pleasure herewith to reproduce his valuable labours in a condensed form, but in fair embodiment of all the important facts:—

Admissions of Patients, according to the Sexes, in the Ten Past Years.

There were admitted into the Hospital during this period 6936 males, and 4880 females, being 100 males to 71·3 females —a proportion which has been found to hold very nearly during each of the ten years, and which agrees within a very small number with similar returns from fifteen other provincial Hospitals.

From a collective return of ten of the London Hospitals, obtained by a Committee of the Statistical Society, the proportion of males to females was found to be 1191 to 1143, or 100 to 75·7; whilst that obtained from a similar source by the Census Commissioners was 1482 to 1081, or 100 to 72·8.

Though there appears to be nothing remarkable in the total numbers admitted, still, when classified according to the diseases, the disproportion in one or two instances is somewhat striking. For diseases of the digestive organs, for instance, 131 males and 229 females were admitted into the Hospital. This may, to some extent, be attributed to the more sedentary occupations of the female population, especially those employed in the lace and hosiery manufactures.

Again, for diseases of the eye 114 males and 181 females were admitted, a disproportion evidently caused, firstly by the large number of cases of scrofulous ophthalmia in the young female of the poorer districts; and, secondly, by the number of cases of affection of the optic nerve, resulting from the close work for several hours a day by many of our females in mending and embroidering lace, especially black lace, before being finished for sale.

Ages of Patients in relation to certain Accidents and Diseases, in Ten Years.

The total number admitted into the Hospital suffering from burns and scalds was 270, and of these 201 were under 12 years of age. If we divide these again into males and females, we find that whilst 67 boys were admitted for these accidents, there were also the great number of 134 girls. These almost invariably received their injuries in their parents' houses, and generally in their parents' absence. The nature of the employment afforded to the female population of Nottingham is either to take the mother away from home for many hours in the day, or if at home to prevent her attending to her household duties. The result is, that the boys, if too young to go to work, are either sent to school, or (much more frequently) allowed to play in the streets; whilst the girls from a very early age are employed in various kinds of household work or allowed to congregate for play in the only living-room of the family, in which there is generally a fire, and that almost invariably unprotected. These causes would also account for the large proportion of males over females admitted in the classes of mechanical injury, as fractures, etc., the result of accidents out of doors, which, under 12 years of age, have borne the ratio of 113 males to 37 females.

The only other class to which I would refer under the head of age is that of Diseases of the Lungs, in which the great bulk has consisted of Pulmonary Consumption in different degrees of development. The total number of cases of Affection of the Lungs admitted into the Hospital during the ten years was 894 (484 males and 410 females), and of these 602 were between the ages of 15 and 30 years, the great proportion of these being of 20 years and upwards. It is a remarkable fact that though the deaths from Phthisis from 15 to 20 are very numerous (from 15 to 25 I believe much more numerous than at any other period of life), the admission of such cases into the Hospital under 20 years of age forms but a very small proportion of the whole. This may be accounted for by the natural desire on the part of those parents, whose means may enable them to do so, to watch over and nurse their younger children during the period of decline, and also by the more rapid course which the majority of cases of Phthisis seem to run at that earlier age. It is thus that though the number admitted into the Hospital under 20 years is small, the number of the same age attending as out-patients is considerably greater. A few years later, and (from death or other causes) the mother's care and help are lost. The children have then gone out into the world, and for some years have been able to provide for themselves; and it is then, when from failing health their means of support are gone, that the majority of Phthisical patients (especially females) seek admission into the Hospital. As the ages of 20 to 30 give the greatest number of admissions, so do the ages of 30 to 40 yield the greatest number of deaths from Phthisis in the Hospital. These are generally amongst the patients whose health has long been failing, and who are not only without the means of subsistence, but also without friends. The rules of the Hospital forbid the occupation of its beds by cases of confirmed Phthisis, and an endeavour is therefore made to remove those whose cases are considered hopeless—the younger the patient (as a rule) the more probable is it that she may have friends to whom she can go. The difficulty of removal increases in a direct ratio with age.

Results of Treatment in various Classes of Cases.

Of the 11,816 admissions there were 649 deaths, or about 5½ per cent.; of these 454 occurred from the following causes, viz.:—Fever, 111; diseases of the heart and dropsy, 63; disease of the lungs, 130; and the results of serious accidents, including burns and scalds, 150. This rate of mortality is, I believe, low as compared with the majority of provincial Hospitals, and is certainly, as might be expected, much below those of London, where the mortality generally ranges from 9 to 11 per cent. As in most other Hospitals, the difficulty of excluding cases of confirmed phthisis, although by the rules inadmissible, is every year proved by returns. The mortality arising from this cause is about 1·1 per cent. upon the whole admissions. The same difficulty as to the exclusion of such cases exist even in the metropolitan Hospitals, where the same rule not only exists, but is tried to be rigidly enforced. Of 1968 deaths from all causes in these Hospitals, no less than 322 were from consumption, being from one-sixth to one-seventh of the total mortality.

Occupations of Patients admitted.

Of the 6936 males, 4121 were engaged in the manufacture of lace and hosiery, the staple trades of the town; whilst of the 4880 females, 2013 were similarly employed. In the period to which these tables refer there were more accidents of a character requiring serious operations, and frequently resulting in loss of life, admitted from the colliery and agricultural districts than from the whole of the large manufacturing population with which we are surrounded.

Diseases incident to Seasons.

By the admissions at each period of the year we find pulmonary complaints increasing with advancing autumn, steadily rising during the winter months, and generally experiencing a sudden and great increase in March and April. Fever, on the other hand, generally begins to increase in July, rises through August and September, and rapidly declines during October and November.

The total number of patients has been greatest from November to June; smallest from July to October. It is curious to observe the effect which the approach of any popular local festival—as the fair, races, Easter, or Whitsuntide—almost invariably produces in diminishing the population of the Hospital.

(To be continued.)

REVIEWS.

Du Diagnostic des Maladies du Système Nerveux par l'Ophthalmoscopie. Par E. Bouchut. Paris: Germer Baillière. 1866.

Two Lectures on Optic Neuritis. By Jonathan Hutchinson. *Royal London Ophthalmic Hospital Reports.*

Clinical Data respecting Cerebral Amaurosis, more especially with reference to that Form supposed to be connected with the Use of Tobacco. By Jonathan Hutchinson. *Reports by the Medical and Surgical Staff of the London Hospital.* Vol. I.

On the Use of the Ophthalmoscope as a Help to Diagnosis in Diseases of the Nervous System. By John W. Ogle, M.D., F.R.C.P., Physician to St. George's Hospital. *Medical Times and Gazette,* June 9, 1860.

On some of the Forms of Disease of the Eye constituting the Condition commonly called Amaurosis. By Ernest Hart, Ophthalmic Surgeon to St. Mary's Hospital, and Lecturer on Ophthalmic Surgery in St. Mary's School. London: John Churchill and Sons, New Burlington-street. 1864.

A writer in a recent number of the *Royal London Ophthalmic Hospital Reports* begins an article on Defects of Sight in Diseases of the Nervous System by saying that the Physician is as much indebted to Helmholtz as the ophthalmologist. M. Bouchut's work proves the truth of this remark. It is a most valuable contribution to the study of diseases of the nervous system. We propose to allude to some of the signs which have been obtained by the use of the ophthalmoscope to help the study of cerebral diseases by one careful observer, who is not a specialist in eye diseases. The paper last on our list is one in which many valuable hints were given long ago on this subject. As, however, that paper is easily accessible to our readers, we now content ourselves with drawing attention to it.

There seems to be among those Physicians who do not use the ophthalmoscope an impression that there is nothing wrong to be seen in the eyes when blindness occurs from disease of the brain. This is an error. We exclude, of course, such cases of amaurosis (in the old or loose sense of the word) as depend on paralysis of the ciliary muscles, which occurs sometimes after diphtheria. But it is an exceedingly rare thing—in Physicians' practice at least—to find even slight defect of sight from disease of the brain—or we might even speak so generally as to say blindness, with any symptoms betokening local disease of the nervous system—without finding marked changes at the backs of the eyes; indeed, the contrary appears to be the fact. There are often most striking changes when the patient complains little or nothing of failure of sight—when, for instance, he can read ordinary newspaper type easily, and now and then even minion. Hence we see that the symptom amaurosis sometimes appears as a warning of cerebral disease before the disease amaurosis calls the patient's attention to failure of an important sense. In cases of partial coma, and also in cases of loss of speech, it is necessary to look at the patient's optic discs in order to be certain whether they are affected or not, as there may be no circumstantial evidence to point to anything wrong with them. Now, M. Bouchut has entered into such points as these with great care; and they are, we think, of such great importance that we shall, in support of what we have said, make one quotation from the most interesting chapter of his most interesting work. M. Bouchut says:—"We should form a very incorrect idea of the influence of lesions of the back of the eye on the sense of sight, if we thought that, in all cases of cerebral disease, ocular lesions are invariably announced or revealed by feebleness of vision. In fact, when we examine without distinction, and we must do so in future, the back of the eye by the ophthalmoscope in all persons having symptoms of disease of the brain or of the cord, we shall often find in the papilla, in the choroid, or in the retina, serous infiltrations, congestive patches, hæmorrhages, albuminous, fatty, or pigmentary exudations, and partial atrophies, which do not affect the sense of sight." We have seen not a few cases in which, after acute cerebral affections, patients are found to have defects of sight, more or less grave, when they have got over the acute symptoms. There are, we have little doubt, many cases in which patients die without the recognition of so important a symptom as optic neuritis.

Now, surely, it is of importance not to omit from our reckoning up of the symptoms in, let us say, a case of disease of the cerebral hemisphere, a symptom so important as amaurosis from disease of the optic nerve. For, although perhaps less interesting, amaurosis is quite as important a symptom as loss of speech in our study of the symptoms which disease of any particular part of the brain may produce. Again, there have been recently recorded several cases of amaurosis without defect of speech, associated with disease of that part of the (right) hemisphere in which is the fellow of M. Broca's (left) convolution of articulate language. A certain kind of objector might say that the use of the otoscope, the laryngoscope, the thermometer, the sphygmograph, etc., might be urged with equal force on the student of diseases of the nervous system. And with good reason. However impracticable it may be for Physicians at present to use these and many other instruments of research, we shall have indefinite ideas of cerebral pathology until they are all properly used and their signs read correctly and together. No Physician would think his examination of a case of chorea completed until he had examined the heart, and no Physician should consider his examination of a case of acute cerebral disease complete until he had looked at the retinal vessels and the optic disc. If the staff of our large Hospitals were increased, not only would there be more scientific work done, but each worker would do better. If M. Bouchut, by his distinguished example, has done no more than lead Physicians to examine the eyes of their patients suffering from disease of the nervous system, he will have conferred a great boon on Medical science. We believe, however, that, besides having this pleasure, he will have the satisfaction of having laid a solid foundation for future work.

M. Bouchut devotes one hundred and thirty pages to meningitis, and gives details of sixty cases. In this part of his subject the author is, we believe, beyond the reach of critics, as, so far as we know, he is the only Physician who has studied, on anything like so large a scale, the condition of the eyes in meningitis. Although it is likely that we should fail to agree with him in all his conclusions, let us again remark that the author, by actually opening out a new field of research, has done work of the highest possible kind that a scientific man can do. We are sorry that we cannot find room for his twenty "conclusions," and the following notes convey but a poor idea of the amount of labour this able Physician has bestowed on his subject. Some lesion of the eye, he tells us, is nearly always present, but the lesions are very various —congestion around the papilla, œdema of the papilla, dilatation, tortuosity, varicosity, and thrombosis of the veins, hæmorrhage in the retina from ruptures of the veins, atrophy of the optic nerve, etc. The changes are always to be seen in both eyes, but the eye on the side of the brain more diseased presents the more striking appearances. The author believes that the changes are due to mechanical causes—viz., to obstruction to the return of the blood from the eye by the ophthalmic vein. He goes so far as to say that partial or general œdema around the papilla, producing enlargement of the veins of the retina beyond the edge of the papilla, in a patient who has doubtful phenomena of meningitis, should induce us to diagnose this disease. The author has observed these last-named changes twenty-six times in fifty-seven cases. He says that atrophy of the papilla is not seen except when the meningitis is a complication of chronic meningitis, an old encephalitis, or an old tumour of the brain. This accords with what we have observed. There are two sorts of atrophy of the optic nerve. The atrophy which is associated with disease of the brain is generally, we believe, the sequel to an acute affection of the optic nerve, and in our experience that acute affection depends usually on "coarse" local disease. The other form is that which occurs with the amaurosis of patients suffering from locomotor ataxy, and has been called spinal amaurosis. By the bye, the Physician more often has the chance of seeing the acute stage of optic neuritis than the ophthalmologist; and when the ophthalmologist does see a case of acute optic neuritis the changes are not always so striking as in the severer cases of cerebral disease which come under the Physician's care. It is to be regretted that Physicians and Ophthalmic Surgeons do not work more together. The disease of the brain which produces atrophy of the optic nerve must have existed some time. To what permanent condition the changes seen in the eyes in meningitis would lead we can only speculate. Recovery from meningitis is so rare an event that we can have little certain evidence on the point. M. Bouchut takes the trouble to remark that in many cases meningitis can be diagnosed without the aid of the ophthalmoscope, and that in recognising the lesions at the back of the eye we are not to give them undue importance. It may possibly be worth while to say this, as there seems to be a sort of vague impression with some that the ophthalmoscope, the laryngoscope, etc., can translate the changes they help us to see into the names of diseases in our text-book.

The author next speaks of the ophthalmoscopic signs which occur after cerebral hæmorrhage. They are, he says, pretty much the same as those which are seen with meningitis, and are produced by the same cause—viz., cerebral compression. To produce this compression the hæmorrhage must be considerable in amount. In one case of extensive cerebral hæmorrhage in which we examined the eye about two hours after the attack, and whilst the patient was in complete coma, the only change seen was extreme dilatation of the retinal veins. We only examined one eye. The author says the lesions are usually found in the eye on the side on which the blood is effused in the brain. We confess that our experience of the condition of the retinal circulation in cases of *recent* cerebral hæmorrhage is not large enough to enable us either to confirm or to dispute this conclusion. Occasionally, M. Bouchut says, hæmorrhages are seen, but these are, he holds, the result of pressure on the cavernous sinus; the retinal veins, being over distended because they cannot empty themselves, rupture. We have in our "Hospital Reports" recorded some remarks by Mr. Hutchinson, in which this Surgeon relates a case in which the diagnosis was not clear betwixt coma from injury to the head and coma from ordinary cerebral hæmorrhage. On looking at the patient's retina, Mr. Hutchinson saw the characteristic marks of chronic Bright's disease, and also retinal hæmorrhages. This led him to the correct diagnosis of hæmorrhage into the brain substance—*i.e.*, apoplexy in the usual application of the term. It might be argued that the intra-ocular hæmorrhages were the result of the mechanical pressure of the clot, and that this pressure might have been just as likely produced by what we may for once call Surgical, to distinguish it from Medical, hæmorrhage. But here there were signs of an advanced stage of Bright's disease—a disease which goes so often with cerebral hæmorrhage that Mr. Hutchinson concluded, as we think justly, that the two hæmorrhages, the ocular and the cerebral, were coincidences. We can, however, well understand that it might be argued that the diseased vessels in the eye, being ready to give way before the cerebral hæmorrhage, gave way as a consequence of the suddenly increased pressure. Such coincidences, however, do occur. We saw recently a specimen of double apoplexy—viz. one in the bodies in the floor of one lateral ventricle, and another in the pons Varolii, both the effusions having evidently occurred within a few hours, at the least, of each other, and possibly both together. To return to our author—he says that, in cases of patients incompletely cured of their hæmorrhage, atrophy of the discs may follow as an indirect consequence of the irritation of the optic nerve, by the serous infiltration of which it had been the subject. Another view of this matter may, we think, be held—viz. the atrophy follows an acute affection of the nerve, which acute affection is certainly peculiar neither to the remains of hæmorrhagic effusion nor to disease in any particular part of the encephalon; moreover, that the changes in the nerve may begin at widely different times after the primary disease has been fixed. As we shall see, M. Bouchut makes a remark pretty much to this effect. We think the secondary effects of hæmorrhage have not yet received the attention they deserve. Of course the optic neuritis is but a part of these secondary changes, but it is an important and a very significant part. Our author's next subject is the ophthalmoscopic signs accompanying limited encephalitis. This chapter is a long one, and is full of interesting facts and observations. It is well known that a tumour, or any sort of organic disease, may excite changes in the brain which, according to its seat and to other circumstances not well understood, produces symptoms which, for want of a better name, we may call general cerebral symptoms. A tumour in the brain gives rise to disturbances which simulate meningitis. Thus, in a case of cancer of the brain we have seen, there were violent headache, bilious vomiting, retracted belly, and irregular pulse. This boy had optic neuritis. At the Ophthalmic Hospital it is not very uncommon for boys to be brought for amaurosis—then generally the ophthalmoscopic signs being those of atrophy of the nerve—occurring after so-called bilious fever. M. Bouchut says—"Different tumours of the encephalon, old sites of hæmorrhage, and sometimes chronic softening consecutive to congestion of the brain, are frequently the starting-points of chronic partial encephalitis."

He thinks the primary organic disease produces amaurosis and other ocular symptoms by destroying the cerebral pulp at the origins of the motor and sensory nerves of the eyeball. However, from remarks in another place, we gather that he holds also that a large tumour may cause changes in the optic nerves by its mechanical effects, as well as by producing encephalitis. The way in which disease of the hemisphere produces changes in the optic nerves is a point of great difficulty, and one into the discussion of which we prefer not to enter at length here.

Optic neuritis seems to us to be due not to a loss of *function* of a part of any one organ or centre, but to a disorder of the *nutrition*, so to speak, of regions of the brain and optic nerves. The separation of function and nutrition is of course to a great extent artificial, but it is convenient, and is countenanced by many pathological facts. Optic neuritis certainly cannot be due to loss of function of even a very large part of one cerebral hemisphere, as the hemisphere may be much damaged without any obvious affection of sight.

No doubt each hemisphere receives fibres directly or indirectly from both optic nerves; yet it is quite certain that limited disease of *one* hemisphere—and of other parts of the encephalon—does somehow give rise to double optic neuritis, although, as we have said, it does not always do so. The question is an obscure one, and, therefore, we can only use obscure language in speaking of it. To say that a foreign body in one hemisphere sometimes does, and sometimes does not, "excite"—among others—changes in both optic nerves, states the facts and formularises our ignorance. The term excite is used as a fashion of speech. A piece of tubercle—dead tissue—is not likely to excite anything. Most probably, driven again to a loose expression, the beginning of uproar about these foreign bodies is due to some change in the general health. This kind of amaurosis ought as a symptom, we think, to be compared and contrasted with loss of speech, which is a symptom due to loss of function of part of the brain. But the most valuable way of studying optic neuritis is by considering it with the pathology of those epileptiform seizures which occur with coarse disease of one cerebral hemisphere. Indeed, we think that the phenomena of convulsive attacks of this kind at least illustrate the apparent paradox that disease of *one* hemisphere does not produce blindness and yet may "excite" *double* optic neuritis. Dr. Broadbent's hypothesis on unilateral and bilateral motion, read with other views and facts, will help to explain, we believe, the apparent paradox we have mentioned; for Dr. Broadbent's hypothesis, although as yet stated chiefly with regard to motor phenomena, will probably, as he has suggested, apply to sensory phenomena too.

M. Bouchut makes use of the ophthalmoscope in order to determine whether a patient is suffering from direct injury to the brain, or from an injury to the skull producing secondary effects on the brain. Next follows an account of most valuable researches on the ocular troubles in atrophy of the brain, microcephalus, chronic hydrocephalus, and locomotor ataxy. In the last disease the author gives no details as to the exact kind of atrophy. The chapter on ocular troubles following diphtheria is a very useful one. We have already incidentally spoken of what is misnamed diphtherial *amaurosis*, but our author here describes changes which, he tells us, occur on the backs of the eyes of some of those patients who have albuminuria with the diphtheria. Upon this point we have ourselves no positive information.

We must now bring our review to a close, hoping, however, to return to the subject at some future opportunity. There are some important observations on the condition of the retinal vessels in epilepsy which we do not like to endorse, but which, however, we are not prepared actually to deny. We would, however, urge that cases of unilateral convulsions should receive attention first at the hands of Physicians who use the ophthalmoscope. Before leaving the author let us, as the best compliment we can pay him, urge the study of the book on those Physicians who are specially interested in diseases of the nervous system. We may also add to this recommendation another—viz., the careful perusal of the works on the ophthalmoscope by Liebreich and Hulke, and of Carter's able translation of Zander.

Along with the title of M. Bouchut's work we have placed the titles of two lectures by Mr. Jonathan Hutchinson. We need scarcely say that anything written by this gentleman is worthy of the most careful attention, but these lectures are, we believe, remarkably good. We know no account of optic neuritis from brain disease which is at once so clear and so complete—which shows, on the one hand, so much special knowledge of ophthalmology, and, on the other, so wide and yet so precise a knowledge of those nervous symptoms which often complicate amaurosis. We have already given, in a former review (January 28, 1865), a brief notice of Mr. Hutchinson's other paper. The facts stated in that paper are of great value to Physicians. Mr. Hutchinson's observations on the relations of amaurosis to sexual excesses and to varicocele seem to us to be particularly interesting in furnishing hints as to the manner of studying *other progressive* forms of disease of the nervous system. Before leaving this subject, we may say that tobacco-smoking is but one of the habits, etc., which Mr. Hutchinson considers in investigating the causes of atrophy of the optic nerves.

Mr. Hart's *brochure* gives one an excellent idea of the vagueness of the word amaurosis. The term ought, we think, to be limited to the form of disease of the optic nerve which disease of the central nervous system produces. Optic neuritis and the atrophy which follows it might be spoken of as cerebral amaurosis, and the atrophy which occurs with the group of symptoms generally designated locomotor ataxy, and probably with other groups, spinal amaurosis. And even in these ways of using the terms, it should be remembered that they are but labels for things, the real meanings and relations of which are by no means properly worked out. Mr. Hart shows that amaurosis has been made to include all sorts of deep ocular affections. He writes:—"The immediate result of ophthalmoscopy has been to show us that amaurosis is not one or two diseases, but a great many; or, rather, that it is a symptom binding together a considerable variety of morbid conditions—conditions so various, that treatment which would benefit the one would greatly injure the other; so complicated, that many years will be needed fully to unravel their separate pathology; but yet so positive in their signs, that they may be read off with ease and precision by any one who will take the trouble to learn to use the art of inspecting the resplendent fundus of the eye." Those Physicians who wish to obtain a clear idea of the very many different things that are often huddled together under the word amaurosis, cannot do better than begin their studies of general ophthalmology by reading Mr. Hart's pamphlet. The beginner will find at the end of it directions how to use the ophthalmoscope.

GENERAL CORRESPONDENCE.

ON THE ACTION OF ACETIC ACID ON OVARIAN CYSTS.

Letter from Dr. Junker.

[To the Editor of the Medical Times and Gazette.]

Sir,—Although portions of an ovarian cyst and of a stomach may be affected in a similar way, when experimented upon on dead membranes with acetic acid, in life the action of this acid, when injected into a cyst or introduced into a stomach, must be vastly different. What can be more different both in anatomical and physiological respects than an ovarian cyst and a stomach? The first is a pathological growth composed of a fibrous stroma of varying thickness, with secreting glands and villi scattered in its inner layer, and with a thin epithelial lining. It contains fluids of different composition and character, mostly alkaline, which steadily increase in quantity, and, as a rule, cannot escape except by rupture of the cyst or by artificial means. The stomach, on the contrary, is one of the most active organs, is furnished with secreting as well as with absorbing glands, both only temporarily called into action, and it is lined with a mucous membrane. Instead of continually accumulating its contents, as ovarian cysts do, it passes them on by its vermicular contractions into the continuing portion of the intestinal canal, or it may reject them altogether, should they disagree. This ovarian cysts unfortunately cannot do with their contents. The stomach is protected by the mucus of its lining membrane against the injurious effects of acids and other irritating substances. Ovarian cysts have not always even the poor protection of an epithelium, of which, in many cases, large portions are denuded. And further, the stomach is not always proof against the effects of irritants. Acute gastritis, chronic inflammation, ulcers, and softening are the by no means unfrequent consequences of their action on its coats; and even the gastric juice, when abnormally secreted, may cause these diseases. In health the stomach is far from containing continually an acid fluid; there is none in the empty stomach. The secretion of gastric juice only takes place under the stimulus of ingested food, and ceases as soon as the food has passed the pyloric valve. Gastric juice in the empty stomach would cause its self-digestion.

Under what different conditions would the very differently constituted cyst-walls be placed if acetic acid, even when diluted, were injected! This acid would act for a far longer period—making due allowance for the dialysis—than gastric juice is ever kept in the stomach. The acidity of the contents would be increased—(Dr. Broadbent proposes to inject at intervals greater quantities of acetic acid)—in the same proportion as (as Dr. Broadbent expects) the lining epithelium would be altered, as—(as I more than suspect)—the cyst-walls would be softened.

I would hesitate to intrude on the space of the *Medical Times and Gazette* and on the time of its readers by reiterating stale, universally known remarks on the physiology of the stomach, were it not to point out that the temporary innocuous presence of vinegar taken with food in the stomach, cannot constitute an argument for the beneficial effects of acetic acid, however diluted, on the walls of an ovarian cyst. Every one who bears these facts in mind will be very reluctant to subject a patient to an experiment—I cannot bring myself to call it a treatment—the results of which cannot be but the reverse to what "the healing art" aims at.

I have altogether omitted to allude to the danger which there must be whenever an ovarian cyst is tapped and only partly emptied, from the escape of the fluid left in the cyst into the peritoneal cavity. But on this and other grounds I do trust that before Dr. Broadbent makes the experiments he threatens on any poor woman, he will think of the old maxim, "Fiat experimentum in corpore vili."

I am, &c. F. E. Junker, M.D.

36, Mount-street, Grosvenor-square, W., Nov. 26.

TOXICOLOGICAL DISCREPANCIES.

Letter from Professor Rodgers.

[To the Editor of the Medical Times and Gazette.]

Sir,—In the middle of September last a circumstance occurred in Essex which has subsequently been followed by such events that a regard for public safety, apart from all other considerations, compels me to give the utmost publicity to the facts, with the view to further investigation.

On the 17th of the month named two little children, aged 2 and 4 years, whilst playing in their father's garden, plucked, and were supposed to have eaten, a few green grapes; but it was certain that in the course of the day they had eaten one apple and one or two pears. At about 4.30 p.m. they were both taken ill—cold and sick—and at the suggestion of a neighbour, who thought their illness was premonitory of small-pox (their father having been in a house where that disease existed), a Medical Practitioner was sent for, who, however, did not take any serious view of their condition. Medicine was prescribed, the dose being two teaspoonfuls every two hours. The first dose was given to the elder child about 7 p.m., and soon after taking it "he appeared giddy, cold, and drowsy." These symptoms were followed by vomiting and violent purging. The younger child did not take his dose until about an hour after his brother; he was similarly affected. In two hours a second dose was given, and in each case the symptoms described were aggravated in an alarming degree. At about 10 p.m., the condition of the children being evidently full of danger, their father again sought Medical aid, but, unfortunately, without success, and on his return gave a third dose of the medicine, the elder swallowing all the dose, while the younger child spilt some. Soon after this third dose, in addition to vomiting and purging, convulsions, accompanied by great difficulty in breathing and foaming at the mouth, supervened in each case and continued, together with insensibility, up to their death, which took place on the 18th—the elder dying at 1 p.m. and the younger at 5 p.m. It is worthy of attention that, according to the father's statement to me, the convulsions in both cases were peculiar, the bodies being during a paroxysm so stiff that when lifted they each seemed to be "in one piece." No more of the mixture was given after the third dose, as on another Medical Practitioner visiting the children some hours before death other medicine was ordered.

In consequence of suspicions entertained by the father as to the nature of the medicine (which he had carefully preserved), an inquest was held, and a verdict of death from English cholera was recorded in each case.

Doubts still existing, the father consulted a Physician in London, who, from effects produced by small doses of the medicine upon a little dog and upon himself, advised that it should be handed over to me for analysis.

The result of a careful qualitative examination for poison was the discovery of veratria in the mixture, and as a consequence the Home Secretary, upon due representation, ordered an exhumation of the bodies, and the viscera, etc., were sent to Professor Taylor of Guy's Hospital for analysis.

The only communication that I had officially upon the subject was a request conveyed by the superintendent of the police of the district that I should hand over to him the remainder of the medicine for analysis by Professor Taylor, and this I did after retaining a quantity sufficient for my own investigation.

Professor Taylor reports that there was no trace of poison in the viscera of the children, and that the medicine "proved to be a perfectly innocent mixture," being "nearly all common water, with a few grains of carbonate of ammonia and a small quantity of wine of ipecacuanha." Not to occupy unnecessarily your valuable space, I will remark that the reactions obtained by me from the alkaloid separated from the mixture, and which in my judgment proved it to be veratria, were—1st. A yellow with cold concentrated sulphuric acid, changing on the application of heat in a few seconds to a beautiful carmine tint; 2nd. The production of a mauve colour by heating with concentrated hydrochloric acid; and 3rd. The production of a beautiful red on treating it with acetic acid and protochloride of tin, and evaporating to dryness. These reactions cannot be obtained from a mixture such as is reported by Professor Taylor. They not only convinced me, but also my learned colleague Dr. Letheby (whose opinion I append), that veratria was present in the mixture.

These discrepancies are serious even in their relation to science, but when it is considered that they might be of enormous consequence in relation to a question of the cause of death, it is manifest that they should be cleared up with as much certainty and as little delay as possible, and this can easily be done if Professor Taylor has any of the mixture left, as I have. I am, &c.

J. E. D. Rodgers, M.R.C.S. and L.S.A.,
Professor of Toxicology in the London Hospital
Medical College.

At Mr. Rodgers' request I state that I witnessed the reactions above described, and am of opinion that they indicate the presence of veratria.

(Signed) Hy. Letheby, M.B., F.L.S., etc.

London Hospital Medical College, November 27.

DENTISTRY AND MEDICINE.

Letter from Mr. Coleman.

[To the Editor of the Medical Times and Gazette.]

Sir,—In one of your leaders of last week, under the head "Absolon *v.* Statham," you enunciated certain principles with which, I am sure, many of your readers cannot agree, and, as one of them, I trust you will afford me the opportunity of discussing certain assertions which you make, but do not in any way attempt to prove.

In the article referred to you state that, "By long usage the specialty of dentistry has become separated from legitimate Medicine, by a tolerably clear demarcation. In fact, it forms a profession by itself, affiliated, truly, by the dental licence to the College in Lincoln's Inn-fields," etc. The "tolerably clear demarcation" you speak of, which separates Dentistry (or, as it is otherwise called, Dental Surgery) from legitimate Medicine, is quite unknown to myself and to many who have practised this specialty for several years. I have always regarded it as much a branch of legitimate Medicine as ophthalmic, aural, or orthopædic Surgery, with either of which it will bear a very fair comparison. In the first-named, as in Dental Surgery, we have to deal with highly organised living structures, intimately connected with other parts of the body, and more or less affected by those general conditions—health and disease.

The study of the structures which compose the organs with which the ophthalmic and with which the dental Surgeon have especially to deal has ever occupied the attention of leading anatomists and physiologists; they have both, indeed, been favourite as well as obscure subjects for the investigators in Medical science.

The diseases to which both organs, viz., those of sight and those of mastication, are liable, differ only as the structures which compose them differ, and he who would thoroughly understand the one must not only be acquainted with the other, but should possess an insight into every form of disease commonly met with in the body. In their treatment they have many things in common; both may become useless, and by their presence set up irritation in adjacent textures necessitating their removal, which is in both cases undoubtedly a surgical operation. The process of plugging teeth, though it has perhaps no direct counterpart in any general surgical operation, may not inaptly be compared with those where dead or disorganised portions of the body are cut or gouged out; in the one case nature, in the other art, supplies the deficiency. But to return to Ophthalmic Surgery: I need hardly remark that in the inflammatory diseases of the eye and of the teeth, as well as of the surrounding structures of each, the principles of treatment are the same.

If there are, then, the above as well as other grounds of resemblance between Ophthalmic and Dental Surgery, why is the latter to be considered a distinct profession separated by clear demarcations from legitimate Medicine, whilst the former you will readily admit as a portion of Medical science? Perhaps you would argue that I had omitted the most important feature of distinction—viz., that the dentist constructs and adjusts artificial teeth, which is "an art rather than a science," and not comparable to any portion of the practice of an Ophthalmic Surgeon. If such should be your argument, I would observe that many dentists do not construct their artificial teeth; they only adjust to their patients' mouths—in fact, do no more than does the oculist, who, after the extraction of a cataract, adapts an artificial lens of glass to supply the place of the lost natural organ. But even if he do construct on his own premises artificial teeth, and so in this department pursues an art, in what does he differ from the apothecary who practises the art of compounding medicines? and if this, in which he alone differs from a Medical Practitioner, should exclude him from their Profession, how much more should those acknowledged members of the Profession be excluded who, rightly or wrongly, vend drugs, chemicals, scents, etc., in open shops! It would occupy too much of your valuable space were I to show, as could easily be done, the correspondence between Dental and Aural and Orthopædic Surgery. I will trespass no further upon it than to allude briefly to what you term the affiliation of this distinct profession to the College in Lincoln's-inn-fields by the dental licence. Now, your readers should remember that some nine or ten years ago an attempt was made, by some of its members, to sever dentistry from Medicine and to establish it as a distinct profession; whilst others, on the other hand, made a vigorous effort to unite themselves more closely to Medicine by obtaining, at the hands of one of the chartered examining bodies of the Faculty, a special examination and licence. The first of these objects you greatly encouraged, the latter you as greatly opposed, but in both instances you signally failed. The College of Surgeons granted the examination and licence; and the body who desired separation from the Medical Profession, after ineffectual attempts to found a separate college, broke up, the bulk of its members admitting their error in judgment by availing themselves of that very licence.

But does that licence merely affiliate its holders to the College in Lincoln's-inn-fields? Let any of your impartial readers make themselves acquainted with the course of general Medical study prescribed by the College for that diploma, and they will not hesitate to say that he who holds it is not merely affiliated to the Royal College of Surgeons, but is undoubtedly affiliated as well to that science you have termed "legitimate Medicine." I am, &c.

Old Burlington-street, Nov. 22. Alfred Coleman.

⁂ In all discussions of this sort the public welfare is the real consideration. We do not wish to revive old controversies, but we must say that Mr. Coleman exhibits a romantic amount of faith when he takes for granted that what the College of Surgeons does must be right. We fully recognise the honourable equality with ourselves of a fully qualified Surgeon, M. or F.R.C.S., who practises Dental Surgery. As for those gentlemen who do not avail themselves of a full Medical and Surgical training, it was once an open question in what manner their Professional education should be conducted. This question is now settled, and there let it rest. We can only say that the sooner Dental Surgeons avail themselves of a general Medical education the better. We regard them as allies, not rivals, and believe that odontology, like ophthalmology, may throw a light on several questions in general Medicine and Surgery.—Ed.

ABSOLON v. STATHAM.

[To the Editor of the Medical Times and Gazette.]

Sir,—I am sure your remarks (November 17) on the case of Absolon v. Statham must have been welcomed by every respectable member of our Profession, for the practice of bringing actions against Medical men with the object of extorting money, or of indulging revenge, or some other base feeling, is becoming of alarming frequency. To meet the injustice of the present case, it has been suggested that a subscription should be entered into to defray the legal expenses incurred by Mr. Statham. Fully sympathising, however, in the indignation which his case is exciting, I yet think that his costs should be paid, not by the Profession at large, but by the authorities of the Hospital where the occurrence for which he has been so unjustly arraigned took place. Medical men attached to Hospitals give up the most valuable portion of their time to attendance on the poor, either without remuneration or for salaries ludicrously small, and out of all proportion to those which are awarded to members of other professions. If during the performance of their public functions they become the object of unfair attacks, it is surely the duty of the managers of the Hospital to defend them and bear them harmless.

Not long ago a most frivolous and vexatious action was brought against a gentleman connected with St. George's Hospital for alleged maltreatment on the part of a nurse, which, if it had been proved, the Surgeon could have had nothing whatever to do with. This gentleman is eminently humane and careful, and withal high-spirited and courageous, and he at once met the groundless charge and obtained a triumphant verdict in his favour. The governors of the Hospital very properly defrayed that gentleman's expenses.

Whenever a charge of malpraxis is got up against a Medical man of standing, there is seldom wanting some low fellow who is ready, from motives of his own, to pander to the malice or ignorance of the prosecutor. Such fellows should be held up to the indignation of the Profession which they disgrace. But how are these prosecutions to be met? The formation of a general "Medical Defence Fund" might lead to serious inconvenience. There are black sheep in every calling, and if a Medical man by bad conduct gets himself into a scrape he must not expect the Profession to defend him merely because he is a Medical man. People who play with edged tools will now and then cut their fingers; they have only themselves to blame. It seems to me that subscriptions should be limited to those cases where the unjust action is brought for alleged malpraxis in private; but that in every case where it is brought against a Physician or Surgeon in the execution of his public functions, it is the bounden duty of those who govern the institution and avail themselves of the Medical man's skill to defray all costs arising from his legal defence.

I am, &c.

November 22. J. D.

P.S.—Since writing the above I have read in your journal of November 24 some excellent remarks by Dr. Richardson on the subject of a "Medical Defence Fund." They are well worthy the attention of the advocates of that scheme.

We have reason to believe that the War-office have resolved to embody in the new warrant in regard to the position of Medical officers in the army the recommendations of the Army and Navy Committee. It is expected that the new warrant will be issued in the beginning of next year; the increased pay and retirement sanctioned by it will not, however, take effect until April 1.—*Pall-mall Gazette.*

New Hospital.—Lady Palmerston and some benevolent ladies and gentlemen are about to build a small Hospital at Romsey.

REPORTS OF SOCIETIES.

THE METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

The first evening meeting for the season was held on Saturday, the 17th, at the Scottish Corporation Hall, Fleet-street, Dr. Druitt, President, in the chair.

The President, after a short allusion to the late Dr. Ansell, proceeded to make a few remarks on the position and duties of Medical Officers of Health, as affected by recent events and by recent legislation.

After showing the extent of the beneficial operations carried on under the Nuisances Removal Act, but yet their inadequacy to cope with habitual epidemic disease, he proceeded:—

"During little more than a year, three events have happened, which cannot fail to make changes for the better in the powers and duties of the bodies under whom we act. These are the Cattle Plague, the Cholera, and the New Sanitary Act.

"Of the Cattle Plague, which it is impossible to mention without honourable reference to our colleague, Dr. Ballard, on whom fell as it were the brunt of the attack, and Drs. Bristowe and Sanderson, whose researches, with those of Dr. Beale, were the most minute and satisfactory etiological and pathological investigations ever carried out, we may say that its visitation before the cholera was most useful. It showed us a disease not generated out of filth, but propagated by the transference of infected beasts or things, yet flourishing where filth most abounded, and not to be got rid of without the suppression of that filth. It showed us, as in a glass, not only the importation and propagation of cholera, but the means necessary for extinguishing it. Amongst the orders and regulations regarding it, let me call to your attention the following points, viz.:—1. The entire disregard of private rights; no man was allowed to let his cattle 'go to the devil his own way,' according to the venerated English proverb, though he might go there himself. 2. The onus thrown on stock owners to make known the existence of disease to the public authorities. 3. The pains taken by Mr. Gamgee, especially, to elucidate the earliest symptoms of the disease by the thermometer. 4. The consent of all parties to any measure judged expedient for 'stamping out' the disease. 5. The various means to this end, the copious use of disinfectants, and the absolute necessity of destroying, burying, or disinfecting dead bodies, straw, litter, and especially all *dejecta*, and for cleansing the sheds inhabited by animals, and the use of disinfectants as preventives. It is impossible to deny that the Cattle Plague Commissioners' Report and the Appendix contributed much that was clear and positive to our ideas on the cholera. The disease furnished, as it were, a *corpus vilius* on which to try our armour, offensive and defensive.

"Then came the cholera. I am not going into the details of the history of the epidemic, which, having raged for the 140 days usually assigned as its limit, now seems about to leave us, but rather to see what were the duties, position, and powers conferred on us, and compare them with our needs and their results. In the first place, I must notice that deplorable anomaly by which, through a conflicting provision of the Diseases Prevention Act, the Medical Officer of Health was in some districts—witness the City of London and Liverpool—virtually dethroned, and deprived of the central authority. Comparing cholera with cattle plague, and the measures available against each respectively, it is evident that Medical Officers of Health are at this disadvantage, that the liberties of private persons take precedence of the public welfare; that there is no onus thrown on any one, Medical or otherwise, to make known the existence of the disease; and that if the patient do not die, and be in no need of public or parochial charity, the existence of the disease may remain unknown, and no provision whatever taken against its dissemination. Excepting this, which no law gives, the powers conferred (or seemingly conferred until contested) by the Orders in Council under the Diseases Prevention Act, were all that could be desired, even if compared with those sanctioned by the Cattle Plague Commissioners. There were house-to-house visitations to discover the earliest symptoms of disease, or of conditions, as diarrhœa, which might lead to cholera; advice was distributed by bills and placards; medicines and comforts; Hospitals, so that the sick might be separated from the healthy; the suppression of nuisances; the use of disinfectants; the destruction of infected articles; speedy burial of the dead; and the substitution of pure water, if attainable, for what might be polluted.

"Yet it is impossible to reflect upon the evidence which connects the present epidemic with the water supply of the east of London without wishing that more vigorous steps had been taken on that hypothesis.

"The 'Memorandum' issued by our Association last spring shows that we clearly foresaw the two possible routes through which the cholera might invade us—one, the water supply; the other, the immigration of infected persons. It is in no spirit of hostile criticism that I regret that, considering the dangers of polluted water, a more systematic effort was not made at the outset of the epidemic in the East to supply the population for a time from a different source, and to cleanse out all traces of pollution from existing pipes and receptacles. Mr. Liddle, Dr. Letheby, and Mr. Dyte, the Medical officer of the Jews' Benevolent Association, did, indeed, with great sagacity, provide in their respective districts means, such as stand-pipes, wherefrom the people might draw water at least as uncontaminated as it issues from the reservoir. These were, however, but partial instances, although they lead us to regret that the measure was not more widely adopted. All through the East-end during the epidemic they drew their water from their dirty butts as usual.

"But when we come to the measures necessary for arresting the spread of the disease, so far as it can be arrested by destroying all poisonous discharges from the sick, I think we are fairly entitled to commend the liberality of the vestries, and the completeness and success of the measures devised by our colleagues. The cattle plague lesson bore good fruit here. The dejections of the sick were decomposed, the drains and closets purified and deodorised, bedding and clothes burned, the public sewers charged with disinfectants, and the streets watered with the same, so as to destroy any casual venom in the impurities left by vagrants and passengers. It is, I believe, consistent with the experience of most of us that the disease was occasionally introduced by some destitute wayfarer. Grant the poisonous nature of the dejections, and none will doubt the wisdom of stringent measures for the speedy disinfection and removal of all the impurities which defile our corners and bye-places. Had it not been for the persistent wet season, and for these extraordinary cleansings, the germs of the disease might have been spread far and wide, into the cleanest families. How necessary such precautions were is evident from the case of that unfortunate gentleman who came from Ghent, and died at an hotel in Piccadilly early in July. In this case the local authorities were not appealed to; and had it not been for the compulsory registration of deaths before burial, the cause of death would have been unknown even to people in the same hotel. In that case, the nurse who attended him died of cholera three days afterwards in St. George's Hospital; and Dr. Whitmore assures me that the man who cleansed the bedding, a tradesman in Marylebone, also took the disease and died. It should be added that the bedding had been removed, and had been said to be disinfected, before the local authorities of St. George's knew aught of the matter.

"Amongst measures of precaution the most important is the disuse of all butts and receptacles for drinking water in the vicinity of closets. In one case of cholera which I investigated in one of the suburbs, where a man had the disease in No. 1, and two persons soon after took it and died in No. 2, the only communication possible was through the one cistern which supplied the two contiguous water-closets, and was also used for drinking.

"The cholera probably will soon pass away, not, however, before killing off a good many of our population at the most valuable age. And it may throw some light on the matter to persons who suppose that the Asiatic cholera is not a foreign and imported disease, but that it is only an aggravated form of summer diarrhœa or English cholera, to know that whereas our indigenous diarrhœas seldom carry off any save the very young and the very old, with a very few persons between 15 and 55 who are already ill of other diseases, the true Asiatic cholera spares no age whatever, and knocks down the strongest men in the prime of life as ruthlessly as old ones, the babies, or the diseased. Cholera, I say, will soon go, and with it the extraordinary powers conferred by the Diseases Prevention Act; but we shall be left face to face with our ordinary enemies—with typhus, typhoid, small-pox, scarlet fever, measles, and whooping cough, which in their totality destroy in any number of years more lives than the cholera which comes once in ten years.

"I wish it were possible to awaken a sound public opinion on this point, and that an effort were made to exterminate these diseases in the way in which we have set to work to stamp out cholera. The great obstacle is, that they are looked on as inevitable! and so they may be as things are now; just as cholera would be inevitable if a whole community drank out of one dirty pond into which they cast their drainage. Just so we are content to let these miasms pass into the ocean of air which we all breathe. But if public opinion were roused on the matter, and the same kind of precaution kept up as against cholera, I do not doubt but that five years would see a great diminution in the amount of these zymotic diseases. Typhus, a disease of crowding and destitution, may probably disappear when the herds of vagrants whom a most ill-advised law (Houseless Poor Act) throws upon our workhouses, shall be made over to the police and cared for in proper houses of correction. All other zymotic disease would decrease if tramps were summarily dealt with. Regarding typhoid, a disease dependent upon vapours which haunt filthy closets and sewers, I think we are bound to carry out the same deodorising process vigorously as for cholera—that is a disease which ought to be got rid of, and all the other zymotics to be decreased. Whenever the parish Doctor attends a case of fever, small-pox, diarrhœa, measles, scarlet fever, or whooping-cough, there ought the inspector of nuisances to take a little carbolic acid. No chamber-pot ought to leave the sick room without being dosed by this acid; no slops to be thrown down the sink or closet without being followed by the same; and every whiff of infected air that escapes from the sick chamber ought to smell of carbolic acid. This plan is believed to have saved our herds from the rinderpest, and ought to be tried largely for ourselves. It is said that the Lord, when he had mercy on Nineveh, reminded the prophet Jonah that the city contained not only children, but 'much cattle.' It is for us to show that we are at least as careful of our children as we have been about our cattle.

"It is to be hoped that the liberal measures which our local authorities have used against the foreign and extraordinary pestilence may be continued in a measure against our habitual fevers; so far as relates to the more systematic disinfection of houses, apartments, closets and drains, and clothes, and the isolation of the sick. And this brings me to allude shortly to the very valuable powers conferred by the new Sanitary Act. It is a happy peculiarity of this Act that it enables the local authorities to lay down regulations the infringement of which is an offence for which a fine may be levied forthwith. Let us take the case of manure. Under the old system, if a man neglected to remove manure, he was served with a notice; if he did not obey it he was summoned; he could contest the fact of the accumulation of dung being a nuisance, and could fight the case bit by bit; even if the magistate made an order, it affected only him, and no one else. But to lay down regulations and proceed against a man for breach of them will (it is hoped) be found as easy as suing on a bill of exchange is, in comparison with suing for a debt every item of which may be disputed.

"The provisions of this Act, making it a punishable offence for any infected person to expose himself, for any vehicle to carry him, for his clothes or bedding to be disposed of without disinfection, or for his apartments to be re-let without equal precaution, are all characterised by great wisdom. How often have we heard of the bedding of persons dying of scarlet fever being sent to an auction, and the lodgings let without ceremony! This will now be a distinct offence.

"But what we propose to discuss presently, are the regulations which the local authorities will be empowered to lay down, under the Sanction of the Secretary of State, by the 35th clause of the Sanitary Act, for the regulation of the lodging houses inhabited by persons so dirty and worthless as to require this measure. In looking at that enactment, and heartily concurring in its provisions as against *landlords*, I must say I wish that wilful breach of such regulations had been made an offence on the part of occupiers, and that any deliberate or careless act of filth, of destruction of water apparatus and the like, on the part of a lodger, were punishable with a week at the treadmill. Certainly I must say that it is often a grievous thing to have to proceed against a landlord for a dirty state of a house, when that is caused, just after a good cleansing, by the wickedness and brutality of the inmates. Till education is compulsory, we ought to make cleanliness so. Society, for its own protection against pestilence, must insist on certain conditions in the lodgment of human beings in towns; such as separation of the sexes—the allowing a certain minimum of space—provision for ventilation—for periodic cleansing—for the removal of all offal—for the cleansing and disinfecting of drains and closets—for giving drinking water uncontaminated by the vapours of any water-closet—and for speedy removal and disinfection in the case of infectious fever. Such provisions may be effected under the 35th section of the Sanitary Act, 1866."

NEW BOOKS, WITH SHORT CRITIQUES.

The Lodging-houses Acts and the Labouring Classes Dwellings Acts. By Danby P. Fry, Esq., Barrister-at-Law. Third edition. London: Knight and Co. Pp. 130.

⁂ The rapidity with which this little volume has passed through its former editions shows that it met a want felt, if not expressed. The bearings of the Sanitary Act of last session are so important that we, on behalf of the Medical Officers of Health, gladly welcome a concise work which shows the legal bearings of the subject.

Are Drugs of Use in the Treatment of Disease? By John S. Bartrum, F.R.C.S. Bath. Reprinted from the British Medical Journal.

⁂ The author says they are; but who doubts it?

Thermometric Observations in Fever. By Thomas Wrigley Grimshaw, A.B., M.B. Dublin. Reprinted from the Medical Press and Circular.

⁂ Founded on some twenty cases. Says Dr. Aitken's line is too high.

Medico-Legal Study on Curare. By Voisin and Liouville. Reprinted from the Annales d'Hygiène et de Médecine Légale.

⁂ Some more experiments on animals, which do not add very much to our knowledge of the poison. Contains some of the reactions of curarine, viz.—(1) That it is coloured blue with concent. sulphuric acid, thus distinguishing it from strychnine; (2) purple by nitric acid; and (3) violet by bichromate of potash and sulphuric acid.

Remarks on the Royal Warrant regulating the Rank, Pay, Promotion, and Retirement of Army Medical Officers (October, 1858).

⁂ An anonymous letter to General Peel, setting forth the requirements of the Army Medical officers as they have been so often reiterated. Contains nothing new.

The City Diary and Almanack for 1867.

⁂ A useful volume for business men, more especially those having any dealings with the various municipal bodies constituting our civic authority.

MEDICAL NEWS.

UNIVERSITY INTELLIGENCE.—UNIVERSITY OF LONDON.—SECOND M.B. EXAMINATION.—The following are the names, arranged in the order of proficiency, of the successful Candidates for Honours in the respective subjects:—

EXAMINATION FOR HONOURS.

Medicine.

First Class.—Charles Kelly (scholarship and gold medal), King's College; Charles William Philpot (gold medal), King's College; Stephen Wootton Bushell, Guy's Hospital, Henry Greenway Howse, Guy's Hospital, and Frederic Barham Nunneley, University College (equal); Thomas Claye Shaw, King's College; Richard Thorne Thorne, St Bartholomew's Hospital; Thomas Cole, St. Bartholomew's Hospital; John Williams, University College; Henry Clothier, University College, Ralph Gooding, King's College, and George Christopher Tayler, St. Bartholomew's Hospital (equal).

Second Class.—Arthur Taylor, Guy's Hospital; John Burges Welch, King's College; John Spencer Ferris, King's College.

Midwifery.

First Class.—Charles Kelly (scholarship and gold medal), King's College; Henry Greenway Howse* (gold medal), Guy's Hospital; Stephen Wootton Bushell,* Guy's Hospital; Thomas Claye Shaw,* King's College; Charles William Philpot,* King's College; John Burges Welch, King's College; Richard Thorne Thorne, St. Bartholomew's Hospital; John Spencer Ferris, King's College, and Frederic Barham Nunneley, University College (equal); John Williams, University College; Ralph Gooding, King's College.

Second Class.—George Owthwaite Spencer, University College; George Christopher Tayler, St. Bartholomew's Hospital, and Arthur Taylor, Guy's Hospital (equal).

Forensic Medicine.

First Class.—George Owthwaite Spencer (scholarship and gold medal), University College; Stephen Wootton Bushell (gold medal), Guy's Hospital; Charles William Philpot, King's College, and Thomas Claye Shaw, King's College (equal); Frederic Barham Nunneley, University College.

Second Class.—Ralph Gooding, King's College, and George Christopher Tayler, St. Bartholomew's Hospital (equal).

Third Class.—Henry Greenway Howse, Guy's Hospital.

APOTHECARIES' HALL.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, Nov. 22, 1866:—

Richard Bottomley Nowell, Guy's Hospital; Frederick William Young, Salisbury; Thomas Henry Willan, Littlehampton, Sussex; Richard Avery Rix, Beccles, Suffolk.

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* Obtained number of marks qualifying for scholarship.

The following gentlemen also on the same day passed their First Examination :—

Robt. Thos. Jenkins, Charing-cross Hospital ; Edward Colson, Guy's Hospital ; Thos. Andrew Roberts, St. Mary's Hospital ; James d'Arcy Harvey, University College Hospital ; John Wyatt Pratt, St. Mary's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Drysdale, C. R., M.D., has been appointed Assistant-Physician to the Metropolitan Free Hospital, Devonshire-square, E.C.

Eastlake, Dr., Fellow of the College of Physicians, Dublin, Physician to the British Lying-in Hospital, &c., has been elected Consulting Accoucheur to the Western Dispensary, Broadway, Westminster, *vice* Dr. Mark Tanner, resigned.

Ellison, J., M.D., has been appointed Joint-Surgeon and Apothecary to her Majesty's Household, Windsor.

Fairbank, J., M.B., has been appointed Joint-Surgeon and Apothecary to her Majesty's Household, Windsor.

Longstaff, Charles, M D., has been appointed Assistant-Surgeon to the Royal South Hants Infirmary.

Randall, J. G., M.R.C.S.E., has been appointed House-Surgeon to the Female Lock Hospital, Harrow-road.

Richards, J. P., M.R.C.S E., has been appointed Assistant Medical Officer to the Devon County Asylum.

Scott, George, M.D., has been appointed Assistant-Physician to the Royal South Hants Infirmary.

Silver, Alexander, M A., M D., late Assistant Professor of Materia Medica and of Medical Jurisprudence, University, Aberdeen, has been appointed Lecturer on Botany at the Charing-cross Hospital School of Medicine.

Stewart, Hugh Grainger, M.D., has been appointed Lecturer on Medical Psychology in the Newcastle-on-Tyne College of Medicine.

Wane, W., M.R.C.S.E., has been appointed House-Surgeon to the Stockport Infirmary.

BIRTHS.

Atkinson.—On November 19, at Iver, Bucks, the wife of Dr. Atkinson, of a son.

Gervis.—On November 27, at 33, Adelaide-road, Haverstock-hill, the wife of F. H. Gervis, Esq., Surgeon, of a son.

Hammond.—On November 22, at Bentley, Hants, the wife of Dr. Hammond, of a daughter.

Lapraik.—On November 24, at 94, Regent-terrace, Glasgow, the wife of Thomas Lapraik, M.D., of a son.

Marshall.—On November 25, at The Chantry, Mere, Wilts, the wife of W. N. Marshall, M.R.C.S.E., of a son.

Millar.—On November 23, at 64, Belsize-park, the wife of Dr. Millar, of a son.

Phillips.—On November 20, at 40, Harley-street, Cavendish-square, the wife of E. Phillips, M.D., of a son.

Pike.—On November 17, at Weyhill, the wife of T. Pike, M.D., of a son.

Sequeira.—On November 23, the wife of H. L. Sequeira, M.R.C.S.E., of Jewry-street, Aldgate, of a son.

Waterworth.—On November 24, at New Kent-road, the wife of Dr. Waterworth, of a daughter.

Webb.—On Friday, November 23, at 22, Woburn-place, Russell-square, the wife of Francis C. Webb, M.D., F.L.S., of a daughter.

MARRIAGES.

Gooding—Simonds.—On November 22, at Trinity Church, Marylebone, R. Gooding, B.A., M.B., A.K.C , of Ipswich, to Adelaide, third daughter of the late Lieutenant-Colonel W. Simonds, 39, Fitzroy-square, and formerly of the 4th Bengal Native Infantry. No cards.

Griffith—Roberts.—On November 28, at Wavertree Church, Lancashire, S. Griffith, Esq., M.D., of Portmadoc, Carnarvonshire, to Mary, youngest daughter of the late Richard Roberts, Esq., of Liverpool. No cards.

Hoare—Gilbert.—On November 21, at St. John the Baptist Church, Leytonstone, W. Hoare, M.R.C.S.E., of Titchfield, Hants, to Mary Ann, eldest daughter of J. Gilbert, Esq., Gainsborough-lodge, Leytonstone, Essex.

Turner—Whitbourn.—On November 25, at the parish church, Godalming, J. S. Turner, M R.C.S.E., to Annie, eldest daughter of R. Whitbourn, Esq., of Godalming.

Walsh—Rowe.—On November 22, at Monkstown Church, near Dublin, W. Walsh, M.D., F.R.C.S.I., only son of John Walsh, J.P., of Walshfield, county Wexford, to Harriet Stephen, widow of the late James Rowe, C.E., of Calcutta.

DEATHS.

Chandler, A. T., M.R.C.S.E., at Chiddingfield, Surrey, late of Godalming, on November 22, in his 49th year.

Fowell, S., M.R.C.S.E., L.S.A , at Milverton, Somerset, aged 48.

Rann, G , L S.A.L., of Birmingham, on November 19, aged 46.

Sargant, W. T., M.R.C.S.E., of Redhill, on November 16.

Smith, H. T., M.D. St. And., at 17, Arlington-street, Piccadilly, on Nov. 17, aged 35.

Walton, S. K., M.R.C.S.E., L.D.S., at Jersey, on November 20.

VACANCIES.

Infirmary for Consumption, Margaret-street.—Visiting Physician.

Hospital for Sick Children.—House-Surgeon.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Camelford Union.—Mr. James Somer has resigned the Boscastle District; area 16,460 ; population 2433 ; salary £30 per annum.

Cardiff Union.—Dr. Alfred Wall has resigned the South District ; salary £40 per annum.

Eton Union —Mr. E. V. Hemingwary has resigned the Colnbrook District ; salary £28 per annum.

Luton Union.—Mr. Patrick Benson has resigned the Barton District ; area 6717 ; population 1747 ; salary £40 per annum.

Melton Mowbray Union.—The Melton Mowbray First District is vacant ; area 15,039 ; population 5730 ; salary £40 per annum.

St. George's-in-the East Parish.—Dr. Tuttle has resigned the Eastern District ; area 50½ ; population 14,522 ; salary £60 per annum

Staines Union.—Mr. Hemingway has resigned the Stanwell District ; area 4060 ; population 1717 ; salary £30 per annum Also the Harmondsworth District ; area 3480 ; population 1385 ; salary £25 per annum.

APPOINTMENTS.

Cerne Union.—Henry Downes, M.D. Edin., M.R.C.S. Edin., to the Western District.

Dudley Union.—Daniel W. Phillips, M.R.C.S.E., L S.A., to the First Rowley Regis District.

Potterspury Union.—Frederick Dufty, M.R.C.S.E., L.S.A., to the First District.

Taunton Union.—Thomas Elmes, M.R.C.S.E., L.K & Q. Coll. Ire., to the Bishop's Lydeard District.

We regret to hear of the death of the celebrated French Physician, Dr. Trousseau.

Release of the "Atrato."—The royal mail steamship *Atrato* was released from quarantine on Friday, the Medical officer of quarantine, Southampton, having given the Privy Council a favourable report of the health of her passengers and crew.

Royal College of Surgeons.—At the recent examination for the Fellowship of the above institution, twelve candidates offered themselves—viz., six seniors and six juniors ; of the latter, one underwent the anatomical examination only, and, having passed, will be allowed to offer himself for the final examination on the next or succeeding occasion. The following were the questions on Pathology and Surgery submitted to both senior and junior candidates—viz. : — 1. Mention the different simple dislocations and fractures which occur at the elbow and at the superior radio-ulnar joints ; state the diagnostic symptoms and the best treatment of each injury. 2. At what time after infection does gonorrhœa generally commence ? What is the seat and nature of that disease ? What are its effects in mild and in severe cases ? and what is the appropriate treatment in different cases ? 3. Give an outline of the morbid conditions of the kidney known as "Bright's disease." State how the existence of that disease may be determined during life, and how it is injurious to the health, so as to render the performance of a Surgical operation unadvisable. 4. What are the consequences of a wound into a healthy knee-joint ? and what morbid changes may occur within the joint from the injury ? State your opinion whether suppuration in the joint is necessarily fatal to its recovery. 5. Mention the leading circumstances to be attended to in the construction of a Hospital Surgical ward, and in the placing of the beds. State in what the vitiation of the air consists ; how much cubic and floor space ought to be allowed for each patient ; and how the space is measured. 6. Mention the most frequent accidental cause, the local symptoms, and the proper treatment of a simple fracture through the carpal end of the radius.

Quekett Microscopical Club.—The monthly meeting was held at University College on the 23rd ult., Ernest Hart, Esq., President, in the chair. Mr. McCooke read a short paper on the best method of transmitting slides through the post. Mr. S. J. McIntire read a paper on the different kinds of *poduræ*, in which he described their history and habits, how to mount and examine their scales, and his experiences in breeding them for microscopical investigation. Mr. N. E. Green read a paper on *melicerta*, being the result of long and careful inquiry into the habits and structure of this low form of animal life, under high powers and in thin glass cells especially contrived for the purpose. Nineteen members were elected, and the proceedings terminated with a *conversazione.*

Medical Society of the College of Physicians, Ireland.—The opening meeting of the third annual session of the above Society was held on the evening of Wednesday, the 21st ult., in the hall of the College, when an introductory address was delivered by the President, Dr. Stokes. In commencing his observations Dr. Stokes gave a very interesting history of the early days of the Society's predecessor—the "Association of Fellows and Licentiates of the King's and Queen's College of Physicians in Ireland," founded in 1816 by a number of gentlemen, of whom one alone, Dr. Richard Grattan, still survives. Dr. Stokes' account included a graphic description of some of the celebrities who took part in the early proceedings of the Association, and who contributed so many important papers to its *Transactions*. The President next gave a brief sketch of the papers read during the first two sessions of the present Society, and in conclusion called attention to the approaching meeting of the British Medical Association in Dublin, and after detailing the objects of the Association, expressed a confident hope that the meeting would prove a successful one, both in its scientific and social aspects. On the conclusion of the President's address, the Rev. Professor Haughton read a paper entitled "A Scientific Inquiry into some of the Causes that have been alleged to produce Cholera." It is to be hoped that this important communication, in which the author advocates the doctrine of the propagation of the disease by contagion, will soon see the light. A spirited discussion followed, in which Sir Dominic Corrigan, Dr. Law, Dr. Lyons, Dr. Hayden, and Dr. MacSwiney took part. Professor Haughton replied generally, and dwelt strongly on the point, that the questions of the degree of contagiousness, and of the communicability by contagion, were to be considered independently.

Pathological Society of Dublin.—The first meeting of the twenty-eighth annual session of the above Society was held on Saturday, the 24th ult., in the anatomical theatre of Trinity College, Dr. McDowel, President, in the chair. At the conclusion of the ordinary business of the day, the subject of the Society's gold medal for 1866-67 was announced to be "The Diagnosis and Pathology of Diseases of the Shoulder-joint." The following officers were then elected for the Medico-Chirurgical year now commencing:—*President:* Robert W. Smith. *Vice-Presidents:* Joseph M. O'Ferrall, Awley Banon, John Denham, George Kidd, Robert Adams, and Sir Dominick J. Corrigan, Bart. *Council:* John Banks, Thomas Beatty, Maurice Colles, James Duncan, Christopher Fleming, Samuel Gordon, Edward Hamilton, James T. Hughes, Benjamin G. M'Dowel, Alfred H. M'Clintock, George H. Porter, and Joliffe Tufnell. *Honorary Secretary:* William Stokes. *Secretary:* Robert Law. *Secretary for Foreign Correspondence:* Robert D. Lyons. *Treasurer:* Robert W. Smith.

The Poor-law Medical Officers' Association.—Whether the Metropolitan Medical Officers' Association is one of those combinations which are destined to effect a good and useful social purpose, it would need an Œdipus rather than a Davus to determine. The idea of combination, as applied to poor-law questions, is altogether too novel, and the principle too untried, for us to pronounce an authoritative opinion. Still it does seem but fair that the committee of the Association should have an impartial hearing, and its members an opportunity of putting their views fairly before boards of guardians and the public. In one particular it gives presage of success; that is, in having adopted as its motive the attainment of a number of objects, and in not entrusting its safety to the efficacy of a single "party cry."—*Poor-law Chronicle*, Nov. 21.

Naval Medical Prizes.—In 1829 the late Sir Gilbert Blane, Bart., a distinguished Surgeon in the Royal Navy, addressed a letter to the Admiralty Board through the Right Hon. Wilson Croker, in which he expressed his belief that it would greatly conduce to some of the best interests of the Royal Navy to hold out an object of emulation to its Medical officers. Acting on this feeling, he requested permission to offer two gold medals biennially to two of the Surgeons of His Majesty's ships of war who shall have, in the course of the two preceding years, delivered into the proper office the two most approved journals, and suggested that the adjudicators should be the Presidents of the Royal Colleges of Physicians and Surgeons of London respectively, with the Director-General of the Medical Department of the Royal Navy. The Lords of the Admiralty gave the required permission, and stated how much they appreciated Sir Gilbert's zeal for the service in which he had served so long and with so much distinction. Since this period the Medical officers of the Royal Navy have evinced a commendable ambition to become Blane medallists, and one of the earliest recipients of the prize was Dr. (afterwards Sir John) Liddell, the late Director-General of the Naval Medical Department, and Dr. Bryson, who now fills this appointment, has also carried off the prize. The awards for the present year have just been made in favour of Messrs. Stephen Bowden, M.D., Mar. Coll. Aberd., F.R C.S. Eng., and L.S.A., of Her Majesty's ship *Prince Consort*, and Staff-Surgeon William Henry Sloggett, M.R C.S. Eng. and L S.A., of Her Majesty's ship *Edgar;* their respective journals having received the commendation of Sir Thomas Watson, Bart., President of the Royal College of Physicians, of Professor Partridge, President of the Royal College of Surgeons, and of Dr. Bryson, the Director-General of the Naval Medical Department.

St. Mary's Hospital.—The *Pall-mall Gazette* of November 22 contained the following apologetic paragraph in reference to the remarks on which we commented last week:—"We are requested to state that the paragraph relating to alleged gross misconduct in the mortuary by students of St. Mary's Hospital, on which we yesterday founded our comments, is a greatly exaggerated and distorted version of the facts. The body, it is stated, was not 'poked with sticks,' and the alleged presence of the widow is an entire fabrication. The same authority adds that the students generally have been frequently most favourably noticed for their excellent conduct in the wards and the school, and have given repeated proofs of their kindness and consideration for the sick. They have as a body spontaneously expressed their deep pain and regret that anything should have occurred to give a colour to the remarks which have been made on this occasion. Our own observations were founded on the report of the case in the newspapers."

Conviction for Neglecting and Starving a Child.—At the Central Criminal Court, on Thursday, November 22, Charlotte Power was indicted on the coroner's inquisition for feloniously killing and slaying Frances Ann Power, her infant child, at Fulham, on September 15. The prisoner is the wife of a labouring man; the deceased child was born the latter part of June. She was attended by Mr. Spurgeon, the Union Doctor, and the child appeared healthy and doing well. On September 9 the prisoner went to Mr. Spurgeon and asked him to visit the deceased, who was suffering from diarrhœa. He ordered beef-tea, arrowroot, and drops of brandy, and the next day it was better, but a few days afterwards, in consequence of statements made by neighbours, he resolved to ascertain whether it had had the nourishment which he had ordered, and accordingly asked to look at the beef-tea. Prisoner showed him some which was sour, and the child was in such a state that he directed its removal to the workhouse that it might be properly attended to. Mr. Andrews, the Medical officer, found it in a very filthy condition; its mouth was partly open, its eyes were sunken, and the napkin not having been changed its thighs were excoriated. It was too weak to suck, and was therefore fed with a spoon, but it did not rally and died on the afternoon of the 15th. Its weight was only 5 lb. 14 oz., whereas it should have weighed from 10 lb. to 12 lb. On a *post-mortem* examination the organs were all found to be healthy, and Mr. Andrews attributed death to inanition, meaning thereby want of nourishment. It was proved that the mother was addicted to drink. The jury returned a verdict of guilty, and she was sentenced to six months' hard labour.

The Water Theory of Cholera.—Mr. Orton, Medical Officer of Health at Limehouse, has presented a report to the District Board of Works, in which he opposes the Registrar-General's theory of the causation of the East London outbreak. Mr. Orton states that he was at first inclined to adopt the theory, but he found that it did not answer to the facts. Eventually he became convinced "that water had little or nothing to do with the cholera." After noticing that amongst water-drinkers but few cases of cholera occurred, and that of the members of large total abstinence clubs living within the limits of the East London water supply the percentage attacked was only fractional, he proceeds to advocate the atmospheric theory of conveyance. "I have already expressed an opinion that the great local nuisances have probably had their part quite as much as the water, or rather more, on the production of cholera. The Lea Cut and Regent's Canal were intolerable during the hot weather in June, when on one day the thermometer was 165° in the sun. Then look at the Bow Creek, into which was pumping all this time the sewage of 70,000 inhabitants, including Stratford, West Ham, and all about Victoria Dock. And am I to be told that such abominations have had nothing to do with bringing about an epidemic? Then add to the list the numerous factories on Bow-common, and more or less throughout the eastern district, the comparatively stagnant water in the docks, as well as that charged with organic matter in and about the poorer dwellings at a low elevation, in some cases only two feet above, and vast numbers many feet actually below, Trinity high-water mark, and there is then to be found an aggregate of filth, I believe I am not wrong in saying, not to be equalled by all the rest of the metropolis. At this time the Thames at Greenwich was 68°, so that from a large tidal stream to stagnant water like the canals, it was probably here at 80° of heat. It is a fact that organic matter in water at 60° undergoes a fermentation, poisonous matters are thrown off, and deadly vapours, so that it would require slight calculation to estimate the influence on these masses of liquid filth, continuing for days together, and then conveyed exactly in a line with the cholera field. The records of Medical science afford plenty of cases in illustration. The outbreak of choleraic diarrhœa, attended with many deaths, at the Carlisle Lunatic Asylum, as related by Dr. Coulston, is a case in point. Here the sewage of this institution had been thrown over a heavy, clayey land in the neighbourhood, and a favouring wind did the mischief. It was found when the wind was away from the asylum the disease was at once relieved; and then again, when in an opposite direction, disease and death increased. . . . If we look at the map and see the river in the south, the Bow Creek in the east, and Sir George Duckett's Canal in the north, there is to be seen the area of mischief. And it is very remarkable, allowing for the action of the excessive heat in the production of cholera miasm, acted upon by a primary atmospheric influence, that the east and the north-east wind following, would exactly convey this poison where the epidemic was mostly felt, and over the field of the East London water supply. Stratford, West Ham, and Victoria Docks are in the rear, where the mortality was great, but then they lie low, and the poisonous contamination would be otherwise rapidly experienced by the process of diffusion, so close upon their borders. It may be asked, why did not this mischief go south—cross the water? This was no doubt prevented by the influence of the tidal currents and the river breezes. The Thames in its sanitary agency is little appreciated. I regard it, apart from other considerations, as the grand conservancy of the public health. It is rare to find a case of fever on its banks at any time, and scarcely ever a death. Not one death from cholera or diarrhœa occurred on the water's edge from the eastern verge of Limehouse to the extremity of Wapping, the distance of a mile and a half, during the late epidemic."

SOUTH AFRICAN SAURIANS.—At the meeting of the Geological Society on the 7th inst., Professor Huxley exhibited some remains of large Dinosaurian reptiles from the Stormberg mountains. The paper read more particularly described a portion of a right femur, which was twenty-five inches and a half long, so that the entire femur may be safely assumed to have exceeded thirty inches in length. The Professor considers that the peculiar form of the bone, and the characters and position of the trochanters, leave no doubt of the affinities of the reptile, which must have been comparable in size to its nearest allies, the Megalosaurus and the Iguanodon. He proposes to name it Enskelosaurus Browni. A portion of the distal end of a femur, indicating another genus of large-sized Dinosaurian reptiles, was also described. The discovery of these remains was stated to be by no means decisive of their geological relations, as Dinosaurian reptiles lived throughout the mesozoic period, and may have existed during the Permian; but it is interesting that the Stormberg rocks conformably overlie the Karoo beds which have yielded the Dicynodonts and so many other remarkable reptiles and Labyrinthodonts.—*Proceedings Geol. Soc.*, No. 154.

ANCIENT BRITISH CATTLE.—In a lecture given at the Royal Institution in May, 1856 (see *Proceedings of Royal Institution*, vol. ii., p. 259), Professor Owen expressed his opinion that the small ox *Bos longifrons*, and not the gigantic *Bos primigenius*, was the aboriginal source of part of our domestic cattle; and he argued that the Romans had probably imported their own tamed cattle to their colonial settlements in Britain. He stated also his belief that the half-wild races of white cattle in Chillingham and a few other British preserves were descended from such introduced cattle, adding that if the blood of any of the aboriginal cattle, contemporaries with the mammoth, still flowed in the veins of any of our domesticated races, it would probably be in the short-horned or hornless varieties of the mountains of Wales and Scotland. In relation to this interesting subject, we have in the new number of the *Quarterly Journal of the Geological Society* (No. 88, p. 391) a paper by Mr. W. Boyd Dawkins on "British Fossil Oxen," especially devoted to the *Bos urus* of Julius Cæsar, the *Bos primigenius* of Bojanus. After referring to the anatomical details given by Cuvier, Rütimeyer, and Nilsson, Mr. Dawkins adds that a very careful comparison of the skulls of *Bos urus* found in Britain with those of the numerous varieties of *Bos taurus*, or the common ox, compels him to believe that there is no difference of specific value between them. From the measurement of a skull of the *Bos urus*, Cuvier inferred that, according to the proportions of the common ox, it would belong to an animal 12 feet long and 6·5 feet high at the withers; and Professor Nilsson deduced the same figures from another skull. Mr. Dawkins attributes most of the specimens found in Britain to the pre-historic age—a date posterior to the extinction of the mammoth cave-bear, etc. Professor Nilsson discovered a skeleton of this early date in Scania which had been pierced with a javelin. It was found at a depth of ten feet, at the bottom of a peat bog, and lay with its head downwards. The evidence that it had fallen by the hand of man is said to be perfectly incontrovertible. Nilsson thinks that the larger cattle of the Netherlands and Holstein have sprung from this animal; and Cuvier and Bell believe that it is in part the ancestor of our domestic breeds. The evidence, on the whole, inclines Mr. Dawkins to the opinion, "as there is no osteological or other difference, saving that of size, between the *Urus* and the domestic race of cattle, that the larger cattle of Western Europe at least are the descendants of the former animal, modified in many respects by restricted range, but still more by the domination of man."

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

A Candidate.—The list will be published as soon as it has been submitted to the Council.

A Country Surgeon.—The best life of John Hunter is the one prefixed to the last revived edition of his work by Palmer; it was written by Mr. Drewry Ottley.

Queen's University, Ireland.—A correspondent makes the following pertinent inquiry. He states that the "M.D. *Honoris Causa* of the Queen's University, Ireland," was recently conferred on Professor Greene, thereby enabling him to register, and, being registered, qualifying him to practise, and asks whether the Council of the Royal College of Surgeons of England would in such a case, and in virtue of the 9th clause of Section III. of their regulations, admit Professor Greene to examination for its diploma. The clause states that "Graduates in Medicine of any legally constituted College or University recognised for this purpose by the College will be admitted to examination on adducing, together with their diploma or degree, proof of being 21 years of age, etc." There is no doubt the attention of the Medical Council will be called to this case at its next meeting.

The Norfolk and Norwich Hospital.—The *Norwich Chronicle*, of November 17, contains an account of a visit to the County Hospital. The writer of the article dilates on the improvements which have lately been made in the building, and writes in appreciating terms of the general management of the Hospital. The building has been newly drained, and various wards have been better ventilated and cheerfully coloured. The writer speaks in high terms of the Catherine Ward, which, he says, is the model ward of the Hospital. It was fitted up by Sir John Boileau, in memory of his late wife.

F.R.C.S. Exam.—The list of successful candidates cannot be published until after the next meeting of the Council, to which body the names will be submitted for approval—a piece of red-tape which would be more honoured in the breach than in the observance. The case of the gentleman mentioned, who was a successful candidate on this occasion, is a very hard one, and on the reopening of Parliament will be made the subject of an inquiry, when H.R.H.'s answer will be looked for with great anxiety by the Army Medical Officers.

M.B.M.A.—There are 2456 members of the Association, of which number about 400 are Fellows of the College. On the last occasion of electing Fellows into the Council only 51 Honorary Fellows out of 275, being members of the Association, voted, whereas the number of Fellows by examination amounted to 41 out of only 105. From a careful analysis of the College calendar, it appears there are now 323 Fellows by Examination, 245 Honorary, and 746 by Election, making a total of 1314.

Gilbert Blane, M. D.—The Surgeons in the Royal Navy to whom the Blane Medals have just been awarded are Stephen Bowden, M.D., F.R.C.S., of H.M.S. *Prince Consort*, and Staff-Surgeon William Henry Sloggett, M.R.C S., L.S.A., of H.M S. *Edgar*. Write to Dr. Bryson, Director-General.

ACCIDENTS OF THE SEASON.

(*From a Correspondent.*)

An accident occurred to the shooting party at Chatsworth on the 27th. The Marquis of Hartington, when firing at a woodcock, unfortunately hit his uncle, Mr. Howard, in the eye. From the excessive swelling which immediately took place, it was feared the sight was damaged, but it is now hoped the shot has not penetrated the eyeball, and from the improvement in the vision that the eye will be saved. He was attended by Mr. Wrench, Surgeon to the Duke of Devonshire, at Chatsworth, and Dr. Kingsley, Physician to the Duke of Rutland. Mr. Dixon, of London, was telegraphed for, but did not arrive as soon as was expected, the express train having met with a serious accident, by which he was delayed. It is a curious coincidence that the Hon. Charles Howard, M.P., cousin of the above, met with a very similar accident last week.

TREATMENT OF FALLING OFF OF THE HAIR.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—"A Constant Reader" will find arsenic very useful in the treatment of alopecia. I have lately been attending the practice at the Western Dispensary for Diseases of the Skin, and I have seen several cases where it had been given with marked good effect. It requires to be persevered with for some months. One case I may mention: it is that of a woman about 40 years of age, whose hair some years ago began to turn grey and to fall off. When she came under treatment last year, she had only a mere fringe, the top of the head being as smooth as polished marble. Arsenic was ordered for her, and she has been taking it up to the present time. She has now a full crop of black hair, about four inches long, which is growing fast. In this case, as in "A Constant Reader's," there was no perceptible disease of the skin or hair follicles. The best form of giving the arsenic is the liquor arsenici chloridi in doses of five minims, gradually increased as the patient may seem to bear it. Where iron is indicated, the muriated tincture should be combined with it. If hereditary, as it probably is in "A Constant Reader's" case, it may be dependent on constitutional syphilis, when minute doses of bichloride of mercury continued for a length of time might prove beneficial.—I am, &c.

November 27. A STUDENT.

COMMUNICATIONS have been received from—

Dr. MOXON; Dr. A. R. PATERSON; Dr. SAMELSON; Dr. JUNKER; Dr. BALLARD; Dr. CHOLMELEY; Messrs. BURTON; Mr. SPENCER WELLS; Dr. B. W. RICHARDSON; Mr. ALFRED J. MARSDEN; J. D.; Dr. MORIARTY; Dr. BEVERLEY; Mr. A. COLEMAN; Mr. HARRY LEACH; MEDICUS; Mr. B. VINCENT; A STUDENT; Mr. RODGERS; Mr. N. C. MACNAMARA; Dr. SKINNER.

BOOKS RECEIVED—

The City Diary and Almanack—Report of the Medical Officer of Health for Charlton—Russell's Hospital Statistics—Remarks on the Royal Warrant Regulating the Pay, etc., of Army Medical Officers—Letheby's Report of the Sanitary Condition of the City of London—Habershon on Diseases of the Stomach and Dyspepsia—Journal de Médecine Mentale—Bulmer's Chart of the Brain and Cranial Nerves—Fry's Lodging Houses Acts, 3rd edition.

NEWSPAPERS RECEIVED—

L'Union Médicale—The Christian Times—Gazette Hebdomadaire—Gazette des Hôpitaux—Gazette Médicale de Paris—The Sunday Gazette.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 24, 1866.

BIRTHS.

Births of Boys, 1101; Girls, 1034; Total, 2135.
Average of 10 corresponding weeks, 1856-65, 1811·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	716	719	1435
Average of the ten years 1856-65	733·5	728·1	1461·6
Average corrected to increased population..	..	..	1608
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	1	5	8	1	1	4	6	..
North ..	618,210	6	5	4	..	9	10	5	1
Central	378,058	3	2	8	..	4	9	3	..
East ..	571,158	10	4	6	..	9	17	2	3
South ..	773,175	6	10	16	2	8	15	10	4
Total ..	2,803,989	26	26	42	3	31	55	26	8

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·838 in.
Mean temperature	39·2
Highest point of thermometer	50·6
Lowest point of thermometer	26·5
Mean dew-point temperature	34·4
General direction of wind	..W.S.W.&S.W.
Whole amount of rain in the week	0·44

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 24, 1866, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending Nov. 24.	Deaths.		Temperature of Air (Fahr.)			Rain Fall.	
				Corrected Average Weekly Number.*	Registered during the week ending Nov. 24.	Highest during the Week.	Lowest during the Week.	Weekly Mean of the Mean Daily Values.	In Inches.	In Tons per Acre.
London (Metropolis)	3067536	39·3	2155	1400	1435	50·6	26·5	39·2	0·44	44
Bristol (City) . .	163680	34·9	120	73	‡168	54·1	27·9	41·8	0·26	26
Birmingham (Boro')	335798	42·9	216	163	155	51·0	27·5	40·6	0·48	48
Liverpool (Borough)	484337	94·8	327	281	285	50·0	32·4	43·4	0·82	83
Manchester (City) .	358855	80·0	227	203	‡208	49·3	27·0	38·2	0·66	67
Salford (Borough) .	112904	21·8	84	57	39	49·4	26·8	39·7	0·58	59
Sheffield (Borough) .	218257	9·6	175	115	94	48·0	28·0	37·7	0·28	28
Leeds (Borough) .	228187	10·6	202	116	126	50·5	27·0	39·4	0·24	24
Hull (Borough) .	105233	29·5	83	49	52	..	..	..	..	..
Nwcastl-on-Tyne, do.	122277	22·9	76	65	76	45·0	27·0	37·1	0·14	14
Edinburgh (City) .	175128	39·6	89	84	100	46·7	29·0	38·0	0·10	10
Glasgow (City) . .	432265	85·4	367	252	244	46·8	26·8	38·9	0·60	61
Dublin (City and some suburbs) .	318437	32·7	173	†156	188	50·9	30·5	41·3	0·09	9
Total of 13 large Towns . . .	6122894	34·4	4274	3014	3070	54·1	26·5	39·6	0·39	39
	(1863)				Week ending Nov. 10.	Week ending Nov. 10.				
Vienna (City) . .	560000	..	..	..	327	..	..	§ 47·3	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·833 in. The barometrical reading decreased from 30·18 in. at the beginning of the week to 29·53 in. on Friday.

The general direction of the wind was W.S.W. and S.W.

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* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 48·4°.

APPOINTMENTS FOR THE WEEK.

December 1. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p.m.

3. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

EPIDEMIOLOGICAL SOCIETY, 8 p.m. Dr. Ed. Goodeve, "On the Proceedings of the International Sanitary Conference, and the Protection of Europe from Cholera."

ODONTOLOGICAL SOCIETY, 8 p.m. Meeting.

ROYAL INSTITUTION, 2 p.m. General Monthly Meeting.

4. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

ANTHROPOLOGICAL SOCIETY OF LONDON, 8 p.m. Meeting.

PATHOLOGICAL SOCIETY, 8 p.m. Meeting.

5. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

OBSTETRICAL SOCIETY OF LONDON (Council, 7 p.m.), 8 p.m. Dr. Fairbank, "On a Case of Fractured Pelvis, with Injury to the Uterus, during Pregnancy." Dr. Tanner, "On Excision of the Clitoris as a Cure for Hysteria." Dr. Newman, "On a Case of Cæsarian Section." And other Papers by Drs. Madge and Short.

6. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

HARVEIAN SOCIETY OF LONDON, 8 p.m. Dr. Broadbent, "On Cases illustrating Prognosis in Heart Disease."

7. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.

WESTERN MEDICAL AND SURGICAL SOCIETY, 8 p.m. Dr. Marcet, "A Case of Empyema treated by Tapping and Injections." Mr. C. Hunter, "A Case of Paralysis treated by Strychnine Injected Hypodermically."

ORIGINAL LECTURES.

LECTURES ON CATARACT,
AND THE
MODERN OPERATIONS FOR ITS TREATMENT.

DELIVERED AT
King's College, London,
During the Summer Session, 1866,

By J. SOELBERG WELLS,
Professor of Ophthalmology in King's College, and Ophthalmic Surgeon to King's College Hospital.

Lecture IV.

Gentlemen,—In my last lecture I described the manner in which the operation of flap extraction is to be performed. I must now very briefly point out to you what course is to be pursued if any untoward circumstances arise during the different steps of the operation. As I cannot enter at sufficient length into so important a subject, I must refer you for more extended information upon these points to works on diseases of the eye, more especially Mackenzie's admirable treatise.

Under the following circumstances, it is advisable to withdraw the knife at once, and postpone the operation until the wound is united:—1. If the puncture is too near the edge of the cornea or in the sclerotic; 2. If it is too far in the cornea, so that the flap would be too small; 3. If the aqueous humour spirts out when the point of the knife has only just entered the anterior chamber, for the iris will then fall forward upon the knife, which would become entangled in it so that it would be impossible to finish the section without lacerating the iris considerably; 4. If the point of the knife is so blunt that it will not readily make the counter-puncture.

Should the aqueous humour escape directly the counter-puncture has been made, the section may yet be finished without wounding the iris by placing the point of the fore or middle finger of the other hand upon the edge of the blade, and pushing the iris off from it as the section is being slowly completed. If, however, it is impossible to avoid wounding the iris, it is better to cut boldly through it, as this is far less apt to excite iritis than if the knife becomes entangled in it. If the counter-puncture is too close to the sclerotic, the knife must be slightly drawn back, and another counter-puncture made, or the size of the section may be diminished by turning the edge of the blade slightly forward in finishing the flap. This should also be done when the counter-puncture is too low. If it be too high, the flap will be too small, and this may be remedied (1) by making another counter-puncture a little lower down, (2) by turning the edge of the blade back in cutting out, or (3) by enlarging the section downwards with a secondary knife or a pair of blunt-pointed scissors. The last proceeding is to be preferred if the counter-puncture is much too high. If we purpose doing this, the section is to be continued until only a little bridge of cornea is left standing (Fig. 7, *a*). The knife is then to be withdrawn, and the section enlarged by dividing the cornea to the required extent at the counter-puncture with the probe-pointed secondary knife (Fig. 8), or with a pair of blunt-pointed scissors; the latter are apt, however, to bruise the cornea more. The advantage of leaving the little bridge standing is, that it will keep the cornea tense, and prevent its yielding before the knife or scissors. The bridge is then to be divided, or before so doing the capsule may be opened. The size of the flap should always be noted before the section is completed, so that we may enlarge it in the above manner if necessary. If the section is too small to permit the ready exit of the lens, there is much danger of rupture of the hyaloid membrane and escape of vitreous humour, and of bruising of the iris and cornea. It is also advisable to leave the bridge standing, if the patient is very unruly, and strains greatly as we are making the section. A few moments' rest will generally suffice to restore his quietude, and then the bridge may be divided.

Fig. 7.

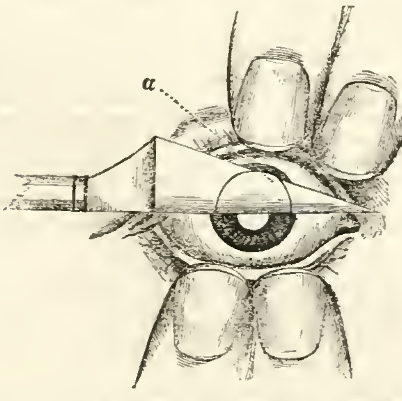
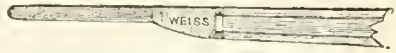


Fig. 8.



If the lens does not at the third period readily present itself in the pupil, we must on no account attempt to force this by pressing strongly on the eye; but we must lacerate the capsule again, and more freely than before. If the capsule be so tough as not to be readily torn with the cystotome, it sometimes comes away with the lens, or it may be divided with the point of the knife, or be afterwards removed with a hook or a pair of iris forceps.

If a little vitreous humour escapes with the lens, it is but of slight consequence. The protruding portion is to be snipped off, and a tight compress applied. But it is very different if it escapes before the lens, for then it will push the latter aside, so that it may even fall to the bottom of the vitreous humour. If this accident should occur, a hook or scoop should be passed behind the lens, and the latter gently "fished out." It should be extracted at all hazards, for if it remains behind it is but too likely to set up a most destructive and painful panophthalmitis.

After the exit of the lens, the corneal flap sometimes becomes wrinkled and collapsed, so that it falls away from the line of incision. This wrinkling is due either to decrease of the intra-ocular tension, or to a diminution in the elasticity of the cornea. Von Graefe lays great stress upon the importance of this symptom, considering it unfavourable if the collapse be at all considerable, for he has found that suppuration of the cornea often occurs in such cases. If we therefore find, in a case of double cataract which is to be operated on at one sitting, that the cornea of the first eye becomes much wrinkled after extraction, it would be wise to submit the other eye to a different mode of operation. In such cases, also, great care must be taken that the flap is not turned back when the upper lid is let down. If the iris protrudes between the lips of the wound after removal of the lens, or if the pupil is distorted, the lids should be closed and lightly rubbed in a circular direction, so as to replace the iris, and restore the regularity of the pupil. If the prolapse still persists, it may be gently replaced with the curette. But if all our efforts prove unavailing, it is by far the best course to draw it out a little further and snip it off. The iridectomy will not be of the slightest disadvantage, more especially in the upper section; in fact, it may prove of positive advantage, not only in favouring the cure, but also in exposing remnants of lens substance which may be situated behind the iris, and have, perhaps, caused the prolapse; whereas the occurrence of prolapse after extraction is one of the chief dangers and annoyances of this operation. The protruding portion of iris sets up considerable irritation, and prevents, perhaps, the union of the section, the aqueous humour flowing off through the fistulous opening; and this constant irritation may set up iritis or iridocyclitis. Even if the iris unites with the section, a broad unsightly cicatrix will be left, the pupil being, perhaps, greatly distorted or almost annulled. To prevent all these untoward complications, I strongly advise the removal of a portion of the iris if the prolapse cannot be easily returned, or if the iris has been much contused by the exit of the lens, or by our endeavours to restore the prolapsed portion.

Hæmorrhage into the vitreous humour is a disastrous occurrence. It may take place either at the time of the operation or some hours afterwards. The patient complains of a sudden sharp pain, a gush of vitreous takes place, followed by blood, and the eye is lost. In such cases there generally exists a diseased condition of the choroidal and retinal vessels, detachment of the retina, etc.

The *after treatment* of flap extraction is a subject of great importance, as much may be done by timely care and attention. As it is of consequence to detect and combat any unfavourable symptoms at the earliest stage, the Surgeon should visit the patient very frequently during the first few days after the operation, and, if possible, himself change the dressings, so that he may watch the condition of the lids, the quantity and character of the discharge, etc. As my space will not permit me to enter fully into this subject, I shall endeavour to lay down for your guidance broad general rules, which will, however, require modification according to the exigencies of particular cases. At one time the antiphlogistic treatment was in great repute. Local and general depletion was had recourse to, and perhaps repeated several times, upon the slightest appearance of pain or inflammatory symptoms. But now this mode of treatment has justly fallen into disuse. Our primary object is to obtain adhesion of the corneal flap by the first intention, and this will take place far more readily in a strong healthy person, than in one who is weak and decrepid; nearly one-half of the cornea has been divided, and for a time the other half has to carry on the nutrition of the whole, and to assist in the process of union. It must also be remembered that this operation is generally performed in persons above the age of 50 or 55, and even indeed in the very aged, whose vital powers will not bear depression. The general health and the reparative power of the system must therefore be sustained. The better and stronger the patient's constitution is, the more favourable may be the prognosis of the result of the operation. Even the florid, turgid, apoplectic-looking individual warrants a better prognosis than the very aged decrepid person, whose general health is poor and feeble, whose cheeks are pale and shrunken, whose arteries are rigid and skin inelastic. Von Graefe also considers the prognosis less favourable if the eyeball is deepset and sunken, and the diameter of the cornea short, for in such cases flaccidity and wrinkling of the corneal flap, and suppuration of the cornea are of not unfrequent occurrence on account of its feeble nutrition.

The after treatment must be varied according to the general health, constitution, and habits of the patient. The diet should, from the commencement, be light, nutritious, and easily digestible. Meat may be allowed once daily; it should, however, be finely minced, so that there is no need for mastication, which would disturb the quietude of the eye. Good beef tea or mutton broth may be given occasionally during the day, but slops are, as a rule, to be avoided. But whilst we endeavour to sustain the patient's strength, we must not fall into the opposite error of over-feeding him. In a very plethoric and full-blooded individual, especially if marked inflammatory and febrile symptoms manifest themselves, a strictly antiphlogistic regimen must be observed. With regard to stimulants and beer we must be entirely guided by the patient's constitution and habits. It is very unwise to cut off all stimulants from an individual who has always, and perhaps largely, indulged in their use; we should allow him a moderate amount of his customary beverage, watching the while its effect, and diminishing or increasing the quantity as the case may demand. In feeble decrepit persons stimulants and malt liquor, together with a good nutritious diet, often prove of great service; quinine and ammonia being also given.

It is well to administer a gentle purgative the day before the operation, so that the bowels may not require to be opened for a day or two after the operation. A mild dose of castor oil should then be given, in order to prevent any straining; and this may be repeated if necessary.

When the operation has been concluded, the patient is to be placed in bed in a darkened room. At night his hands should be tied to the side of the bed, to prevent his touching his eyes during sleep. The lids of both eyes may be fastened with a strip or two of sticking plaister, although this is apt to irritate from its shrinking and hardening. I myself prefer a light bandage, especially Liebreich's, which is the most convenient for this purpose. If this is found to he too hot, I employ a very thin gauze bandage. A piece of soft linen is to be applied over the eyelid to soak up any discharge, and prevent its clogging and hardening the charpie, a little pad of which is to be next applied, the whole being kept in place by the bandage. But if we desire to exert more pressure upon the eye, we must employ Von Graefe's compress bandage, the application of which, however, demands far more care and practice. As you will find its use of great service in many eye operations, and as its efficacy depends greatly upon its being properly applied, I will here briefly describe how this is to be done. The patient being directed to close his lids, an oval piece of linen is laid over them; a succession of small pledgets of charpie or finely carded cotton-wool is then placed over it, chiefly in the hollow at the inside of the eyeball and beneath the upper edge of the orbit, so as to fill these out. The pressure of this cushion should be uniform, and not greater upon one point than another, more especially upon the centre of the eyeball; otherwise it will produce pain and uneasiness. The compress should be so applied that the upper lid is gently stretched across the eyeball in a lateral direction, and the lids thus kept immovable. The two principal points of pressure should be at the inner and outer canthus, so that the eyeball is only pressed by the upper lid being stretched gently across it. Von Graefe describes three forms of compressive bandages —1, the temporary; 2, the regular compress; 3, the pressure compress.(a) For temporary purposes I prefer Liebreich's, or a fine elastic web, or gauze bandage, and shall, therefore, only describe the last two.

(To be continued.)

ORIGINAL COMMUNICATIONS.

ON THE

APPLICATION OF THE GRAPHICAL METHOD TO THE STUDY OF THE DISEASES OF THE HEART AND GREAT VESSELS.

By BALTHAZAR W. FOSTER, M.D., M.R.C.P. (Lond.),
Professor of Clinical Medicine in the Queen's College, and Physician to the Queen's Hospital, Birmingham, etc., etc.

II.

In order to establish the actual value of any mechanical contrivance in the diagnosis of disease, it is necessary that all cases in which the instrument has been carefully used should be reported, and that the record should not be confined merely to those which tell of its successful application. The shortcomings of a new method of research must be as accurately studied as the greatest of its triumphs before its general application can lead us to the discovery of any generalisations which may render our power of detecting disease more unerring, and our knowledge of its nature more profound. A true estimate of the value of the sphygmograph will, I am convinced, make it in time an indispensable adjunct to the stethoscope in the study of cardiac diseases; but to render its adoption general, the Profession must not be led to form too extravagant notions of its powers, lest they discard it at the first disappointment, and, like too many clinical appliances, the first check may retard for many a long day the general recognition of the importance of M. Marey's invention. I, therefore, publish the following case in order to show that while the instrument may be very useful in clearing up part of the diagnosis, it occasionally fails, from causes not yet elucidated, to indicate lesions which we might well expect would influence the characters of the pulse-trace.

Case 2.—*Mitral Regurgitation—Atheroma of Lining Membrane of Left Ventricle and Aorta—Pulmonary Tuberculosis—Dropsy—Death—Autopsy.*

W. F., aged 58, tailor, was admitted into the Queen's Hospital on July 28, 1866.

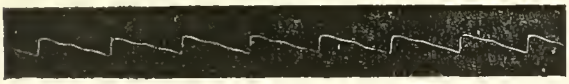
History.—In early life he served in the army for ten years, and was very intemperate, but for the last thirty years he has worked as a tailor, and, in spite of occasional intemperance, has enjoyed good health up to about three months since. From time to time hæmorrhoids and constipation have troubled him; he never had rheumatism, but had syphilis some years back. He married when he left the army, and has one child. About three months since he broke a blood-vessel, and bled, he says, from his nose for several hours. The nares were plugged by his Medical attendant, and the hæmorrhage thus stopped.

Present Condition (*July* 28).—Expression of countenance anxious; skin pale and sallow. He complains of a pain in the left hypochondriac region, which has annoyed him ever since his attack. He states that the pain is occasionally felt higher up, and is better when he is in bed at rest, but is aggravated when he lies on his right side. Breath short; respirations 22; lies in bed without any pillow, as he cannot sleep when his head is raised; appetite bad; bowels regular.

(a) For a lengthened description of the use of these bandages I must refer the reader to my abridgment of Von Graefe's article in the *Arch. fur Ophthal.*, ix. 2, in the *Royal Lond. Ophthal. Hosp. Rep.*, vol. iv., part 2.

Cough frequent and harassing; the mucus expectorated is often tinged with blood; pulse 84, slightly jerky, and visible in the radial and ulnar arteries. Pulse-trace taken on left side and found as follows:—

Fig. 1.

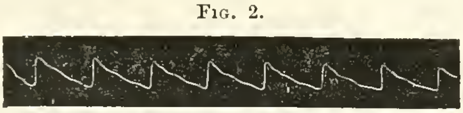


The chest, on examination, was found to be well formed; percussion elicited dulness under right clavicle, and somewhat less impaired percussion-note was detected under the left clavicle. The bases of the lungs posteriorly were dull on percussion, the right the more so of the two. The area of cardiac dulness was increased, extending laterally about three-quarters of an inch beyond the right edge of the sternum, and descending from the third rib to the middle of the seventh.

On auscultation, muco-crepitant rhonchi were heard under right clavicle, and an occasional rhonchus under left. Moist sounds were also heard posteriorly. The heart sounds were as follows:—At apex the first sound was accompanied by a soft blowing murmur, terminated by the second sound, which was heard sharp and clear at the apex. The murmur was well propagated towards the axilla, but was not heard well at the ensiform cartilage. It could be traced up towards the base of the left ventricle, but was there replaced by a rougher and louder murmur, which was audible all over the upper part of the chest anteriorly, and posteriorly in the left vertebral groove. The first sound at the base was therefore accompanied by a loud rough systolic murmur, terminated by the second sound, which was clear, sharp, and accentuated from time to time over the pulmonary artery, but dull and muffled over the aortic orifice. The heart's impulse was strong and heaving; a thrill was perceptible at the base over the aorta. The liver was enlarged, extending about one inch below the costal cartilages. The abdominal cavity contained a small quantity of fluid. The splenic dulness was considerably increased, and to this splenic congestion was referred the pain in the left side of which the patient complained. Urine was scanty and high-coloured, but free from albumen.

Under treatment the man was much relieved, and towards the end of August was told off for discharge; but before leaving the Hospital the lung symptoms became much worse from exposure to cold. Blood reappeared in the sputa, the ascites returned, and the feet became œdematous. The heart sounds remained the same, the thrill at the base became more marked, and the murmur at the base and along the great vessels was heard louder and rougher, and was noticed to be more distinct along the great vessels than at the base of the heart. The heart's action was very forcible, shaking the entire thorax, while every artery leaped from its bed at each systole of the ventricle. Pulse trace taken, and found as follows:—

Fig. 2.



After a week's suffering, during which time the dropsical effusion increased, in spite of all efforts to relieve it by acting on the kidneys and the bowels, he died, worn out by cough and dyspnœa, on September 16.

The post-mortem examination was made thirty-three hours after death. The abdomen was distended by fluid, and the legs were œdematous. On opening the thorax, the heart was seen to occupy a considerable space. Two ounces of clear fluid were found in the pericardium; and the transverse diameter of the heart one inch below the base, when measured *in situ*, was found to be six and a-half inches. When removed, the right cavities contained fibrinous clots, but the left ventricle was nearly empty. The left auricle, however, contained some clots. The pleural cavities each contained several ounces of fluid. The right lung was very adherent at the upper third, and on section was found to be full of softening tubercles. A small cavity had already formed. The left lung contained an old cavity, and exhibited the cicatrix of a former one. Both lungs were congested, and œdematous posteriorly. The liver, large and congested, weighed 52 ounces; the spleen very large, with its capsule thickened, and marked by recent spots of inflammatory deposit, weighed 22 ounces; kidneys healthy.

The heart and the great vessels on being removed from the body were examined more closely, with the following results:—The heart weighed 19½ ounces. The left ventricle was found to have a circumference of five inches. On opening the cavities, those on the right side presented no abnormal peculiarities, beyond those to be gathered from the measurements given below. On the left side the superior curtain of the mitral valve was studded on the edge of the auricular surface with warty vegetations. The whole of the auricular aspect of the valve was roughened by atheromatous patches. The ventricular surface of the superior mitral valve presented in places minute rough spots, but on the lining membrane of the ventricle, just below the posterior segments of the aortic valves, a patch of small vegetations was discovered not quite a quarter of an inch in diameter, and elevated about an eighth of an inch from the surface. The inferior curtain of the mitral valve was much thickened at its free margin, and several of the chordæ tendineæ were diseased and studded with calcareous particles at their attachments. These calcareous particles were only found affecting the ventricular aspect of the valve; the auricular surface, though roughened over a larger extent, had not undergone calcareous degeneration. The wall of the auricle was affected by the extension of the pathological change from the mitral valves. The aortic valves acted fairly when tested. Their free thin margins were thinner than usual, and in one of the valves a little of this thin portion had been absorbed, so that one or two small holes could be detected just inside the free margin of the valve. The aorta was evidently dilated, and measured five inches and three-quarters in circumference, about one inch above its origin. From this point to the descending part of the vessels the inner surface was rough, white, and shrivelled-looking from atheromatous disease. In places spots of calcareous or cartilaginous degeneration were distinguishable. In a word, the aorta presented a very remarkable example of the changes which follow inflammatory conditions in the internal coat of the arterial system. The process had evidently been recently going on, for the external surface of the vessel was of a brilliant red colour from the congestion. The orifices of the innominate and left carotid arteries were surrounded by atheromatous rings, but the vessels themselves were healthy. Several arteries, including the radials, were carefully examined, but no atheromatous change could be detected. We may conclude, therefore, that the process was confined to the aorta, and possibly the cerebral vessels, which were not examined. The measurements of the heart and its orifices were carefully made according to the method previously referred to, and were found to be as follows:—

		English Inches.
Length of the cavity of the right ventricle		4·125
Length of the cavity of the left ventricle		4·25
Thickness of the walls of the right ventricle	Base	·25
	Midpoint	·312
	Apex	·187
Thickness of the walls of the left ventricle	Base	·937
	Midpoint	·812
	Apex	·562
Thickness of the septum of the ventricles		·687
Circumference of the right auriculo-ventricular aperture		5·812
Circumference of the left auriculo-ventricular aperture		4·875
Circumference of the pulmonic aperture		4·5
Circumference of the aortic aperture		4·25

Remarks.—The pulse-trace (Fig. 1) cleared up part of the diagnosis in this case. The vertical line of ascent, as seen in every pulsation of the series, showed that the blood found free and rapid exit from the ventricle. If narrowing of the aortic orifice sufficient to account for the murmur had existed, an oblique or curved line of ascent in the pulsations would have betrayed the lesion. The supposition of aortic obstruction being thus proved untenable, the loud systolic murmur heard at the base of the heart and along the aorta was considered as the consequent of some other pathological change. The history of the case led me to the conclusion that this change consisted in atheromatous roughening of the lining membrane of the ventricle not far from the aortic orifice, and the increased loudness of the murmur along the great vessels was referred to a similar roughening of the aorta itself. The post-mortem examination confirmed the correctness of this view. The pulse-traces throughout the whole course of the frequent observations made during the patient's stay in the Hospital, failed, however, at any time to afford unmistakable evidence of the extensive atheromatous disease which affected the aorta. The existence of impaired elasticity in the arterial walls may be gathered from three peculiarities which mark the pulse-trace of senile change in the vessels. The first and most important of these three is the flattened or rounded summit which replaces the angular apex of the healthy pulsation. The second indication consists in the occurrence of a rather sudden fall after the summit of the trace; and the third peculiarity is the absence of dicrotism. In the first of the two traces figured above we remark, in looking for any of these three peculiarities, a partial absence of dicrotism alone. We cannot say that no dicrotism exists in the trace, but we see that it is very slight. The summit of each pulsation is angular, and has none of that round or square peculiarity which well-marked atheroma generally gives. In the second trace this is more striking than in the other, while the tendency to dicrotism is more marked. The third indication or sudden drop after the summit of the pulsation is absent from both. The case would seem, therefore, to oppose the opinion that marked changes in the elasticity of the great vessels of the thorax betray themselves by an altered form in the radial blood movement. One case of this kind can be accepted only as a very small contribution to the number which must be recorded before the question can be settled. For my own part, I must frankly admit that my past experience leads me to look upon this case as an exception, and I much regret that observations were not made upon the arteries nearer to the heart—*e.g.*, the brachial and carotids—where I believe traces of the aortic degeneration, which failed to show themselves in the radial pulse trace, would have been found. In all cases published in future it will be necessary, as was done in this instance, to carefully examine after death the condition of the radial arteries, in order that the absence of atheroma may be satisfactorily established. The question to be solved is, whether atheroma limited to the thoracic aorta alone can betray itself by peculiarities in the radial blood movement. In old age, when the most characteristic forms of atheromatous pulse-traces are to be collected, the radial arteries are generally more or less inelastic from the extension of the change to their coats. The existence of atheroma limited to the coats of the great vessels of the chest is a most important point to determine, and if the sphygmograph can lead us to detect this degeneration before it has affected the smaller vessels, I need hardly point out what an immense benefit will be conferred on Medicine.

The visibly leaping movement of the arteries in this case is worthy of remark. I have frequently observed it in cases where atheroma has affected the large arterial trunks, and has left the radials free from change. The pulse traces may appear to some to be very regular, considering that the condition of the mitral valves was such as to admit regurgitation into the auricle, and that the measurements of the right ventricle recorded above bear witness to the marked changes consequent on this insufficiency of the valves. This regularity continued throughout, and oftentimes when loud murmurs indicate mitral insufficiency the pulse-trace will, notwithstanding, be found to be very regular. Even in cases where no narrowing of the mitral orifice co-exists, this regularity remains, so long as the regurgitation is not excessive, and the ventricle retains the power of propelling at each systole a fair amount of blood into the systemic vessels. Only in the later phases of mitral disease, when the failing ventricle drives varying amounts of blood into the aorta, does the irregular pulse become a necessary consequent of mitral insufficiency.

The dilatation of the aorta which existed in this case, was so very similar to that recorded in my last paper in the *Medical Times and Gazette* of September 29, that many may inquire whether a comparison of the amplitudes of the right and left radial pulse-traces led me in the present instance to the diagnosis of the lesion. Unfortunately, in the case under notice, the comparison of the pulse-traces afforded no certain ground for conclusion, for on the right side the radial artery gave off the superficialis volæ high up, and then passed round to the back of the forearm. This peculiarity is not unfrequently met with, and sometimes gives rise to very puzzling results in sphygmographic observation. On this account the traces recorded above were collected on the radial artery of the left side.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN, 53, Berners-street, W.—John Propert, Esq., was elected a Vice-President of this Society, at the half-yearly general meeting on October 31, in the room of D. Henry Walne, Esq., deceased.

CASE OF

DIPHTHERIA BY INOCULATION APPEARING ON A WOUND WITHOUT THE CORRESPONDING AFFECTION

OF THE

FAUCES, AND FOLLOWED BY PARALYSIS.(a)

By A. R. PATERSON, M.D., Aberdeen.

JOHN A., farmer, aged 43, a tall, muscular-looking man, residing in a healthy part of Scotland, consulted me in reference to a sore finger, the index finger of the right hand, which he said had been under the treatment of another Medical man for about ten days. On examination it presented the following appearances—viz., from the last phalangeal joint almost to the metacarpo-phalangeal articulation, the finger referred to was in a state of disease throughout its entire circumference. On the palmar surface about one-half of this extent was covered by a membranous exudation of a greyish colour and soft consistence. The other half of the diseased portion presented an ulcerating surface, yielding a thin ichorous discharge of an offensive odour. On the dorsal aspect the skin was of a dark reddish hue, resembling the integument surrounding the edges of a sloughing phagedænic ulcer. The finger felt cold, the soft parts were collapsed, and the flexor tendons partially contracted. The following information was derived from the patient. About a fortnight ago, while using a pocket-knife for some purpose, he accidentally inflicted a wound on the palmar surface of this finger near its middle. He described it as being a "mere trifle," giving rise to neither pain nor annoyance. He was a married man, and had five of a family, three of whom had died of diphtheria during the three weeks immediately preceding his application to me. The way in every case by which the disease seemed to have proved fatal was by extension of the exudation to the larynx and trachea, producing death by asphyxia. In the case of his third child, who died a day or two previous to this, during a paroxysm of threatened suffocation he thrust his finger into the little patient's throat with the view of extracting something that he imagined was "choking" the child. After this the wound began to inflame and got exceedingly painful. He now felt very feverish and generally unwell. I made a most minute examination of the mouth and throat, but could not discover a trace of disease there, and the truth of this was verified by the patient's own statement. In the way of treatment I touched the diseased portion of the finger pretty freely with solid lunar caustic, gave instructions to place it in a poultice, and ordered a sedative draught to be taken at bedtime. On visiting again I found that a slough had been detached, disclosing a raw irritable surface beneath. The constitutional symptoms had become more alarming, the strength of the heart's action being much diminished and the pulse intermitting, weak, and feeble. These symptoms, local and constitutional, taken in combination with the valuable history of the case, pointed very plainly to diphtheria by inoculation, caused, no doubt, by the introduction of the finger into the child's throat, where the wound had come into contact with the poison of this disease or secretions impregnated with it.

The following medicines were then ordered:—℞ Potass. chloratis ʒjss.; tinct. ferri sesquichloridi ʒj.; aquæ ℥vj. Ft. lotio. ℞ Amm. sesquicarb. ʒss.; decoct. cinchonæ ℥viij. Ft. mist. A large tablespoonful every second hour.

By attending to the various emunctories, supporting the strength of the patient, and varying the treatment to the circumstances of the case, the finger speedily got well, and the constitutional symptoms disappeared. A week after I had ceased to visit, and a month from the date of his first application to me, I was again requested to see him, on account of a giddiness in his head and a weakness in his right leg. Having seen him, as desired, I found that he could not support the weight of his body on the leg in question, and there was evident paralysis of its muscles, chiefly the extensors. The right arm hung loosely by his side, and was utterly powerless. It had been in this state, he said, for a week, beginning to get "weak as he got better," but beyond this he was to all appearance in the enjoyment of good health. The urine contained a large amount of urates, was normal in quantity, and did not show any trace of albumen.

(a) Read before the Medico-Chirurgical Society on April 5, 1866.

Being pressed by the patient's friends, I gave a favourable, but qualified prognosis, knowing that cases of paralysis consequent on diphtheria usually terminate favourably. Another opinion, however, being desired, I determined, in accordance with their wishes, to call in consultation a Medical man of extensive experience and high reputation. This gentleman, having examined the patient and weighed all the circumstances connected with the case, arrived at the firm conviction that it was no case of paralysis consequent on diphtheria, but a case of disease (softening) of the brain, and consequently almost certainly hopeless.

By the end of the second week, notwithstanding the remedies employed to retard its progress, there was complete paralysis of motion (acinesia) of the right upper and lower extremities, and the left arm could not now be raised to the head. By the end of the fifth week from the date at which the paralysis first showed itself there was complete acinesia of the upper and lower extremities on both sides of the body, the right arm being greatly emaciated and its temperature much reduced, which caused the patient to complain of a cold, disagreeable feeling in it. His mental faculties seemed in the main unimpaired, and he described some of them, such as memory, as being better than usual. The digestive system seemed morbidly vigorous, the patient having a constant craving for animal food (especially the fat), large quantities of which were eaten by him every day. The circulatory and excretory systems appeared natural, save that the urine showed excess of urea, and no derangement could be discovered in any of the senses whatever. In short, I entirely agreed with the patient when he said "Give me the use of my legs and arms, Doctor, and I'll be all right again." I now resolved to change the treatment altogether, and give strychnine a fair trial. A few days subsequent to this the temperature of the extremities, especially the right arm, had risen very perceptibly, and the patient expressed himself grateful; but the legs and the feet had become exceedingly œdematous, the swelling extending as far up as the knee, and the upper extremities seemed more wasted, but felt warmer, while slight startings of the legs and arms were complained of. He had not taken the mixture more than a week when contractions of the muscles of the extremities occurred in paroxysms so violent as sometimes actually to toss his legs and arms about, the intermissions being attended with constant gnawing pain. Although similar convulsive movements of the affected limbs are not uncommon in this disease when no strychnine has been given, I deemed it prudent to be left off for a day or two and then resumed, supplying its place during the interval with iron and quinine. He remained in the open air much of the day, devoting a couple of hours to driving, his legs being elevated by a suitable apparatus invented by himself for that purpose. Under this treatment he gradually regained the use of his extremities, the left leg first, then the left arm and right leg, and, lastly, the right arm, which was first affected. The patient's wife had to feed him for six weeks, being himself utterly helpless. The muscles of deglutition were not in the least involved. He is now (to use his own phraseology) all right—a muscular, powerful-looking man, contrasting oddly enough with the poor helpless-looking object that he once was. In four months his recovery was perfect.

I have ventured to designate this case one of diphtheria by inoculation, well aware that this is not in accordance with currently received opinions, and that experiments have been performed which tend to show that the disease is not so communicable. But these have been too few and unsatisfactory to afford conclusive evidence on this subject, and seem merely to establish its non-communicability from man to the inferior animals. But we have no evidence that the constitutional proclivity of the inferior animals to diphtheria is equal or even approaching to that of man, and one case of positive evidence in the human subject is worth any amount of negative results in the inferior animals. The whole circumstances connected with the history of this case lead one to endorse the opinion of Bretonneau that diphtheria is propagable by contact with the secretions of the throat. No doubt Bretonneau was wrong when he asserted that this was the only way of communication, and that the atmosphere could not transmit the contagion of diphtheria, for we have abundant evidence that it can be propagated through the medium of the atmosphere, although the tendency to epidemic diffusion of this miasm is comparatively slight. But his opinion that it can be propagated by a true inoculation cannot be so easily set aside; it is strictly in accordance with analogy, and satisfactorily explains ascertained facts. Like that of small-pox, the poison of diphtheria seems capable of manifesting its contagious properties when existing either in the gaseous or liquid form, and of being absorbed either by the mucous surfaces or through abrasions of the skin. Here the local symptoms and, *pari passu*, the constitutional affection followed so directly the introduction of the cut finger into the child's throat that one must naturally conclude that the disease was inoculated; any other explanation appears, at least *primâ facie*, roundabout and improbable. And if at the same time we consider the absence of throat affection, which might surely be expected to have been present if diphtheria so severe, and nervous sequelæ so grave, had proceeded from contagion in the ordinary way, we have the strongest probability in our favour when we attribute the affection to inoculation of the malady through a wound on the finger. No doubt it may be maintained that the patient first contracted the constitutional affection through the medium of the atmosphere, and that it manifested itself locally in the finger as a secondary effect of the impregnation of the blood with the poison. But on this supposition I cannot understand how so well marked a case of diphtheria, with sequelæ so severe, should have failed to be accompanied with its special and characteristic affection of the fauces. This appears to us a pathological anomaly hardly credible. Besides, the diphtheria then prevailing in the district was almost wholly confined to children and young people, being rarely seen at the patient's age, and then not of a severe character. But whatever opinion may be entertained regarding the origin of this disease, it will be readily conceded that the history just given is one of diphtheria, with its characteristic nervous sequelæ. The slight giddiness complained of at the outset is quite common in this affection, and was too trifling to beget any suspicion of cerebral hæmorrhage or other organic lesion adequately to account for the symptoms. There was, in short, no evidence throughout of any organic cerebral disease, and the issue of the case must exclude the supposition of softening of the brain. That the paralysis was the consequence of the diphtheria may be clearly inferred by duly weighing the sequence and character of the phenomena. 1. There was the inoculation of the wound on the finger. 2. Local diphtheritic action in the finger and constitutional symptoms of diphtheria. 3. There was, as is usual in such cases, an intercurrent period of convalescence between the primary phenomena and the manifestation of the secondary effects. 4. The gradually progressive character of the paralytic invasion, as in other cases consequent on diphtheria. 5. The duration of symptoms, the effects of remedies, and the manner and order in which the symptoms disappeared and terminated in the patient's perfect restoration to health and muscular vigour, are all essentially identical with other observed cases of this disease. The case is exceptional in the paralysis being almost solely that of motion, sensation having never been perceptibly impaired.

From the peculiarities of this case, it is not uninteresting in a pathological point of view. 1. It shows that the usual constitutional symptoms and sequelæ, as paralysis, may follow a merely inoculated diphtheria without the ordinary faucial affection. 2. It renders almost untenable the currently received theory of paralysis consequent on diphtheria. The suggestion of Dr. Gull, that diphtherial paralysis is due to an extension of the primary disease from the fauces to the upper part of the spinal cord, is here wholly inapplicable. Neither can we admit in this case, where the local lesion was so distant and so circumscribed, that a primary affection of the peripheral nerves was propagated by continuity of nerve tissue to the nervous centres, and gave rise to such an extensive impairment of the functions of this system. Symptoms indicating an affection of the nervous centres so extensive, and only showing themselves after the local lesion had disappeared, and with it the peripheral irritation, can hardly be explained by the hypothesis of peripheral nervous irritation or impression, either reflected or propagated by continuity of nerve tissue to the nerve centres. 3. It points rather to an independent action of the diphtherial miasm through the blood on the nervous centres, and I am disposed by the facts of the case to attribute the paralysis to such action, and to regard it as centric and toxæmic in its character and causation. The miasm appears to exert a toxic influence primarily and specifically on the nervous centres, thus giving rise to such nervous sequelæ of diphtheria as hemiplegia, paraplegia, general paralysis, strabismus, paralysis of the ciliary muscle, with impairment of the power of adjustment of the eye, and corresponding loss of vision, etc.

11, Union-place.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.

DIFFUSED TRAUMATIC ANEURISM FROM A PUNCTURED WOUND OF THE RIGHT FEMORAL ARTERY—LIGATURE ABOVE AND BELOW THE WOUND IN THE VESSEL—RECOVERY.

[Communicated by Mr. FRANK W. COOPER.]

Richard G., aged 49, married, a spring-knife cutler, admitted under the care of Mr. Chesman, December 15, 1865. While at his usual work—polishing the blades of a pocket knife on a rapidly revolving wheel—the knife was forced from his hold and thrown swiftly against his right thigh. The large blade, being open, entered the limb in a direction from before backwards, at a point five inches below Poupart's ligament, and immediately over the course of the femoral vessels. He attempted to walk to the Hospital, but, becoming faint, was placed in a cab and conveyed there at once.

When his boot was taken off it was full of blood and the stocking saturated. At the upper part of the limb and over the femoral artery there was a little swelling, and in the situation described a small clean wound, three-fourths of an inch in length, extending across the long axis of the thigh and penetrating to a depth of four inches. Pulsation in the anterior and posterior tibial arteries remained distinct, but not so full as in the corresponding vessels of the opposite leg. No pulsation could be detected anywhere about the region of the injury, nor had there been any bleeding from the wound since admission.

December 29.—The case had apparently progressed favourably, the external wound being thoroughly healed, when, contrary to orders, getting out of bed last night, he was seized with a sudden and violent pain at the seat of injury and down the thigh. When seen this morning the thigh had considerably increased in size, was very painful, and communicated to the palm of the hand placed upon it a distinct pulsatory impulse, with the aneurismal purring sensation. Pressure on the artery in the groin at once stopped the impulse and sensation, and at the same time caused the tumefaction to subside somewhat. Stethoscopic examination demonstrated *bruit de soufflet* synchronous with the heart's beat. Pulsation still continued in the tibial vessels.

31st.—Mr. Chesman cut down upon the femoral artery, and, after removing a large quantity of coagula, found a wound partially dividing the vessel, from which arterial blood pumped copiously. A ligature was placed above and below the opening, and effectually restrained all further bleeding. The patient bore the operation exceedingly well, and the whole limb having been carefully wrapped in cotton-wool, he was removed to bed. In the evening he felt very comfortable. The limb continued warm.

Jan.	1, 10 a.m.	Pulse	116.	Temperature,	right leg,	99·8;	left,	99·9
,,	1, 8 p.m.	,,	108	,,	,,	99·2	,,	100·2
,,	2, 10 a.m.	,,	104	,,	,,	97·9	,,	98·2
,,	2, 8 p.m.	,,	102	,,	,,	99·8	,,	99·9
,,	3, 10 a.m.	,,	102	,,	,,	99·8	,,	99·8
,,	5 ,,	,,	96	,,	,,	99·8	,,	99·8
,,	7 ,,	,,	94	,,	,,	98·2	,,	98·2
,,	9 ,,	,,	92	,,	,,	98·2	,,	98·2

January 14.—The proximal ligature came away; the patient doing well in all respects.

February 4.—He was now up and about the ward, and in a fortnight left the Hospital to resume his work.

DIFFUSED TRAUMATIC ANEURISM FROM A WOUND OF THE RADIAL ARTERY ABOVE THE ELBOW—LIGATURE—RECOVERY.

George R., aged 20, single, a buffer-maker, admitted, under the care of Mr. Parker, January 3, 1866. The patient, a well-nourished, intelligent young man rather above the middle height, whose habits had been temperate and health always good, gave the following history of his case prior to admission:

"On the 11th of December last I was working at a steam-hammer with some hot iron. During the process, at each successive fall of the hammer, small portions of metal were scattered in all directions. One of these pieces, about four inches long and half an inch wide, struck me in the bend of my left elbow, in front; it was very hot, and remained for a moment embedded in the wound it had made. I, as quickly as possible, plucked it out, and forcibly bent my arm so as to stop any bleeding, but there was very little. On the next day the place became much inflamed and swollen, and there was a good deal of pain in it. I could both see and feel it throb. Poultices and lotions have been applied, yet the pain is becoming worse, and my middle and third fingers are stiff and numb."

Examination showed a general swelling over the inner condyle, extending to the front of the joint. On the anterior surface of the arm, half an inch above the bend of the elbow, and looking rather inwards, was a small cicatrix situated on the summit of a somewhat more elevated portion of the general tumefaction; for a limited space around the scar, the part was rather inflamed, and considerably resembled a "pointing" abscess. By placing the finger over this spot, a distinct purr or thrill and pulsation were felt; these were simultaneous in their action with the brachial artery; pressure on this vessel modified or suspended the whizz and beat, and also affected the proportions of the tumour, producing a diminution in its size corresponding to the pressure employed. By auscultation a loud aneurismal *bruit de soufflet* was plainly heard, varying in intensity with the amount of blood allowed to pass through the artery, and becoming inaudible when the flow was quite impeded. The radial artery had ceased to beat. The left forearm was sensibly colder than the other, and had to be wrapped in cotton wool.

January 7.—Chloroform having been administered, Mr. Parker commenced to operate, anticipating a wound in the brachial artery; when, however, a large quantity of coagula had been removed, and the rent in the vessel discovered, it was found to be the radial, having an unusual course, and taking its origin somewhat higher up the arm. A ligature was placed above and below the wound in the artery, controlling all further hæmorrhage. Pulsation in the ulnar continued unaltered. Lint dressing was then applied, and an angular splint kept the part at rest.

On the third day after operation the proximal ligature came away, soon followed by the other, and in sixteen days he was made an out-patient.

ST. BARTHOLOMEW'S HOSPITAL, ROCHESTER.

CASES OF HEMIPLEGIA—REMARKS.

[Communicated by Dr. ATKINSON, House-Surgeon.]

Remarks.—The first thing to be done in the treatment of paralysis, as in that of all other cases, is to find out the true nature of the disease; otherwise no successful issue can be expected. It was formerly supposed that a sudden attack was characteristic of congestion of brain, while a slow advance of the disease indicated anæmia; but in these means of diagnosis I have little faith. The best guide, in my opinion, is the state of the muscular system. If the muscles of the palsied limb upon being flexed are found to be perfectly flaccid, then the lesion may be judged to be of an atrophic nature, and the treatment should consist of ammonia and bark, wine, and a nourishing and easily digestible diet. If there is any resistance when the limb is bent, then the lesion of the brain is of an irritative nature, and should be treated by occasional leeching, mustard cataplasms to the back of the neck, iodide of potassium internally, and rather light diet. Trousseau, in his Lectures on Clinical Medicine, lays down the following rules:—1. When hemiplegia occurs suddenly, without any loss of consciousness, softening of brain may be diagnosed. 2. When hemiplegia occurs suddenly, with loss of consciousness, hæmorrhage may be diagnosed. 3. When complete hemiplegia occurs, with only obtuseness of intellect and incomplete loss of sensibility, hæmorrhage in connexion with softening may be diagnosed.

Case 1.—W. C., aged 30, single, a labourer, residing at Chatham, admitted into St. Bartholomew's Hospital, Rochester, May 16, 1866, with complete paralysis of the right side of the body. Was first taken (according to the statement of his friends) about twelve days ago with difficulty in his speech, and cramps in his legs and arms. Seemed better the next day, but was worse again in the evening, and appeared weak in his right arm and leg. This weakness has continued to increase up to the present time, so as to render him perfectly powerless. The muscles of the right arm and leg, on being flexed, are quite flaccid, and do not afford the slightest resistance. There is loss of sensation from the knee downwards. Face drawn slightly to the left; tongue protruded a little to the right, covered, except at the tip and edges, with a brownish fur; speech entirely lost; eyes somewhat congested, left inturned; left eyelid droops; constant hiccup; saliva continually running from the mouth; great difficulty in swallowing; head hot; some headache; pulse small, about 70; respiration 14; bowels confined; no history of syphilis or rheumatism; has never been a great drinker; heart sounds healthy; chest sounds natural; urine, sp. gr. 1012, normal. Ordered fifteen minims of the aromatic spirits of ammonia, three grains of iodide of potassium, and decoction of bark to the half-ounce thrice daily. Half an ounce of castor oil to-morrow morning. A mustard poultice to the back of the neck. Beef-tea two pints and a half, milk one pint, wine six ounces, daily.

May 18.—Somewhat improved. Hiccup less; able to swallow somewhat better; pulse rather stronger; bowels still confined. Ordered another dose of castor oil.

24th.—Sensation returned in leg; hiccup stopped.

30th.—Is able to say yes and no pretty distinctly. Ordered milk pint and a half, fish, rice pudding, bread ten ounces, and wine six ounces daily.

June 1.—Not so well yesterday. Complained of pain in the head. This was relieved by two leeches to the temples, and he now feels better.

7th.—Moves his right leg slightly.

8th.—Moves his right arm slightly.

July 20.—Is now able to stand by holding on to the posts of the bed, and is daily gaining strength.

August 22.—Able to walk without any assistance, and desires to go home.

Case 2.—H. D., aged 47, married, a hammerman, residing at Gillingham, admitted into St. Bartholomew's Hospital, Rochester, May 23, with complete paralysis of the left leg and arm. Was first taken, he says, four days ago with headache and giddiness. The next morning he found he was unable to move his left leg and arm. Towards the latter part of the day his wife says he wandered, and was troubled with constant hiccup. The muscles of both the leg and arm are perfectly rigid; there is no loss of sensation; face drawn to the right side; tongue protruded to left, and covered with a brownish fur; speech rather imperfect; axis of eyes normal; no inequality of pupils; constant hiccup; saliva runs from the mouth; headache; pulse 90, full and hard; bowels confined; had syphilis 21 years ago; has had rheumatism; never been accustomed to drink much; has been put to a great deal of trouble lately on account of his wife; heart sounds natural; chest sounds natural; urine rather high-coloured, sp. gr. 1010; no albumen. Ordered two leeches to each temple; a mustard poultice to the nape of the neck; a scruple of rhubarb and mercury powder, and three grains of iodide of potassium in half an ounce of infusion of quassia thrice daily. Diet: Beef-tea two pints, milk one pint, and six ounces of bread.

29th.—Better; slight movement of leg and arm; no hiccup; saliva still runs from the mouth, but less than it did; bowels regular; pulse 68, strong. The iodide of potassium to be increased to five grains thrice a day.

30th.—Not so well; has been wandering the greater part of the day; tongue drier and browner. Ordered two leeches to each temple; mustard poultice to the nape of the neck.

June 11.—Varies a great deal; the paralysis, however, is on the whole decidedly less.

30th.—Is greatly improved; movement of leg and arm pretty good; has had milk pint and a half, fish, rice-pudding, and bread twelve ounces since the 18th.

July 12.—Able to walk about; can lift his arm at right angles to his shoulder; somewhat deaf; intellect rather dull; perfectly rational.

August 8.—Wishes to be made an out-patient; walks about without any assistance, and is daily progressing.

Case 3.—S. B., aged 50, married, a labourer, residing at Gillingham, admitted into St. Bartholomew's Hospital, Rochester, with complete paralysis of the left side.

August 28, 1866.—On waking yesterday morning, he says that he found he was unable to move either the left arm or leg. Has been drinking rather heavily lately, and thinks this may have had something to do with his illness; had syphilis some years ago, never rheumatism. The muscles of the left leg and arm are perfectly rigid; there is no loss of sensation; face drawn to the right side; tongue protruded to left and covered with a brownish-coloured fur; speech pretty fair; eyes slightly congested; some headache; pulse 86, full and hard; bowels confined; urine rather scanty and high-coloured, otherwise normal; heart and chest sounds natural. Ordered two leeches to each temple, a scruple of rhubarb and mercury powder at once, and three grains of iodide of potassium in half an ounce of water thrice daily. Beef-tea two pints, milk one pint, and bread six ounces daily.

September 2.—Can just move his leg.

5th.—Can just move his arm.

10th.—Is just able to stand.

20th.—Can walk pretty fairly. Discharged at his own request.

Case 4.—J. B., aged 28, married, a bricklayer, residing at Chatham, admitted into St. Bartholomew's Hospital, Rochester, September 17, 1866, with complete paralysis of the left side. On waking yesterday morning, he says that he found himself completely powerless on the left side. He has not been drinking at all lately, and cannot give any reason for the attack; had syphilis four years ago, never rheumatism. The muscles of the left arm and leg on being flexed are perfectly flabby; there is no loss of sensation; face drawn to the right; tongue protruded to left and furred; speech imperfect; eyes natural; no hiccup; slight headache; bowels confined; pulse small, about 82; heart sounds healthy; respiration natural; urine normal. Ordered half an ounce of castor oil to-morrow morning, a mustard poultice to the back of the neck, twenty minims of the aromatic spirits of ammonia, decoction of bark to the half-ounce thrice daily. Beef-tea two pints and a half, milk one pint, bread six ounces, and wine six ounces daily.

September 18.—Loss of speech; difficulty of swallowing; tongue more coated; pulse very small; very low-spirited.

21st.—Able to speak; tongue clearing; pulse improving.

29th.—Able to move his leg.

October 4.—Able to move his arm. Ordered, milk one pint and a half, fish, and two eggs; wine to continue.

8th.—Can just stand.

19th.—Walks very fairly without any support. Ordered middle diet; beef-tea one pint; wine to be reduced to three ounces daily.

November 1.—Manages to assist in the wards; is daily gaining strength; is quite able to leave the Hospital.

ELECTRICAL ROOM.

Odd as it may seem at first glance, we would say that not a few therapeutical proceedings are undertaken—quite unconsciously—rather to relieve the Doctor's mind than to relieve the patient. Our feelings often goad us to act. There are certain things it is thought right to try in the most hopeless cases, and they are tried so often that we rarely look them fairly in the face to see if they are really worth trial. Our thoughts and actions become automatic in these as in other things, and we "try" galvanism when our drugs and time have done all they seem likely to be able to do. For a patient to die is always sad, but that he should die without certain therapeutical ceremonies is sad indeed. Now in the matter of Medical electricity we think it is often used simply because a paralysed patient does not get well, and not from any intelligent consideration of what such special treatment is likely to do in particular cases of palsy or nervous affections. It is often allowable to act empirically when we do not fully understand conditions of disease; but—and this is the point at present of most importance—in scientific investigation such vague action is not profitable. Electric therapeutics will not make steady progress until we are as careful in our selection of cases as we are decided in doing something for them. It is a false spirit of utilitarianism that is always ready to urge us to do something without precise consideration of what wants doing. It is, or ought to be, easy to persuade the committees of our large Hospitals to set apart a room, and easy to get the right sort of electrical apparatus, and but little manipulative skill is required to keep the instruments in working order. The difficulty is to ascertain the exact thing to be done, and, when it is known, to do it properly. It is really hard work in most cases to get a clear idea of the locality and degree of paralysis and of the seat and nature of the internal disease which causes it. Moreover, the attention required to enable us to act definitely on particular muscles affected often involves a very great exertion. The mere occupation which careless stimulation of that uncertain quantity "paralysed muscles" gives is comparatively trifling labour.

Whilst the establishment of special rooms for electrical treatment is to be encouraged, the notion that this is merely to be a place where galvanism is constantly on tap to act mysteriously on paralysed parts is to be deprecated. Yet there seems to be in some institutions an idea that it is as easy to apply galvanism as it is to play on a barrel organ, and its application is trusted to nurses and dispensers. It is quite otherwise. Electrical therapeutics require a large and exact knowledge of anatomy, a very wide acquaintance with clinical varieties of palsy and spasm, and a readiness in an infinity of mechanical details. To most of these points we have previously referred, and our present object in returning to the subject is to urge that besides setting apart a room fitted with scientific instruments, the Hospital Committee should appoint not a manipulator only, but a skilled Medical electrician. None but a highly educated Medical man can fully understand and carry out the directions of the Physician or Surgeon who wishes his patient to receive benefit from galvanism.

We may take the opportunity of mentioning that in our report last week of the doings at the Hospital for Epilepsy and Paralysis, we omitted the name of one of the Physicians under whose care two of the patients, whose cases were related, were treated. Dr. Radcliffe is so well known as an able worker and discoverer in the field of electric therapeutics, that the omission of his name, whilst of no importance to him, diminishes the accuracy and completeness of our report. We now add, therefore, that the two patients whose cases were first given were under his care.

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Medical Times and Gazette.

SATURDAY, DECEMBER 8.

HUNTER v. SHARPE.

It appears from the recent summing up of the Lord Chief Justice that there are two pleas on which a published libel may be justified. It may either be proved to be true, and in that case by the law of England is no libel, or it may be proved that, under all the circumstances of the case, the writer, in his vocation as a public author, had such reasons presented to him for believing what he had written to be true, that he, exercising proper caution and reflection, was justified in drawing the inferences he did, and could not reasonably be expected to arrive at a different conclusion. It seems that he jury, in the great libel case which was concluded last aturday, did not regard either of these pleas as completely established. They therefore returned a verdict for the plaintiff. But they considered one or other of them as so nearly subtantiated that the value of the doubt which turned the scale n favour of Dr. Hunter they estimated in current coin of the realm at one farthing, which they accordingly presented o the plaintiff as remuneration for the damage which his professional character had sustained. It is difficult to overestimate the moral effect of this verdict either upon the *status* of legitimate and illegitimate Medicine or upon the responsibilities and position of writers in the public press who may deem themselves called on for the general good to criticise and, if needs be, to stigmatise the arts by which Medical pretenders to public confidence seek to advance their ends. It is to the effect of the verdict on legitimate and illegal Medicine that we now wish to direct attention.

First, let it be clearly understood that the moral condemnation which the jury have given to Dr. Hunter's proceedings must not be supposed to be based solely or mainly on anything faulty in his theory of the nature or treatment of consumption. This principle is clearly laid down in the able and lucid summing up of Chief Justice Cockburn. We need not tell our readers that Dr. Hunter's theory (if it be worthy the dignity of the name) of carbon as the essence of tubercle, and of deficient respiration as its cause, is absolutely and entirely worthless; and that the treatment by the inhalation of oxygen, mysteriously hinted at in his writings and advertisements, even if he had carried it into effect by the means he employed, is utterly impotent to the cure of phthisis. The Profession does not require the powerful battery of Medical and chemical learning brought against it by the defence to blow such a tissue of absurdity to the winds. But if men were to be held up to public reprobation as quacks and impostors on account of false theories in Medicine and misdirected efforts in practice, how many of the legitimate Practitioners of Medicine might find themselves lampooned in public prints and set in the pillory of public scorn! Every epidemic of cholera has produced theories of its nature which receive no support from science; and for how many diseases are there proposals for treatment extant, the dire effects of which, if put into practice, a special Providence alone could avert! And yet the authors are not quacks in the received sense of the word; much less are they to be hooted from society as scoundrels and impostors. Any man, be he Medical or otherwise, has a right to set forth any theory of disease or of Medical treatment he pleases, provided he honestly believes it himself, and does it from the pure motive of a desire to instruct the Medical Profession and to benefit the public. No one would rightly call Bishop Berkeley a quack and impostor because he wrote a treatise on the virtues of tar-water; neither is it within the province of any judge or jury to decide dogmatically as to what is true and what is false in Medical theory, unless Medical science were as exact as the rules of arithmetic and as certain as the demonstrations of Euclid. The scouted and abused discoverer or theorist of one generation has become the demigod of the next, and propositions which are deemed irrefragable now may in a few years be cast aside as puerile and absurd. It is not, therefore, by his theory or treatment that the plaintiff has rightly incurred the most severe and damaging public rebuke that any Practitioner, legal or illegal, has received in the memory of the present generation.

Yet it was necessary that the defence should prove to the Court that the plaintiff's theory was palpably wrong—based, in fact, on the most transparent fallacies—and that the treatment which he advocated, so far as he had specified or described it, was entirely inoperative. The libel asserted—and to justify it, it must be established by the defence, or at least rendered highly probable—that the plaintiff did not honestly advance this theory, himself believing it, but that his whole system was one of wilful fraud and deception. Of this the absurdity of the theory could be no proof *per se*, but (as we think was the purport of the Chief Justice's summing up) it became powerful collateral evidence when it was taken in conjunction with the motive which evidently actuated the plaintiff and his manner of proceeding to attain his ends. The main proofs on which the libel was justified were such facts as the following: that in his book the plaintiff excited the fears of the ignorant and nervous by representing ordinary symptoms of trivial moment as the tokens or forerunners of incurable disease; that by advertisements and publications he asserted pretensions to be the sole possessor of a secret method of cure; that he vilified the whole body of Practitioners of Medicine, whilst he paid members of the Profession to act as his assistants, to write laudatory prefaces to his book, which purported to be the admiring tribute of independent Professional witnesses, and to establish, by similar means, in his name branch practices in Edinburgh and Dublin; that he spent many hundreds of pounds in advertising his theory of disease and puffing his secret mode of treatment; that although professing to be a duly qualified Medical man, he possessed only foreign qualifications of doubtful value, unrecognised by the law; and, lastly, that all these very questionable proceedings were practised for the sole purpose of attracting patients and obtaining money. Combined with facts of this kind, it was argued that the false theory and the mistaken practice assumed a very much more serious aspect, and the probability of fraud increased, whilst that of ignorance and mistake was proportionally diminished. The verdict of the jury is, therefore, to be considered not as a triumph of rational and orthodox Medicine over false and heterodox Medical theories, but as a definite announcement that the proceedings of irregular Practitioners, which bear the semblance of arts and attempts to gain practice at the expense of the pockets and well-being of the uneducated and credulous, do not receive the approval or condonation of the British public.

It would be almost impossible, therefore, to over-estimate the important bearing of this trial upon the position and responsibilities and *morale* of legitimate Medicine. Putting aside for the moment all consideration of Dr. Hunter's case, we would refer to the Chief Justice's summing up as a public recognition by the highest legal authority of a broad line of demarcation between the honourable and the dishonourable in Medicine, the tricks of the charlatan and the course of the regular Practitioner. It is a prominent legal acknowledgment of the moral turpitude involved in raising the fears of the multitude for the purposes of private gain, and it establishes on a broad basis the freedom of public writers to criticise and denounce the machinery of the quack. We may safely affirm that the Lord Chief Justice of England has done more for the status and claims of legitimate Medicine than has been accomplished by the Medical Registration Act and half a dozen sessions of the Medical Council. It is now at least established that the law, as explained by one of its highest dignitaries, does not support any man who trades on the dread, the ignorance, and the sufferings of humanity; who pretends to secret methods of cure which are illusory and worthless; who seeks pecuniary gain by imputing wrong motives or crass ignorance to the whole Medical Profession, and puffs himself as the only person capable of aiding and relieving the sick. And it is now authoritatively declared that members of the Medical Profession are not justified in overstepping, for the purpose of attracting public attention, those bounds which a wise and time-honoured Professional etiquette has imposed on Practitioners of Medicine equally with practitioners of law.

LONDON WORKMEN IN THEIR PHYSICAL ASPECTS.

The Trades Reform Demonstration, on Monday, gave us a unique opportunity of observing masses of workmen of different callings, and of noting their physical condition as well as their apparent fitness for manhood suffrage. As for the numbers present, the newspaper accounts tally with our own. The procession was one hour and a half in passing a certain spot in Piccadilly. The men marched in rows of not less than four, mostly six, rarely seven or eight abreast; we believe six to be a full average. They marched at such a rate that from 50 to 70 rows passed in a minute. Taking 60 as an average, $60 \times 6 \times 90 = 32,400$; but we must deduct at least an eighth for occasional gaps between the trades; so that we make the highest possible total 28,000. Before the procession began, we wandered about examining the men's bodily development, and their mental status so far as revealed by their outward appearance, gestures, and remarks. It was a highly interesting study, and well repaid the discomfort of muddy walking and crushing for the space of two hours and a half.

First of the *tailors*. It is generally said that it requires nine to make a man; but the tailors this time showed that the old saw, like other oldsters, is apt to lose its teeth by age; for, take them all in all, they were the best-looking and most intelligent set of men upon the ground;—not only as to their dress—that one would expect to be neat—but in physical development and healthy appearance they far exceeded many who are supposed to enjoy much more favourable conditions. Their countenances, too, were intelligent above the average of workmen, save when here and there the stolid face of a Dane or German met the eye. Many of them had a very unpleasant degree of self-assertion, manifested in look, air, and gait. Almost every one wore beard, moustache, or both, and many had meerschaum or wooden pipes, or cigars, whilst the other classes had common "clays." Among them, too, was the only brandy bottle we encountered on the field. In strong contradistinction to the tailors were the shoemakers. Though famous for their love of oratory and politics, they were few in number, and, taken as a class, presented the poorest physical development of any. On an average, their height might have been five feet four or five; their countenances expressed narrowness of mind, with a doggedness or rather self-opinionated look. The tailors seemed to think themselves better than anybody else there: the shoemakers to think every one worse than themselves. Deformity was rife amongst them, and we saw more than one cheek as they defiled past us whose hectic flush, we fear, would be little improved by the day's proceedings. After the tailors, the hatters looked the most intelligent, but less healthy. They were distinguished by the smartness of their head-dresses. We should think the bricklayers the most healthy of all the classes present, but their intelligence seemed to be low; the members also seemed to look upon the occasion as a mere holiday. Few seemed to care a pin for the matter which had brought them together. The carpenters might come next as regards healthy and intelligent appearance, and cheeks more ruddy than one usually sees in London. Curiously enough, the cabinet-makers come a long way after them in the matter of *physique*. The biggest men we saw were among the brick-makers, though their ranks also contained some very poor specimens of our race. Foresters were there in great force and presented a highly respectable-looking body of men, very much more so than the members of the Phœnix Societies, teetotallers though they be. Some of them appeared in full dress, but their gaudy trappings were fairly eclipsed by those of certain "True Britons" and "Old Friends," who turned out in the most gorgeous style. The workers in brass did not seem to suffer from their trade so much as the workers in iron, some of whom, especially the boiler-makers, presented a rather dissipated appearance. Among the painters and French polishers also there were too many red noses. Sailors were said to be there, but we did not see more than half-a-dozen true salts, and they seemed to look upon the matter as mere fun. Stonemasons were few, and not healthy-looking. Many trades were but poorly represented, and more still had no representative at all. Take the men all in all, we liked their looks; they seemed men who would hear that a question had got two sides, although there were numbers of villanously low-browed individuals who, evidently possessing but one idea, would stick to that with the tenacity of death. Their leaders did not show to any great advantage, physical or moral. The body professing to represent the Reform League was very far from coming up to the standard of any of the trade societies, physically or intellectually. Three-fourths of this body was composed of children under eighteen, some not more than thirteen. Our general impression is favourable as regards the respectability and self-command of the working men, scarcely so as regards their physical development.

We may remind them that the wages lost on that day would make the year's income of many a charitable institution at which workmen's wives and families receive the unpaid attendance of Medical men, often worse paid, and certainly harder worked, than themselves.

THE WEEK.

THE MEDICAL EVIDENCE IN HUNTER v. SHARPE.

We would call particular attention to the Medical evidence in this trial, our version of which has been corrected by the witnesses, whom we thank for their courtesy. The evidence which these witnesses gave formed parts of, a series embracing the disputed questions on the nature of phthisis. Dr. Williams showed that it was not a mere lung disease, nor yet the fruit of imperfect respiration. He also expressed his dissent from the doctrine that phthisis is incurable. Dr. Markham pointed out the fallacy of supposing oxygen, *per se*, at low temperatures capable of combining with tubercle. Dr. Risdon Bennett showed that carbon, *per se*, was no promoter of phthisis. Dr. George Johnson spoke of local examinations by the laryngoscope, which the plaintiff neglected, though affirming laryngitis to be a precursor of phthisis. Dr. Cotton testified to the real significance of blood-spitting, and the possible dangers of oxygen inhalation. Dr. Quain was examined as to the poisonous nature of carbon and its alleged excess in tubercle, and Dr. Odling criticised the oxygen theory, and the alleged means by which the plaintiff procured the gas. We may fairly say that Medical evidence was never given more lucidly, or listened to with more due respect, than in this case.

THE DIRECTOR-GENERAL AND DR. WILLS.

The recent trial of Hunter *v.* the *Pall Mall Gazette* has abundantly brought to light the fact that the "Army Surgeon of great ability and high attainments" who "resigned his commission to establish himself in the same specialty at Edinburgh" was a "Dr. Wills." We learn from the plaintiff's evidence that this Dr. Wills has now returned to the army, and the Army List substantiates the truth of the statement. We learn, moreover, that he was a friend of the plaintiff's, that he stayed in his house, that he adopted his theories, that he went to Edinburgh, advertised in the Scotch newspapers, and "there is Dr. Hunter's Red Book for England, my Green Book for Ireland, and the Blue Book of Dr. Wills for Scotland." (Laughter.)

At page 52 of the recently published Report of the Committee on the Army and Naval Medical Services, we find that a Medical officer, in answer to Lord William Paulet, says he has known several men who have left the army for private practice; and in answer to *Sir James Gibson's questions, "Do you know Dr. Wills?"—"Yes." "He left recently?"—"Yes."*

Now, we need not insult the professors at Netley by supposing that their opinion of Dr. Hunter's "little specialty" at all differs from that expressed by all the most eminent and experienced Physicians at the trial. Any person consulting Dr. Hunter does it with his eyes open; he makes his selection of a Doctor, and there is an end of it. With soldiers it is quite otherwise; they can have no choice. A sick soldier is *compelled* to apply to the Medical officer supplied him, and to submit to his treatment. Under these circumstances, we think the tax-paying public has a right to ask a few questions of H.R.H., and the Profession has some right also to ask the Director-General what steps he took to protect the interests of the soldier, and to sustain the honour and dignity of the department of which he is the Medical head.

Has he ascertained whether Dr. Wills holds that "all observation and experience, both in and out of the Profession, prove the utter worthlessness of the common routine of fish-oil, etc.;" "that failure of cure has proceeded almost invariably from the irrational course of treatment pursued;" and that consumption has proved so fatal "only because the treatment pursued has been false and contrary to the best established principles of Medicine?" Is a Medical officer to be allowed to blow vapours down the throats of our consumptive soldiers? Is the State, through its army Medical authorities, to endorse this system of Medical advertising with its approval? "If," as Lord Chief Justice Cockburn said, "professional men connected with the law in this country were to adopt that practice, they would be scouted from their profession from a feeling that it had been humiliated and disgraced by such a proceeding. And why should not the sister profession of Medicine be actuated by the same feeling?" What, we want to know, are those Medical officers to do who assume this view and heartily thank the judge for expressing it? What course are they to follow when called upon to consult with Dr. Wills in a case of pulmonary disease?

The Profession rises like one man against the whole advertising fraternity. And yet we wonder that our more highly educated and gentlemanly students will not enter Her Majesty's army.

ABSOLON v. STATHAM.

We have received the following announcement for publication. In a previous number we announced Mr. Statham's resolution not to accept a pecuniary testimonial:—

"A public meeting of the Medical and Dental Professions will be held at 4.30, on Tuesday, Dec. 11, at the Literary and Scientific Institute, Edwards-street, Portman-square (Sir William Fergusson, Bart., in the chair), to receive the report of a Sub-Committee appointed at the preliminary meeting of Nov. 20, and to unite in an expression of sympathy and confidence in Mr. Statham.

"Charles James Fox, *Hon. Sec.*"

We therefore hope that a very large attendance, both of Medical men and Dentists, will express the high estimation in which his conduct throughout has been held by his brethren in both professions.

THE BISHOP OF LONDON ON SISTERHOODS.

The Bishop in his late charge bears eloquent testimony to the value of sisterhoods in nursing the sick poor from the Crimean War down to the last epidemic of cholera. He urges them to give no handle to accusations of indiscretion, as regards religious peculiarities, or other tendencies which might excite the suspicion or the hostility of the average Englishman. All reports concur in stating that such Hospitals as are nursed by sisterhoods are well nursed, and that the fears we have expressed as to a conflict of authority between the Medical and the religious functionaries of Hospitals have not been realised. Much notice has been taken of a *tiff* which is said to exist between the nursing sisterhood at King's College Hospital and one of their clergy. Such things must occur, we suppose, so long as human nature lasts, but there are very few institutions indeed that have no such occasional hitch in their working. But this is no argument against them.

THE COTTAGE HOSPITAL, WALSALL.

Cottage Hospitals, which owe their introduction to Mr. Napper, of Cranley, have now become recognised institutions throughout the land. Not long ago we noticed the favourable financial position of the one established at Tewkesbury, and were it not from peculiar circumstances we should have had to do the same now for that at Walsall. The difficulties are only temporary, however, and no doubt by next year matters will be on a better footing. Wherever they have been started these little Hospitals seem to flourish, and the good done by them must be very great. Their inexpensive character has already recommended them in many different localities, and they are now springing up at Barrow-on-Furness, at Middle-boro'-on-Tees, at Rugby, and at many other places. At the unpretending institution whose name appears at the head of this notice no less than 114 in- and 1156 out-patients have been relieved during the year, all these being of a Surgical nature, for, from want of room or funds, Medical cases are not yet received. A letter from the Surgeons, in another column, gives an interesting account of the practice.

"CHANGE OF DOCTOR," AND "STATUS OF CONSULTANTS."

THE pressure of other important matter has hindered us as yet from completing the account we hope to give of the existing custom amongst men of character with regard to the delicate question of partially or wholly taking charge of patients who are under the charge of other Medical men. Meanwhile, we give insertion to the following note, from "Medicus," of Clifton, and endeavour to reply to it:—

(*To the Editor of the Medical Times and Gazette.*)

SIR,—I thank you for your courteous reply to my note on "Change of Doctor." I fully endorse your opinion on the impropriety of calling on the patient of another Medical man without his knowledge, whether under his care for acute or chronic disease. My question implies the patient calling on the consultant. It may make my meaning plainer if I suppose a case. A. is a consulting Physician or Surgeon in London; B. is a patient living in the country and under treatment at home by his usual Medical man, C.; wishing "further advice," he goes up to town, unknown to C., and calls on A. He may or may not say he is under the care of C. He does not wish to put himself in A.'s hands instead of C.'s, but only to have his opinion once or so. How should A. act? In connexion with the *per se* practice of the consultant, how does he act in the event of a patient, accustomed to see him only at his own house, and having no other Medical adviser, becoming so ill as not to be able to leave home? Does he still attend him, perhaps twice a day and maybe in the night too, as a general Practitioner would do, or does he hand him over to some one else? With many apologies for thus troubling you, I am, &c.

Clifton, December 1. MEDICUS.

P.S.—Another question may arise as to any difference of conduct when the patient lives in the same town as the consulting Practitioner.

In reply to the question, "How should A. act?" there are at least three possible conditions, according to which A.'s action will differ. (1) If B. comes with a chronic or not dangerous ailment, just to have A.'s opinion, saying nothing about being under the care of any one else, we believe the practice to be that A. will give his opinion, and take his fee; and there the matter ends. (2) If B. comes to A. for his opinion in like manner, but A. sees that his case is one requiring to be constantly under a Medical eye, A. will ask, "Have you no regular Medical attendant? If you have, I advise you to consult him, tell him you have seen me, and give him this letter." (3) If B. says, "I come from X., where I have been attended by C., but want further advice," A. will act as he did in the last case—*i.e.*, write to C. a courteous letter stating that his patient B. has called on him, and tendering to C. his opinion on the case. So much for the first question.

With regard to the second question. Let us suppose an eminent London Physician attending Admiral D. At first the Admiral calls on Dr. A. After a while he sends for Dr. A. to his own house, sees him twice a day or more, or even in the night. All we can say is, that if the patient can afford to give A. the fees justly compensatory for such attendance, A. is justified in attending, and, as a matter of fact, *does* so. Yet it is very probable that in such a case A. will suggest that a junior Physician or general Practitioner should be called in.

We see that "Medicus" draws a line between the difference of conduct expedient, according to whether the patient and the Doctors live in the same town or not. Undoubtedly there is a difference, established by the claims of mutual courtesy. But we hope, as we have said, to return to the subject shortly.

TESTIMONIAL TO DR. BALLARD.

THE following resolution of the Islington Vestry needs but the alteration of one word to make it perfect. Instead of fifty we should have read two hundred guineas:—

"In consideration of the extra arduous duties which have devolved on Dr. Ballard during the last few months, and the able manner, untiring energy, and attention shown by him in all cases of cholera brought under his notice, by which means the epidemic has been greatly kept in check, this Committee are desirous of presenting him a substantial proof of their appreciation of his attention and ability, and do so by requesting his acceptance of fifty guineas."

FROM ABROAD.—SUCCESSFUL INJECTION OF WARM WATER INTO THE VEINS IN CHOLERA—MR. PEABODY'S FOUNDATION OF AN ETHNOLOGICAL PROFESSORSHIP AND MUSEUM IN HARVARD UNIVERSITY.

M. LORAIN read, at a recent meeting of the Académie des Sciences, an interesting account of a case of cholera in which he had injected water into the veins with success—the patient having been pronounced by all the Physicians who saw him in the most hopeless state. Of robust constitution, he was brought into St. Antoine on September 29, at eight in the morning, having had twelve rice-water stools and vomiting the night before. On admission he presented all the symptoms of the first stage of algide cholera—cramps, chills, general cyanosis, total suppression of urine, loss of voice, absence of pulse, excessive dyspnœa, and extreme prostration. The temperature of the mouth was found to be 32° C., of the axilla 34°, and of the rectum 37·6°. He weighed seventy-one kilogrammes. By the evening everything had become worse. He could neither move nor speak, and the pupils ceased contracting in the presence of light. He was in fact quite insensible; and when lifted on the bed for the purpose of making the injection he exactly resembled a corpse. The dissection necessary to expose the vein was quite unperceived by him. By means of a glass pump 400 grammes of water at 40° C. were injected at 5.30 p.m., the first result perceived being a stronger pulsation of the heart, although the pulse could not yet be perceived; the next result observed was that the respiration became deeper and less oppressed; and the third was an elevation of temperature—a thermometer, kept in the mouth, which before the operation marked 26·8°, ten minutes after its completion indicating 30°. Lastly, immediately after the operation the patient complained, with a feeble voice, that he was thirsty. At 8 o'clock he was asleep, breathing quietly, the skin being moist and recovering its warmth. At 11 o'clock the thermometer in the axilla had risen from 33·8° to 34·8°, the patient having then become restless and vomited abundantly. By the morning of the 30th he was able to rise and sit in a chair, the pulse still, however, remaining insensible, and no urine having reappeared. The thermometer indicated 35·9° in the mouth, 34·6° in the axilla, and 37·8° in the rectum. The weight of the patient had increased by 450 grammes, as he now drank more than he excreted. The patient continued to improve, and on October 2 he passed a litre of urine, his temperature having risen to 36·8° in the mouth, 36° in the axilla, and 37·2° in the rectum. By means of the sphygmograph a regular tracing of his pulse was obtained, indicating strong tension and normal impulse. He left the Hospital on October 8 quite convalescent, and eventually entirely recovered.

Mr. Peabody, whose name is synonymous with enlightened beneficence, has made over to the Harvard University, Massachusetts, the sum of $150,000, for "the foundation and maintenance of a Museum and Professorship of American Archæology and Ethnology."

"I have for some years," he says, in the letter announcing his intentions, "had the purpose of contributing, as I might find opportunity, to extend the usefulness of the honoured and ancient University of our commonwealth, and I trust that, in view of the importance and national character of the proposed department and its interesting relations to kindred investigations in other countries, the means I have chosen may prove acceptable.

"Aside from the provisions of the instrument of gift, I leave in your hands the details and management of the trust, only suggesting that, in view of the gradual obliteration or destruction of the works and remains of the ancient races of this continent, the labour of exploration and collection be commenced at as early a day as practicable, and also that in the event of the discovery in America of human remains or implements of an earlier geological period than the present, especial attention be given to their study and their comparison with those found in other countries."

By the deed of gift, Mr. Peabody directs that $45,000 be invested as a fund, the income from which shall be applied to the forming and preserving collections of antiquities and objects relating to the early races of the American continent, or such (including such books and works as may form a good working library for this department of science) as shall be requisite for the investigation and illustration of archæology and ethnology in general, in main and special reference, however, to the aboriginal American races. A further sum of $45,000 is to be devoted to the establishment and maintenance of a Professorship of American Archæology and Ethnology, such Professor to be appointed by the President and Fellows of Harvard College. Further, $60,000 are to be invested until they accumulate to at least $100,000, for the purpose of defraying the cost of the erection of a suitable Museum.

HUNTER *v.* SHARPE.

COURT OF QUEEN'S BENCH, WESTMINSTER, NOVEMBER 27.

(Sittings at Nisi Prius, before the LORD CHIEF JUSTICE *and a Special Jury.)*

THIS was an action by Dr. Hunter against the printer and proprietor of the *Pall-mall Gazette* for an alleged libel contained in that paper of November 10, 1865, entitled "Impostors and Dupes." The article ran thus, the passages declared on being those enclosed in brackets:—[" The modern system of easy advertising and the facilities of the penny post have many advantages, but they have also their attendant evils of no little weight. One of these evils is nothing less than a curse upon English society. Occasional exposures in the law courts and the newspapers have long made us familiar with the advertising practices of a certain class of Medical impostors, and with the misery they inflict upon their unhappy dupes. And now a series of recent proceedings in the Marylebone police-office has revealed the existence of ramifications of the detestable system in question for which few ordinary readers will have been prepared. Persons who turn over the pages of the cheap newspapers in search of the curiosities of advertising will have noticed the frequent recurrence of a whole column, purporting to give a consecutive series of extracts from a Medical work on consumption by a person signing himself Robert Hunter, M.D. If they have taken the trouble to read its uninviting paragraphs, they will have found that they are a long rigmarole of semi-scientific declamation, professing to expound to the non-professional invalid the causes and symptoms of disease of the lungs, and to prove that nobody knows how to cure it except this same Dr. Hunter, whose method is one of inhalation. On the face of all this there is nothing more than the puffery of the dealers in the various pills, potions, ointments, and liniments, who rejoice in the possession of testimonials from innumerable correspondents who bless the day that they first made the acquaintance of the pill, potion, ointment, or liniment in question, and who are all alike in an unfortunate ignorance of English grammar. That any reputable Physician would thus advertise for patients is, of course, out of the question. But, although these advertisements are free from the mysterious hints and suggestions and the scarcely veiled offensive phraseology of the basest class of Medical puffs, one is led to suspect the existence of very serious malpractices by observing the length and the frequency of these recommendations of Dr. Hunter and his inhalations. When a man finds it worth his while to insert a very costly advertisement in several papers, and to go on with it from day to day or week to week, it is clear that his patients must be dupes of a very different class from the simple people who buy pills by the gross and potions by the gallon.] There is no need of the revelations of a police-court to show that the inhaling process means a process for working upon the fears of the ignorant, and for obtaining enormous fees. Men like these advertisers know well that there is one class of society which is specially open to their allurements, and at the same time supplies abundant dupes in such circumstances as to make them quite worth the expense of entrapping. Ladies and gentlemen, and the more wealthy and comfortable class of tradesmen, have, as a rule, their regular family doctors. They dislike Doctors' bills as much as any other bills, and it is sometimes hard enough to pay them. But still, until we go further down in the social scale, every man has his own Doctor. Then comes an immensely numerous class, whose real education is not much above that of the actual poor, and whose experience of life is confined to a narrow range. These are the men and women who are the destined victims of the advertising Doctors. They read about mucous membranes, carbonaceous blood, and tubercular deposits, and are impressed with the genius of the gentleman who can thus easily make them familiar with the profoundest secrets of science. If they have anything really the matter with them, their disagreeable sensations are at once intensified; if they have nothing more than a cold in the head or a tightness in the chest, produced by over-indulgence at supper, Dr. Hunter's catalogue of terrific symptoms suggests a mysterious signification to their pains. And when at last the advertisement recommends them 'to put their worldly affairs in order, and withdraw their minds from all earthly ties,' for they have only 'a few short months of life' before them—*i.e.*, unless they consult Dr. Hunter—what else remains but to go the next morning to see the pious, learned, and benevolent Physician, residing in that highly respectable part of London, Upper Seymour-street, Portman-square? For he is a real Physician, they see, being entitled to call himself M.D., not knowing in their simplicity how degrees are, or were, sold, or rather given away, in Scotland, and how agents still advertise in London that they can get anybody any sort of degree in Germany. Once in the toils of the Physician's 'consulting-room,' the rest is clear. A man must be a sorry Practitioner indeed if he cannot work upon the terrors of a foolish woman, especially if she is really ill, and so keep up the game of questioning and examining, and physicking, until the poor victim's purse will bleed no more. . . . Howsoever considered, the Merrick-Hunter story is a fresh illustration of the utterly unsatisfactory state of the law in the matter of these abominable advertisements. The sufferance of these lures for the unwary is a thing that ought not to be longer endured. It is obviously most dangerous for persons who know nothing of Medicine or physiology to habituate themselves to the study of Medical books even of the purely Professional kind. As it is, a knowledge of the human frame, of the laws of health, and the symptoms of common disease is no part of a gentleman's or lady's education. The ignorance of well-educated men and women on matters which it is of the utmost practical moment that they should understand is often amazing. Consequently, they frighten themselves out of their senses when chance puts in their way such publications, for instance, as Dr. Forbes Winslow's books on mental disease. Symptoms which prove nothing but the existence of over-fatigue of the nervous system, and which call only for less work, more air, and quiet amusement, and perhaps an extra glass or two of good wine, are mistaken for indications of actual brain disease, and thus tend to produce the effect which has been mistaken for their cause. If such is the case with cultivated minds and recognised Medical treatises, what must be the effect of these advertised abominations on the ignorant, the silly, and the vulgar? [Nor need there be any actual difficulty in putting a stop to such advertisements by Act of Parliament. It should be an indictable offence for any man to call himself a Physician, Surgeon, Apothecary, or Dentist, unless empowered to practise by the colleges or societies recognised by the law of the land. The assumption of all foreign Medical degrees should be absolutely forbidden under the same penalties, whether claimed by English subjects or by foreigners. English subjects are forbidden to assume any foreign title of rank without the permission of the Crown. But what would be the evils of permitting some foolish gentleman to call himself count or baron compared with the mischief done by scoundrels who utter this base, forged coin, and claim to be respected as qualified Physicians on the strength of some diploma obtained in Canada or New York?]"

The plaintiff by his allegations of innuendoes represented that the effect of this article was to impute to him that he was a quack, a scoundrel, an impostor; that he plundered his patients, etc.

The defendant pleaded "Not guilty;" and also a general justification that the alleged libel was true in substance and effect.

Mr. Coleridge, Q.C, Mr. Serjeant Parry, Mr. Hume Williams, and Mr. Cashel Hoey were for the plaintiff; Mr. Karslake, Q.C., Mr. Quain, Q.C., and Mr. Fitzjames Stephen were for the defendant.

Mr. Coleridge having opened the case, the plaintiff was called. He stated that he was "Doctor of Medicine of the University of New York," and Licentiate of the Medical Board of Canada, and produced his diplomas, dated 1846 and 1847. He was born in 1826, so he got his diploma at the age of 20. He returned to Canada, where he went through another examination, upon which he had a certificate (produced), which was, however, he said, rather educational than professional, and did not of itself amount to a diploma. He obtained, however, on this, his Canada diploma, and practised five years near Toronto. He then retired temporarily, from ill-health (having consumptive symptoms), and turned his attention to pulmonary diseases and the theory of inhalation for their cure, which he submitted to the Professor of Chemistry in the University of New York, with a view to its trial upon himself. The Professor, however, tried to dissuade him from it, as likely to be dangerous, but he persisted in it, and ultimately recovered his health. He then visited Europe. He returned to New York and resumed his practice, but again retired, having had a relapse, and fearing the effect of practice upon his health. From 1852 to 1859 he remained at New York, having had a large practice, and devoting himself especially to pulmonary diseases. He then went to Canada, and practised there until June, 1864, when he came to England. Being asked why he left, he said it was for the education of his family, to visit his friends, etc , not on account of his health. He sought to establish himself here as Doctor of Medicine. Before he came he was not aware of the Medical Registration Act He found that he could not be registered without examination, and he wrote to the President of the Medical Council about it, claiming to be admitted as a colonial practitioner. He published a work on consumption, on the title-page of which he set forth his American and Canadian diplomas. (This was put in.) In New York he associated himself in practice with a Mr. Melville, and in London with a Dr. M'Gregor, an M.D. of Edinburgh. He was advised that it would not be illegal to practise here though not registered, but that he could not recover his fees. He practised in London and was successful, and acquired a large practice. Some of his patients had been subpœnaed, and he believed were in attendance..

About this stage of the examination the Lord Chief Justice observed that he should like to hear something about the plaintiff's advertisements, adding that he had thought that the plaintiff's counsel would have read or referred to some of them.

Upon this a copy of *The Times* of September 28 was produced, containing one of the plaintiff's advertisements.

The jury desired to hear it read.

The officer accordingly began to read it. It commenced by alluding to the celebrated work of Dr. Hunter, which, it was said, had created a profound sensation in America and effected an entire change of treatment, etc. After hearing a few passages read,

The jury said they desired to hear no more read.

The Lord Chief Justice: You merely wished to see the tone and style of the advertisement, I presume?

The Jury: Just so; and we have heard enough for that purpose.

The plaintiff's counsel observed that, as the advertisement was one of a series giving Dr. Hunter's theory—

The Lord Chief Justice: You put it in. His Lordship read some more passages, and then observed that what he wanted to know was what was the cure; it was easy enough to describe the symptoms, and this advertisement was occupied with the symptoms.

It was stated that the whole or principal part of the plaintiff's work was published by degrees in the advertisements, interspersed with statements of cures.

The plaintiff's examination was then resumed, and stated that the only difference between his system and that of other Medical men was inhalation.

The Lord Chief Justice: Are the means of cure indicated in your work?

The Plaintiff: I think so.

Mr. Karslake: We say not, and that there is nothing to indicate it distinctly.

The Lord Chief Justice said he had once read the book, and it made that impression upon his mind.

The plaintiff was called upon to explain distinctly what his treatment was, and stated it chiefly lay in the "increase of vitality by promoting the inhalation of oxygen," and he thought that this was sufficiently indicated in his book. He declared that he had greater faith in his system than in anything else, but he did not rely on it entirely. There was at present no established method of treatment in consumption.

The Lord Chief Justice: Don't you in your book disapprove of ordinary remedies?

The plaintiff denied this; upon which

The Lord Chief Justice read a passage from his book, deriding the system of pouring down cod-liver oil, etc., and representing that "on this one principle (that of inhalation) hinges the whole system," etc.

The plaintiff admitted that he relied chiefly on inhalation, but he declared that he employed other means. He placed, however, he said, his main reliance upon oxygen, admitting that his views about it were rather at variance with received ideas. He avowed that his work and his advertisements were addressed to the general public, and not merely to the Profession. He used various drugs in inhalation – those included in the Pharmacopœia; there was nothing empirical in it. He mentioned some of the drugs he used—stramonium, belladonna, and chloric acid, which he used, he said, as sedatives or as oxygenising agents. He also used iodine, and occasionally tar.

The Lord Chief Justice inquired whether these drugs were mentioned in the plaintiff's book.

The plaintiff stated that he had not mentioned them specifically, but generally, as "astringents, sedatives, expectorants, and alteratives." He had not mentioned the specific ingredients, as the work was for popular perusal, and they would require Medical advice as to their use. The examination was then directed to the case of Mrs. Merrick, who had made a charge of rape against him, in which he said there was not a word of truth. After the publication of the libel his practice had fallen off considerably.

Mr. Karslake, commencing his cross-examination: And I suppose it fell off after the publication of the charge made by Mr. Merrick?

Plaintiff: Why, yes; the two things came together certainly.

The Lord Chief Justice: It speaks for itself.

Mr. Karslake, then pursuing his cross examination, elicited that at the time the plaintiff had his diploma he was about 20 years of age. He did not think it was unusual for a Medical man to publish his name as M.D., when he was not so, or when he was only a foreign M.D , nor did he believe it was penal or illegal. His advertisements, containing parts of his book, were published in many of the papers in this country. The chief object was the reputation they produced, and the results. He declared that he could not say within a few hundred pounds what he had expended in these advertisements.

The Lord Chief Justice: Not within a few hundred pounds?

Witness: Well, it is a mere guess, but perhaps a thousand pounds.

Mr. Karslake: Will you undertake to say it was not some thousands of pounds?

The Plaintiff said he believed not. He was then examined as to the proceedings of his friends, Mr. Melville, Dr. M'Gregor, and Dr. Wills, who, it appeared, had established themselves in Dublin and Edinburgh, in a similar line of practice, and published similar works, with a similar system of advertising. Being examined as to his own system, he said it consisted in greater application of the inhaling process (especially with reference to oxygen), together with the use of some drugs not formerly used for the purpose, especially stramonium and chloric acid. He was shown the Pharmacopœia of the Brompton Hospital containing several of the drugs he had mentioned for inhalation. He admitted that he knew in 1864, when he published his advertisements in this country, that not only inhalation had been used, but some of those very drugs which he mentioned. He was challenged to point out in his work any kind of drug or oxygenated or medicated agents which it would be proper to use for the purpose of inhalation; he said he had not mentioned particular drugs or agents; the basis of his view, he said, was the carbonaceous character of tubercle, and the importance of an oxygenated mode of treatment, and he admitted that he was not then aware that Medical writers had treated of the subject before. He was then challenged with a statement in his book to the effect that Medical men in England, in treating consumption, relied entirely on cod-liver oil and other medicines; he said he believed it was substantially true at the time; and then being reminded of his own admissions that the inhalant process was used at the Brompton Hospital, and the use of some of the identical drugs he mentioned, he said he believed they were used only as palliatives. He admitted that cod-liver oil was a very valuable agent in consumptive disorders, as nourishing in its nature. He was then pressed with passages in which he spoke of the "old system" as having no real effect, and of his new system as of almost sovereign efficacy; the essence of his system was a topical or local treatment, as opposed to constitutional treatment. His attention was then called to passages in his book giving terrible pictures of the nature and progress of the disease, and he admitted that the symptoms he described so alarmingly were symptoms of other things. Other passages were read, of which he admitted the effect to be that general Practitioners did not understand the symptoms of this disease, and that patients should go to some one who had, as he had done, made it his specialty. Other passages were cited, the effect of which was that most diseases attributed to the liver were really consumptive. He was asked a great deal as to his opinions on the subject of consumption, and stated that it was closely allied with scrofula, and that he regarded carbon as inimical to health, and as the true cause of tubercle, and the object of his system was to eliminate it. He was asked whether the blood was not affected and altered by medicines received through the stomach; but this he would not admit, except with great qualification and limitation, and he thought that it was only on the lungs that the blood must be reached. He said in his view the disease was local, and must be met by treatment of the organ affected, and getting into the blood through the lungs. His object was the inhalation of oxygen, and he used, he said, chloride of potassium and peroxide of manganese, put into a gasometer and inhaled in the form of gas. The gas when generated was diffused through the atmosphere of the room in which the patient slept. The mode of diffusing the gas was by combustion of the nitrate of potassium and stramonium, and thus liberating the oxygen and diffusing it in the air of the room. He also used inhaling instruments for inhaling directly into the lungs. Patients, he said, could communicate and be prescribed for by letter, receiving in that way directions as to the use of the gas. There were no particular directions in his book, which merely described the principle of the system. He said he was practising still.

In re-examination, he stated that his book did not profess to be addressed to the Medical Profession; it was a popular work; but it could easily be understood by any ordinarily qualified Medical man.

SECOND DAY'S PROCEEDINGS.

Dr. Melville, one of the plaintiff's coadjutors, was called and examined on his behalf as a witness. He stated that he had graduated as M.D. at Edinburgh in 1837, and had known the plaintiff since 1853, and was registered in this country as a Practitioner. The plaintiff, he said, had "systematised" the process of inhalation, and made it more useful. Being asked whether he considered it was sufficiently described in the plaintiff's book to enable even Medical men to understand and apply it, he said that it was so; upon which he was invited to point out where it was particularly described, and he admitted it was only described generally as the inhalation of "sedatives," etc., leaving Medical men to select and apply them, taking such as were susceptible of volatilisation. He admitted, however, that the book was written chiefly for popular perusal. He was asked whether he considered it regular or proper to advise and prescribe for patients without seeing them and personally examining them, and he said it was not improper. He was referred to passages in the plaintiff's book in which it was represented that the most gratifying cures had been effected in cases "treated entirely by correspondence," and especially a case of a Countess Rodowlinski, which was described as a very remarkable one, and whose letter of acknowledgment was referred to.

The LORD CHIEF JUSTICE: Have you the originals of these letters?

The witness said he had them, and could produce the one referred to. After some search he produced one of the plaintiff's forms, "filled up," as he said, by the countess. He was asked to produce the letter in answer to which this form had been sent by him, and he said he had not got it. He was asked for the envelope, and said he had not got it. The form, he said, was the form ordinarily sent upon inquiries. He produced a letter which he said had come back with the form, written, as he suggested, by the countess, and signed by her husband, "Count Hugo Rodowlinski." The "ordinary inhalants," and inhaling instruments, he said, had been sent. Being asked to describe the "ordinary inhalants," he stated them thus—stramonium, iodine, chloric acid, and chloroform. Being asked to describe the proportions, he said a drachm and a half of tincture of iodine, a drachm and a half of chloroform, six drachms of chloric acid, and the rest (*i. e.*, of a 6 oz. bottle) stramonium. The practical directions were to put a teaspoonful of the inhalant into the inhaler with a certain proportion of hot water. He said tar was sometimes used, and a basin of tar placed in a room for the purpose of inhalation was, he said, often very beneficial.

In re-examination the witness stated that it was not unusual for Medical men to publish cases.

The LORD CHIEF JUSTICE: Not letters from grateful patients?

Mr. Coleridge: Oh, yes! I am told that it was not at all unusual. Here is a work by Dr. Hugh Bennett, in which I find several.

The LORD CHIEF JUSTICE: Without any disparagement to him, I don't think it is usual in the Medical Profession, whereas, as we all know, in a certain class of cases it is a characteristic.

(It was elicited that the witness had received a salary from the plaintiff as his assistant.)

Dr. M'Gregor, another of the plaintiff's coadjutors, was then called, and gave similar evidence, stating that he considered the plaintiff's system sound, and believed that it had done great good. He stated that he was registered and qualified as a Practitioner, and he became acquainted with the plaintiff in this way:—The plaintiff advertised for a qualified Practitioner to practise with, and he agreed to act with him, and, as "he was not a man of capital and the plaintiff was," he arranged to receive a salary from him. He had written the preface for the plaintiff's first edition of his book in 1864. It appeared that the witness had since started in similar practice in Dublin, and another friend of the plaintiff, a Dr. Wills, had also started in Edinburgh, each publishing a similar book, substantially the same with the plaintiff's, and in each instance giving the address, hours of practice, etc. Passages were read from the two works almost in the same words. One of them was a passage which in the plaintiff's book ran thus:—"The patient is told that when he can breathe the pure fresh air of the country all will be well, but, alas! he generally finds that the 'country' referred to is beyond the grave;" and in Dr. M'Gregor's book it ran—"Alas! for those who put their faith in these delusive promises. Too late they find that the 'country' referred to is that beyond the grave—the bourne whence no traveller e'er returns." The witness said the business had not been so successful in Dublin as in London. "They are not so rich there as here," he said. (A laugh.)

A witness from a drug merchant's deposed that Dr. Hunter had been supplied with 800 pounds' worth of drugs in one year; amongst them was chloric acid, which produces large volumes of oxygen, and was not generally used. Several witnesses were called, who believed themselves to have been cured or benefited by the plaintiff. They had been suffering chiefly from asthma and bronchitis.

This closed the case for the prosecution. Mr. Karslake having opened for the defence, proceeded to call the following witnesses on the

THIRD DAY.

Dr. Williams, F.R.C.P., and Consulting Physician to the Brompton Consumption Hospital, stated that he had practised in London thirty-six years, had paid particular attention to diseases of the throat and lungs, and had read Dr. Hunter's book, which contained, he said, many exaggerations and misstatements. The statement in the book "that the root of consumption is in the lungs, and tubercles are but the fruit of imperfect respiration," was as much opposed to the truth as a statement could possibly be. It is a remarkable fact that many of the diseases in which respiration is most imperfect are peculiarly free from tubercular deposition. Emphysema of the lungs and spasmodic asthma seem to prevent the deposition of tubercle in the lung. There was another class of cases connected with disease of the heart, in which there was imperfect respiration, showing equal exemption from tubercle in the lungs. In another class of cases connected with distortion of the spine there was imperfect respiration, but in these cases tubercle was not common. Again, the statement in Dr. Hunter's book that "Carbon being a poison most inimical to life, I regard it as the true cause of tubercle," was entirely erroneous. Carbon was the same as charcoal, and was a remarkably inert substance; and even in the lungs, where it is often found in advancing life, it was perfectly innocuous. The statement that it is the true cause of tubercle was wholly unintelligible. The statement of Scherer's analysis of the composition of tubercle was quite incorrect. "The analysis of Scherer proves that 54 per cent. of it is pure carbon, and the remaining 46 per cent. is made up of the elements of disintegrated tissues of the lungs in which it is deposited." Dr. Hunter obviously did not know what ultimate analysis meant. Fifty-four per cent. of carbon was no peculiarity in tubercle. Other tissues of the body contained the same and larger proportion. Again, the statement that catarrh leads to consumption generally, was a gross exaggeration. It could not be denied that catarrh might develope the disease in cases of persons predisposed to consumption, but to assert that "diseases of the nose, throat, and bronchial tubes, when neglected, invariably end in pulmonary consumption," was a gross exaggeration, made only to excite alarm. The statement that the pulse averaged from 60 to 68 might be correct as regarded the male sex, but he should put it at 70. In women the average was higher. In colds there was a liability to cough and an increase of the pulse. Many persons were subject to nervous cough from accidental causes, and such persons were subject to acceleration of the pulse. The statement as to mischief in the lungs being surely indicated by a cough, united with shortness of breath, especially if associated with acceleration of the pulse, etc., was absurd, and only made to frighten people.

The Lord Chief Justice said the whole passage should be looked at, not isolated expressions.

The entire passage was read :—

"In consumption the pulse keeps pace with the shortness of breath. In health the pulse should range from 60 to 68, the average being about 64 beats in the minute. If, therefore, you have a hacking cough and slight shortness of breath on exertion, accompanied by an increase in the frequency of the pulse of 10 or 15 beats per minute, you cannot doubt the existence of mischief in the lungs, and should instantly set about its removal."

The witness stated that he had perused the entire chapter, and, indeed, the whole work, and his opinion was that the passage read was erroneous, and that the general tendency of the work was unduly to alarm the public, and that it contained many statements grossly exaggerated, if not entirely unfounded. His attention was then directed to another passage :—

"We do not always find apparent loss of flesh in the first stage of consumption. In young women particularly I have very often found the lungs seriously affected, while they still retained their colour and plumpness. But, as a rule, if we reduce the matter to a certainty by weighing, we shall find a few pounds of difference between their present and former weight. If, with the loss of weight, there is a disposition to sigh, a dark discoloration below the eyes, and a quickened pulse, with some heat in the hands, set it down as almost certain that the lungs are affected."

The witness stated that, though there was some degree of truth in the first sentence, the latter part of the passage was very erroneous, and calculated to produce a false and alarming impression. The symptoms thus stated were often met with in cases where there was no such affection of the lungs. His attention was then pointed to a passage in which it was stated :—

"The weekly bills of mortality point us to the startling fact that of those who have passed the age of puberty fully one in every four persons we meet in the great thoroughfares of business and pleasure is under the ban of this terrible disease, and destined to fall a sacrifice to it unless saved through the prompt adoption of more rational means than those usually employed."

The witness stated that he considered this to be an exaggeration, and far too alarming. He believed that the deaths from tuberculous disease amounted to one in every eight from all causes. He was then asked as to a passage which ran thus :—

"From these facts the reader can understand that one of the great objects of treatment is to subdue the catarrhal condition of the mucous membrane. How can this be accomplished? It is no treatment for a local disease in the lungs to pour down cod-liver oil and tonics into the stomach, for they never reach the parts affected; and, besides, such medicines possess no properties capable of effecting a cure, if they did. No Physician will pretend that cod-liver oil, or any cough mixture or any tonic ever compounded, has power to remove tubercle, purify the blood, or heal the mucous membrane, even if directly applied. How, then, in the name of reason, can they accomplish these objects when they are applied to a distant and healthy part?"

The witness said this was entirely erroneous. There was abundant evidence that such medicines did reach the lungs, and every part of the body where the blood circulated. When cod-liver oil and other medicines are taken into the stomach, they are speedily absorbed both by lacteals and veins, and are mixed with the blood, and, with it, have access to every part of the lungs and to every tissue of the body. In the case of cod-liver oil, it goes to enrich the molecular base of the chyle, and in minute globules is conveyed in the blood to the lungs in immediate contact with tuberculous deposits.

The Lord Chief Justice: Then, you would say that cod-liver oil had a beneficial action upon the lungs by the oily matter being brought into immediate contact with every part of the lungs.

Witness: As one mode of action, but it has other modes of operation—nutritious, for instance.

The Lord Chief Justice: In other words, you think that if the lungs could be got at locally it would do good to apply the oil to their surface?

The Witness: Well, that I should doubt. It is in the blood that it is believed to effect good, because the deposit of tubercle depends upon the condition of the blood in the lungs, and it is in the blood thus circulating that the oil acts, and it is proved to be very beneficial. We believe, therefore, that we get at the lungs through the stomach more surely and effectively than by inhalation. The witness then had his attention called to a passage in an essay prefixed by the plaintiff to his book :—

"The conclusion is, that pulmonary complaints are curable, even after they have reached a confirmed stage, when treated by properly regulated and adapted inhalations of oxygenated and medicated vapours; and I cannot but regard it as a contribution to Medical science of inestimable importance to mankind, and one destined to exert a more beneficial influence on the practice of Medicine, than any discovery of modern times."

The witness stated that he had been for thirty years in the habit of using inhalation in such cases; and that it had been used in the Brompton Hospital for many years, and was common in his own practice, and he believed in that of many of his brethren. The agents which he most commonly used for inhalation were creosote, carbolic acid, hemlock, stramonium, and iodine; but a vast number of others have been tried. He regarded it as a valuable auxiliary, but as subordinate to the use of medicines taken into the stomach in the ordinary way. Inhalation, he said, was transient in its effects, and though, no doubt, gases, vapours, and fumes inhaled reached the air passages, and even the blood, it was in such minute quantities that the effect was not enduring. Inhalations, too, were extremely uncertain in their operation; sometimes they would produce little or no effect, and sometimes, on the contrary, strong and overpowering effects, such as stupefaction, giddiness, sickness, and faintness; so that they required to be administered with great care, and with personal supervision of the patient; and their beneficial operation, at the best, was limited, because so transient. Take, for instance, asthma, the disease in which it might be supposed most likely to be useful, although the inhalation of the fumes of stramonium for its cure had been long known and acknowledged, and indeed it was in common use all over the world; yet it was transient in its operation, whereas that same drug when administered through the stomach was far more certain and beneficial in its effects. In fact, the Profession, having long been acquainted with inhalation, and having tried it with all kinds of drugs and in all kinds of cases, and in all kinds of ways, had discovered that it was not so very efficacious or permanent in its operation as was supposed at first, and therefore they gave it less importance than Dr. Hunter had given to it. Asked as to the mode of administration, he stated that, though he had tried inhaling instruments, he had not found them so convenient as the more simple mode of putting the hot liquid in a jug, and confining the steam by a napkin from above the nose to around the jug, the patient then inhales the vapour through both nose and mouth in the natural way. As to the plaintiff's "inhaler," he had found it impossible to find out what it was. Neither his instrument nor his system was described in his book, nor is it said where the inhaler is to be seen. The witness was then directed to the passage in which the plaintiff described his system:—

"The medicines which it is necessary for the patient to inhale are of four kinds—first, expectorants, to expel the mucus; second, sedatives, to allay irritation; third, astringents, to diminish secretion; and fourth, alteratives, to change the action of the diseased membrane."

He was asked whether he could collect from this the plaintiff's system, so as to understand distinctly what it was, and he declared that he could not; it was so utterly vague, not even naming the drugs to be used, nor giving any directions as to the means employed for inhalation; and this remark he applied to the book as a whole. There was nothing in it which was sufficiently definite to enable a Medical man to understand his treatment and to apply it. It was so vague that it gave no definite information. He found no directions in particular which would guide any Medical man in the administration of oxygen; nor, indeed, at this moment could he collect, either from the book or from the plaintiff's evidence, that he had ever really administered oxygen at all. The process described by the plaintiff was, he believed, one which would not really develope free oxygen. Chloric acid, which the plaintiff said he used, would no doubt, if decomposed by heat, give out oxygen and chlorine, and if these were given alone, then the latter would be such an irritant to the lungs as to prevent inhalation being continued; and if they were combined with other substances, such as the tinctures mentioned, then these would absorb the oxygen and chlorine too, so that in either case no "free" oxygen would be inhaled at all, and the process was useless. Witness had prescribed oxygen inhaled from a gasometer, but with no satisfactory result; it is rather a troublesome process, and not easy for patients. In some cases, he said, the inhalation of oxygen would be dangerous in cases of pulmonary disease, for reasons which he explained. Consumption always comprised a tendency to many inflammatory diseases, of which bronchitis was one, and the effect of oxygen being to increase the stimulating effect of the air on the lungs, he should fear its effect in increasing the tendency to inflammation. So far, therefore, from thinking, as the plaintiff stated in his book, that the great thing in every case was inhalation of oxygen, it would be in some cases extremely injurious. It was false that the Medical Profession were imbued with "almost hopeless apathy" in the study and treatment of consumption. So far from it, no disease in all the catalogue of maladies had attracted more attention, and witness could state, as the result of his own experience, that whereas the average duration of life in phthisis was put down by his former teacher Laennec and by Louis at two years, he found it was now extended to five years.

Mr. Coleridge in cross-examination: Do you consider consumption curable or not?—I consider it curable in certain forms and degrees.

The LORD CHIEF JUSTICE: In what forms and degrees?—In the incipient stage, or when the disease is limited in extent.

Mr. Coleridge: Beyond that it is incurable?—When it is extensive, no doubt.

Then it is all the more important to treat it as early as possible?—Certainly, provided it exists. (A laugh.)

But it is all the more important to treat for it as soon as it is suspected to exist?—Yes, no doubt.

The witness was then challenged upon his opinion as to a passage in which the plaintiff stated—"All observation and experience unite to prove that the root of the malady is in the lungs, and that tubercles are but the fruit of imperfect respiration;" and he repeated that this was as untrue as any statement could possibly be. He was then asked as to another passage:—"Tuberculous deposits are the invariable results of insufficient performance of the respiratory function and rebreathed air;" and he was asked whether this proposition was as false as the other; and if not, where was the difference. The plaintiff pointed out that the distinction was, that in the one case there was the mere imperfection of respiration, whereas in the other—the latter passage—there was the corruption caused by the air having already passed through the breath: still the statement was an exaggerated one.

The witness was then told that the latter proposition was from Dr. M'Cormack's work on consumption, and he said he did not dispute that the continued breathing of impure air might contribute to induce consumption. There might, however, he added, be imperfect respiration without consumption, and he declined to say that consumption always implied as its cause imperfect respiration. There was, he said, no evidence that imperfect respiration caused or preceded the deposit of tubercle; though, of course, after consumption had gone on, respiration would be interfered with; consumption, however, was often found without previous imperfect respiration. He also declared it to be a total mistake to state that the cause of consumption was the absence of oxygen or the excess of carbon in the blood, and the passage stating that carbon retained and not sufficiently discharged "was deposited as tubercle" was quite incorrect. The cause of consumption might be in the unhealthy condition of various functions of the body; respiration was one of them; and it was utterly incorrect to represent absence of oxygen or imperfection of respiration as the sole cause. The insufficiency of oxygen, no doubt, might be one of several co-operating causes, leading to that deteriorated state of the system which resulted in consumption. Air which had been breathed or respired was positively pernicious. Asked whether oxygenation of the blood was not of great importance and went on in the lungs, he said of course it was; but that the oxygen did a great deal more than combine with carbon. To be beneficial it would be absorbed into the blood, and pass through the whole system, thus rendering all the functions of the body active by its presence. He denied the proposition of the plaintiff that consumption is only the consequence of a carbonaceous condition of the blood.

Mr. Coleridge: What do you consider the cause of consumption?

Dr. Williams: A degraded condition of the nutritive material of the blood—that is, such a deteriorated condition of it that it no longer makes good flesh.

Mr. Coleridge: And is not that the result of a carbonaceous condition of the blood, and the deficiency of oxygen?

Witness: On the contrary, many eminent pathologists are of opinion that an excess of oxygen exists in the blood in consumption.

Mr. Coleridge: Ah, you may have too much of a good thing, no doubt; but is it not a cause of consumption?

Witness: Not a direct cause. It may tend to that general deterioration of the blood which is the real source and cause of consumption, but is not a direct cause of it.

Mr. Coleridge: Then your distinction is between direct and indirect?

Witness: No; between a sole cause and a co-operating cause. The plaintiff states in his book that consumption is "only the consequence of a carbonaceous condition of the blood."

The witness was then challenged with the plaintiff's statement, "Catarrh is the first step towards consumption," which he had declared to be grossly exaggerated. Even when colds were chronic and neglected, they did not necessarily lead to consumption. A catarrh might be neglected and go on for a whole winter, and might pass away in the summer, or might be neglected for years, and become what was called an "old man's cough." It often happened that colds were necessarily neglected, and yet, happily, they did not lead to consumption. If, indeed, there was a consumptive tendency, or if the cold was combined with other causes, it might be dangerous; but he entirely protested against such a broad statement as that "catarrh was always the first step to consumption." So he entirely dissented from the statement that deaths caused by consumption were one-fourth of the whole number of deaths caused by disease. That might have been supposed half a century ago, when the bills of mortality were not kept so accurately as they are now, but it was not believed to be the case now. So of the statement that "one-fourth of the persons we meet with are under the ban of this terrible disease." This was an exaggeration to excite alarm. The mortality from tuberculous disease was now believed to be one in every eight deaths from all causes. He particularly objected to the passage:—

"If, therefore, you have a hacking cough and slight shortness of breath on exertion, etc., you cannot doubt the existence of mischief in the lungs."

This, he said, was a great exaggeration, as these were very common symptoms in persons not at all consumptive.

Mr. Coleridge: What do you say to this extract from Dr. McCormack's book?—

"All the codfish that swim in the mighty ocean cannot avert for a single instance tubercular decay."

Dr. Williams: That is *his* opinion. *Valeat quantum.*

Mr. Coleridge: So we may say of your opinion *valeat quantum.*

Dr. Williams: Certainly. I don't think much of those who object to cod-liver oil. Asked about inhalation, the witness repeated his statement that it had been used as a means of cure for thirty years, and Sir C. Scudamore, as long ago as that, had published a treatise on the subject, although it had not been found very successful. Iodine inhalation and other forms of inhalation, however, were still in use, but their value was problematical. He knew of no considerable Physician who treated his patients exclusively by inhalation, but it was well known and used, and there had been 50 inhalers invented and applied. Hemlock, stramonium, opium, camphor, and many other drugs were thus used. There was, indeed, hardly any drug which had not been so used. The inhalation of oxygen had been practised in London to a great extent—not exclusively for diseases of the chest, but for them among others. Sixty years ago, Dr. Beddoes, of Bristol, had an institution for the inhalation of oxygen and other gases, and he believed that Sir Humphry Davy was an assistant there.

Mr. Coleridge: That was not laughing-gas, was it?

Dr. Williams: No; but laughing-gas was tried. As to the plaintiff's process of inhalation of oxygen, he had found it quite impossible to discover it. It was utterly impossible to discover it from his book. There was no mode in which oxygen could be brought into contact with the lungs except in the form of gas, and he found from inquiries of the plaintiff's patients that no such instrument as could hold oxygen separately—as a gas-holder—was used. On being asked his opinion on a passage from a work by Dr. E. Smith in 1862—viz., that the Profession are not agreed as to the essential nature of tuberculous disease, and that it is almost as universally fatal now as in all preceding ages—witness considered these expressions too strong.

In re-examination, Dr. Williams stated that the efficacy of the remedies for consumption had greatly increased of late years, especially since cod-liver oil had been used in its purer form, and it was used to a greater extent than ever.

In answer to inquiries from the Lord Chief Justice, the witness stated that in some cases the bringing of oxygen into the air-vessels might possibly be beneficial to a limited extent, but he thought these cases were rather exceptional than general. The examination and cross-examination of Dr. Williams lasted the greater part of the day, up to half-past two o'clock.

Dr. Risdon Bennett, Fellow of the Royal College of Physicians, Physician and Lecturer at St. Thomas's, and Physician at the Hospital for Diseases of the Chest, Victoria-park, was then called, and gave similar evidence. He denied the fundamental proposition of the plaintiff, that carbon was the origin of consumption; on the contrary, in cases of "black lung," as it was called, in which carbon was actually through excess deposited in the lung, there was no tubercle; and so much was it the reverse of the truth, that it was a well-known fact that in the great majority of cases in which what was called a carbonaceous—*i.e.*, a venous—condition of the blood existed, no tubercle was found, and so much so that Rokitanski, the celebrated pathologist, had formed an opinion that such a condition of the blood was antagonistic to consumption; and so far from carbon being, as the plaintiff stated, a "poison inimical to life," it formed a large portion of the animal tissues and frame. He quite differed from the statement, "If, therefore, you have a hacking cough, etc., and slight shortness of breath, etc., you cannot doubt the existence of mischief in the lungs." Persons often came to him with those symptoms who had very little the matter with them, and certainly no tendency to consumption So as to plaintiff's statements that "catarrh is the first step towards consumption," etc., he said the mildest term that could be applied to it was that it was gross exaggeration; and so as to the statement that "colds, catarrh, and affections of the throat gradually laid the foundation of consumption." He had never found granular disease of the throat lead to consumption, as implied in the statement that "the malady would proceed slowly but surely towards the lungs, and the unfortunate patient would soon learn how short was the step from a sore throat to confirmed consumption." In all his experience he had never known such an instance. So he quite differed from the statement as to the symptoms of consumption, and declared that persons might have many, if not all, of these symptoms, and yet have perfectly sound lungs. He did not agree in thinking that (as the plaintiff stated) "most cases of consumption arose from cold," etc. He differed from the plaintiff's statements derogatory to the use of medicine; for as consumption arose from a degraded condition of the blood, medicines acting on the blood through the stomach were of great use. Change of climate and regulation of diet alone in many cases were found to cure consumption. And if so, then, *à fortiori*, the use in addition of remedies calculated to improve the digestion and insure the proper action of all the other organs of the body besides the lungs (as the liver, the kidneys, etc.) would exercise a beneficial influence upon the system. And cod-liver oil, steel, and other agents, had a direct effect in controlling tubercular disease. Virtually, these medicines, introduced into the blood through the stomach, were carried all through the system, and had a direct operation on the lungs. As to the plaintiff's system of cure, he had great difficulty in making it out. Taking the book as a whole, it professed to cure consumption by introducing oxygen into the system through the lungs by means of inhalation. The first thing, therefore, that he looked for was the mode of getting the oxygen, and next the mode of introducing it into the lungs. But he found nothing distinct on either point. Nor did he think that generally or necessarily oxygen would be beneficial In some cases it would be positively injurious. He could not at all understand the plaintiff's theory of cure by oxygen, supposing it introduced. The plaintiff appeared to think the tubercle would be "oxidised" by being brought into contact with the oxygen, but such a notion was simply unintelligible—the operation was impossible. As to the "cases" of cures put forth by the plaintiff in his book, they had such a strong similarity that he had not been at the trouble of reading them all, and they were, in a Medical view, utterly worthless. In some parts of his book the plaintiff spoke of filling a chamber with oxygen, but he could not understand how this could be done without very special appliances, not likely to be obtainable in the patient's own house, and he could not understand how patients could get into chambers of oxygen, nor could he see in the book anything to lead to the belief that oxygen had ever been given by the plaintiff. There were such statements in his book, no doubt, but there was nothing to lead him to believe such statements or to understand them. He had practised inhalation a long time himself, and knew that it would alleviate the sufferings from asthma, cough, etc., but he had never known any decisive curative effects upon consumption. He had tried stramonium and the other drugs mentioned. He knew nothing of the use of chloric acid for the production of oxygen for Medical purposes. These means of inhalation were generally palliative, though in asthma and similar cases they were sometimes curative. In cross-examination he said that he understood the whole basis of the plaintiff's book was this, that he had discovered a mode of curing consumption chiefly by inhalation.

The Lord Chief Justice: Beyond all doubt that is the gist of the book.

The witness being asked as to the curability of consumption, said he agreed that it was curable before it had gone to a certain extent.

The Lord Chief Justice said the whole tenor of the plaintiff's book was that heretofore not only had the means used failed, but that they had proved worse than useless, and that he had discovered means of doing that which all others had failed to do.

The witness, when asked how he should treat consumption, said he should, among other things, recommend change of air and climate, which he deemed the most effective form of inhalation. He stated that in the main he concurred with Dr. Williams in his evidence. His attention being called to the passage in which the plaintiff stated that "no treatment could effect the cure of consumption which did not begin at the foundation by restoring the purity of the blood, and causing the oxidation and absorption of the tubercles," he declared that the latter part of it was to him utterly unintelligible. It did not speak merely of purifying the blood (and if the blood could be really purified, probably little would remain to be done), but of oxidising the tubercles—not the blood, but the tubercles; and this to him was perfectly unintelligible, and he believed that the oxidation of tubercle was quite impossible. He declared that he did not understand how the plaintiff could have given oxygen. The only mode he understood of getting oxygen was collecting it in the form of oxygen gas, in a gasometer or bladder, and taking it to the patient's house, and giving it, as it was done in Hospitals. But in such cases the gas was manufactured first in the chemical laboratories of the Hospital, and collected in the form of gas, and applied in that form. But he did not at all understand from the plaintiff's book how he got oxygen gas, or administered it, and there was no evidence in the book that he ever administered it at all. Nor would the "inhalers" he described be available for the administration of pure oxygen. In re-examination, the witness stated that the passage in the preface, to the effect that the "Medical Profession united in a confession that they can recommend neither preventive nor cure for consumption," was most unfair and erroneous. Adverting to a statement in one of the "cases," that of "Joseph Warford, Esq."—"I inhale in two ways: warm, from an inhaling instrument; and cold, by filling a chamber with vapour, into which I go three or four times a day"—the witness said he could not understand what was meant by it, nor how the patient got a chamber filled with oxygen.

The Lord Chief Justice: There is nothing in the text of the book about it, and it seems to have been the voluntary act and invention of "Joseph Warford, Esq."

Mr. Karslake drew attention to the plaintiff's comment upon it in the text:—"It will be observed that in all these cases the oxygen chamber was employed in conjunction with the other inhalation." But there was nothing in the plaintiff's work to explain how a patient was to get oxygen or fill a "chamber" with it.

Dr. Cotton: I am a Fellow of the Royal College of Physicians of London, and Physician to the Brompton Hospital. Dr. Williams has stated in his evidence the symptoms and treatment of the disease generally, as it is taught in all the schools, and is generally accepted, and with that statement I agree. Blood, when coughed up, does not always come from the lungs, but very often from the throat and neighbouring parts, and is not necessarily and universally, as Dr. Hunter says, an indication of consumption. Such a statement as Dr. Hunter's put forth in public advertisements is likely to create great alarm in the public mind. Blood-spitting, however, may be a serious symptom, and requires to be inquired into, but I repeat that it is not necessarily a symptom of consumption. I have practised inhalation for many years. Dr. Snow, who devoted himself to the inhalation of chloroform, assisted me several years ago in many experiments in inhalation. I have used, over and over again, every possible inhalant, and there is not one used by Dr. Hunter with which I am not practically acquainted. I have known three instances of inhaling oxygen as introduced by Dr. Beigel within the last six months, but I did not observe any satisfactory results. In cases of pure tubercular consumption my own idea is that the inhalation of oxygen is undesirable, because in consumption there is excessive wear and tear of structure, with an increased temperature of the body; and I should hold the most likely result of administering oxygen would be adding fire to the fuel by increasing the wear and tear, or, in other words, the destruction of the animal tissues. Another reason I have against oxygen is that it is an excitant, and likely to aggravate any tendency to spit blood. I am of opinion that oxygen inhalation may do some good in certain forms of asthma and bronchitis in a chronic form, but I do not think it is adapted to consumption. I look to inhalation as an auxiliary, but not as a curative—the reverse of Dr. Hunter's treatment. I do not know the meaning of an inhaled "alterative," as used by Dr. Hunter. It is a term which is not explicit, and if I were asked to prescribe one, I should not know what to give by those terms. I consider cod-liver oil a valuable adjunct in the treatment of consumption, and I should not think all had been done for a consumptive patient without at least trying it. There is nothing in Dr. Hunter's book to guide me to his treatment. It is usual in Medical works to publish fully any new remedy or treatment. No legitimate Medical work contains a secret remedy; and every author writing with a *bonâ fide* desire to advance science and benefit others, openly states his remedies and the mode in which he employs them, in order that others may try their effects also.

The Lord Chief Justice: The fact is very obvious, on the face of the book, that all that the "cases" show is, that Dr. Hunter's "treatment" was adopted, and that Dr. Hunter's "treatment" was successful, without stating anywhere what Dr. Hunter's "treatment" really was.

Cross-examined by Mr. Coleridge: Many Medical books contain statements of cases, and then the treatment is given more or less explicitly. I cannot attribute tubercular diseases to any one cause. There is a large number of acquired cases of consumption; but Dr. Hunter's statement that all cases are so is not correct, a vast number arising from hereditary causes. Any Medical man in good practice would be able to show as many successful cases of asthma as Dr. Hunter did yesterday. Dr. Hunter did not show us a single case of consumption; all who gave their evidence as having been cured by him were ordinary cases of asthma with chronic bronchitis; two of them, indeed, were simply cases of nasal obstruction. Dr. Hunter's book does not tell us what his treatment really is. He does not specify any one remedy he uses. I had not seen the plaintiff's book before the article was published. It was not written on my authority, nor did I see it until the solicitor for the defendant called on me.

Cross-examined: Burning nitrate of potass in a bedroom has been adopted for years for asthma, but I do not believe, as Dr. Hunter stated in his evidence, that pure oxygen is given off by this process.

The further hearing of the case was then adjourned.

Fourth Day.

Dr. Markham, Physician to St. Mary's Hospital, said that both the theory and the practice of Dr. Hunter were founded in fallacy. The theory, as he understood it, was that tubercle was a deposit of carbon in the lungs; and that the carbon resulted from defective respiration; and the practice, that the inhalation of oxygen removed the tubercle by uniting with its carbon.

The Lord Chief Justice: Then, even supposing you were to bring oxygen into contact with the tubercle, it would not dissipate the tubercle?

Witness: No, certainly not. Carbon will not combine with oxygen except under the influence of heat. The witness also said that he could not collect from the plaintiff's book how he got oxygen or how he administered it. His book gave no information at all on either point. And in his evidence in the witness-box, the things the plaintiff had mentioned as oxygenated compounds would not evolve oxygen. He did not believe that any oxygen at all would be given out by those compounds. No oxygen would be given by the inhalations he mentioned as administered to his patients. The filling of a chamber with oxygen by means of manganese and sulphuric acid would require a chamber specially fitted up for the purpose. As regarded the cases of cures in the book he could not collect anything distinct from them. Not a case of cure by oxygen was mentioned in it. And as to the cases of cures produced in evidence, though they were good specimens of cures, so far as they went, they were such as any Medical Practitioner could produce, and none of them were cases of consumption.

The Lord Chief Justice: No, we have had no case produced of cure of pulmonary consumption.

The witness went on to state that inhalations had been used for thirty years; but he was not aware that the inhalation of oxygen had been used in the cure of consumption. Speaking generally of the tenor and tendency of the plaintiff's book, he thought it a system of frightening and puffing. In cross-examination he was pressed as to whether the presence of carbon was not a great cause of consumption, but this he denied, and pointed out the distinction between carbon and carbonic acid gas, which was the vital breath after it had been corrupted by respiration. Asked as to the cases of cures produced in court, he again said that any Practitioner could produce a similar number of cases—patients who would say that they had been to other Doctors who had done them no good, and that he had cured them. But if a hundred consecutive patients were taken, they would tell a very different tale; and so it was of Dr. Hunter's patients. This, he said, was the common experience of Medical men. There is no free carbon in the blood. Blood contains carbonic acid already formed. Respiration is merely a giving off from the blood of carbonic acid, and a replacing of it by oxygen. Tubercle is no more carbon than muscle is carbon. The composition of tubercle and of muscle is, in fact, identical. Oxygen will no more act directly on the carbon of tubercle in the lungs, than it will act on the carbon of the lung-tissue itself. Oxygen will not remove the carbon in the "miners'" lung.

Dr. Quain, who had been previously called in his absence, gave similar evidence. He stated that as regarded the plaintiff's theory it was so vague that he felt unwilling to put any interpretation upon it. As to his fundamental proposition, that tubercle was merely carbon, which was a poison inimical to life, etc., the witness said the statement was vague, indeterminate, and, indeed, incorrect; for, in fact, carbon was contained in all kinds of substances—for example, sugar—and it was embodied in all the animal tissues; it existed actually in greater proportions in the healthy tissues than in tubercle. The plaintiff's statement that oxygen could decompose tubercle was, he said, so entirely erroneous that he was sure if the plaintiff had understood it he would not have made it. (A laugh.)

In reply to the Chief Justice, he said that oxygen, if introduced into the lungs, would not eliminate tubercle, even if it were composed of carbon. It was utterly impossible that it should do so; for oxygen could not dissipate carbon, except at a heat far greater than that of mere animal temperature.

In cross-examination the witness was asked by Mr. Coleridge whether he had been at all consulted about the article, and he said "No." He said that his first acquaintance with the plaintiff's works began in reading the plaintiff's letters in the newspapers, which greatly surprised him, but he had not any knowledge of the article complained of until after its publication.

Dr. George Johnson, of King's College, gave similar evidence. He declared that the theory of consumption put forth by the plaintiff was not maintainable, being opposed to undoubted facts. Carbon was not the cause of consumption, and the introduction of oxygen into the lungs would not cure it. Neither would the plaintiff's inhalants produce oxygen—that is, in a "free" or pure state; and though chloric acid would produce oxygen in combination with chlorine, the latter was so irritating that it would prevent inhalation. And, indeed, pure oxygen might, in some cases, be really injurious—promoting excitement and bleeding. Alluding to a statement of the plaintiff as to a disease to which the witness said he had particularly applied himself—a statement that "chronic laryngitis is always a serious malady, and when left to itself rarely ends until it has involved the lungs in disease," etc., and that as the disease was local it must be treated by inhalation—the witness said the plaintiff was evidently under an entire misapprehension as to the effect of inhalations, which were by no means merely local in their action, but by being taken up into the lungs and thence into the blood would affect distant organs, in some instances the brain, injuriously. And then, again, the plaintiff appeared to be entirely unacquainted with that valuable instrument the "laryngoscope," by which Practitioners were enabled to reach the throat directly, and which was used not only as a means of diagnosis, but of cure. By the aid of this instrument local remedies might be applied to the larynx with great precision, but the plaintiff made no mention of its use. The witness gave an opinion similar to that of the other Medical witnesses as to the plaintiff's statement that catarrh and other affections led to consumption, etc. As to the statement that enlargement of the uvula was a cause of consumption, he said that as it was a very common ailment it would be very alarming if that were so; but it certainly was not a cause of consumption.

It should be stated that Mr. Coleridge elicited from all the Medical witnesses for the defence that they had not been consulted on the part of the *Pall-mall Gazette* before the libel was published. They one and all declared that they had not been consulted, and had not even read the article until long after the publication.

The Lord Chief Justice having intimated that he thought the question was hardly necessary, as it might be safely assumed that these gentlemen had not had anything to do with the libel,

Mr. Coleridge desired to explain that he did not in the least degree mean to convey or suggest that they had. On the contrary, his object was just the reverse, and rather to have it formally proved that the writer in the *Pall-mall Gazette* had not consulted any of these gentlemen before he wrote the article.

Dr. William Odling, F.R.S., of St. Bartholomew's Hospital, gave similar evidence. The plaintiff's account of tubercle, he said, was a complete misstatement. Its composition was substantially the same as that of all other animal tissues, healthy or unhealthy, except that instead of containing more carbon it contained rather less. This was pointed out in most text-books and received works on animal chemistry. Atmospheric air, he stated, contained one-fifth part of oxygen, and a person inspired about three cubic feet of oxygen per hour; thus, therefore, the inhalation of a few gallons of it more or less in a day was of very trivial importance, even assuming it to be pure oxygen, and of course if mixed with other vaporous matter it would be in still less proportion. As to chloric acid, which the plaintiff said he got oxygen from, he had never known it used medicinally, or otherwise than in the manufacture of fireworks. (A laugh.) Chloric acid yielded by its decomposition two volumes of chlorine for every three volumes af oxygen; and the chlorine produced along with the oxygen was extremely irritating, even in the proportion of ½ per cent. Below that proportion it might be breathed, but not above it. It therefore came to this, that if the product were so diluted as to render the chlorine not irritating, the oxygen would be so diluted as to be inappreciable. Chloric acid was known only in the form of weaker or stronger solutions; but as eighty-five grains of absolute chloric acid (about a fluid drachm) would evolve only thirty-six cubic inches of oxygen, and as eighty cubic inches were usually inspired per minute, the quantity producible from a drachm of aqueous chloric acid would have no real effect. Moreover, chloric acid mixed with hot water was decomposed very slowly and imperfectly. Added to this, he stated that in the preparations given by the plaintiff neither chlorine nor oxygen would be obtained, for both would be immediately absorbed by the spirit of the tincture. (A laugh.) The burning of pastiles of nitre and stramonium did not give off any oxygen whatever. As to the plaintiff's view that carbon was the basis of tubercle and inimical to life, he said the blood contained rather more oxygen in disease than in health, and carbon was "the basis of tubercle" only in the same sense in which it was the basis of all animal tissue. The statement that carbon was inimical to life was a jumble of different and opposite things—namely, carbon which had been used, and carbon which had not. Unused carbon was not inimical to life any more than coals were inimical to a steam-engine, but was, on the contrary, essential to life. Carbon that had been used was inimical to life like the smoke of a steam-engine furnace, but this carbon existed chiefly in the form of carbonic acid gas, and could no more produce tubercle than it could produce flesh and blood. It had been shown by Regnault that the inspiration of air containing twice or three times its ordinary proportion of oxygen did not effect an increased discharge of carbon from our body. In ordinary respiration not more than one-sixth of the oxygen inspired was used in the system, the remaining five-sixths being returned to the atmosphere unaltered. The plaintiff's compounds would not, he said, give out oxygen—even assuming it to be of any use; but the mere administration of oxygen would be of no use. Pure oxygen, no doubt, could be administered; but it required either a gas-holder (or a rough substitute for it, like a bladder) or a gas-chamber, which latter would require to be specially constructed for the purpose, and have its ordinary atmosphere altered by the infusion of oxygen gas into it.

In cross-examination the witness stated that it was not so much the absence of oxygen which rendered air injurious, as the atmosphere of a crowded court—(a laugh)—but the presence in it of something injurious—carbonic acid gas, and other animal exhalations.

The Counsel on both sides having replied on the evidence, on the

Fifth Day,

The Chief Justice proceeded to sum up.

Having remarked on the importance of the case to the plaintiff, the defendant, and to public writers, he said that unless the article could be justified it was unquestionably libellous. "The defendant takes two grounds of defence. In the first place he says, What I have written and published is true, and as by the law of England truth is not libellous, I was justified, and I am not responsible in the present action. But he says in the second place (and this is very well worthy of your consideration), Even if I should fail in making out to the necessary extent the plea of justification, or, in other words, the truth of the matter which I have written, still I say that, looking to all the circumstances of the case, the inferences of the plaintiff's bad motives and mischievous designs which I have there set forth were such as any man exercising a due and proper amount of forbearance and moderation in the consideration of questions affecting another man's character, and bringing the best exercise of his judgment to bear upon the matter, might have drawn. Therefore, the matter being one in which the public interest was concerned—for the health of those who might be brought within the sphere of the plaintiff's treatment would make it of public interest—I was justified in writing upon the subject, and also—exercising a reasonable caution and judgment—in drawing the inferences which I have there set forth, and

I am therefore in point of law not liable." He first examined the former plea. He said — "The charge is this, that the plaintiff, dealing with one of the most fatal diseases known to mankind, with the intention of obtaining profit and gain to himself, began by exciting unnecessarily and wantonly the fears of those into whose hands his publication should find its way; that having excited these fears he held out to them a delusive prospect of recovery, either from disease which he induced them to think they were suffering under while they were not, or from disease which had actually set itself up in their system; that he, by inducing them to take these remedies, which he knew to be delusive, was trifling with the hopes which he excited, tampering with the health of his dupes, and aggravating their illness; and that he was doing all this with a perfect knowledge of the inefficiency of his treatment for the sordid purpose of putting money into his own pocket. Gentlemen, if this charge be true, one can hardly conceive anything worse. The article unquestionably is one of exceeding severity. The language used is of the strongest character. But if the facts upon the assumption of which the article proceeds are true—if it be true that the plaintiff has intentionally, fraudulently, dishonestly put forward these pretences in order to delude patients, and make them in purse, if not in person, his victims—there can be no doubt, I think, that, strong as the language of this article is, it is not one whit too strong; for a man who does all these things is an impostor, and an impostor of the very worst description. To say of him that he is an impostor and a scoundrel, strong as the language may be, is probably what no twelve men in a jury box would think one whit too strong, or inconsistent with the proper use of the English language." He then noticed the fact that the article was published pending the investigation of the case of Mrs. Merrick, and that that case was referred to in two passages. He said, "The main question, however, does not turn upon these two passages. They may enable the plaintiff to get a verdict, but I can hardly suppose that if those two passages stood alone this action would have been brought. In the first place, with regard to the charge brought by Mrs. Merrick against Dr. Hunter, he has been acquitted, and the article has therefore done him no harm in that respect. It may have been inopportune; I think it was. I think it a great pity that the writer of the article adverted to the circumstance of that charge while it was still pending, assuming it was a charge which had some substance and foundation. But clearly in that respect it did the plaintiff, Dr. Hunter, no harm, because he was acquitted. The main question between the parties is this—Is the system which Dr. Hunter has propounded to the world one which an honest Medical writer and Medical Practitioner would put forward for the mere purpose of enlightening his Profession or benefiting the public, or is it a system of quackery and delusion dishonestly put forward for the purpose, no matter at what cost to those who may become victims of the delusion, of getting money and putting it into the pockets of the person thus writing and acting?" He then went through a masterly analysis of and commentary on the subject, spirit, and tenor of the plaintiff's book, and continued:—"It is not because a man in error propounds an untenable theory that therefore he is to have his motives impugned, and to have sinister and wicked designs imputed to him. We must take great care in judging a question like this that we do not fall into either of two extremes. It was put forward by the learned counsel for the plaintiff in his very able address, that this article was the result of that resistance which the scientific world and the Medical world generally offer to new discoveries which clash with the received opinions of the day. It is perfectly true that many of the most valuable discoveries which have enriched the sphere of human knowledge and operated for the benefit of mankind have made their way against the opposition and the resistance of those who were in possession, as it was supposed, of all the scientific knowledge of the day. That is perfectly true. I suppose it arises from the composition of human nature. We do not like to have to go to school again. Those who are in possession of the field, who are the teachers of the day, who are the professors of any particular science, do not like to be told 'Here is a new discovery which will make all your boasted learning vain, which will compel you to unlearn that which you hitherto supposed to be the undoubted truths of the particular department of science to which you belong.' It is all very unpleasant, and, naturally enough, if certain opinions are received into the Medical world among the professors and the practitioners of that great science, and some one comes forward and says, 'All your theory is without any substantial foundation; I will tell you something to show you that you have been pursuing the wrong track,' there is a natural inclination in the mind of every man so circumstanced to receive the pretended discovery with distrust, and to look upon the man who puts it forward as a shallow pretender and impostor. Therefore, if a jury saw that there was any intention to crush any man so circumstanced, to drive him out of the Profession because he propounded theories and proposed treatment which were at variance with the received opinions of practice of the day, I should say it was the duty of a jury to stand forth and protect a man under such circumstances. But, on the other hand, we must equally be upon our guard against the other possible contingency. We do know, by experience which dates back to the very origin of history, that there have been men who in all ages have practised upon the fears and credulity of mankind, and especially that there have been such pretenders and impostors as regards the ailments, the diseases, and the afflictions to which human nature is subject; men who have trafficked in the misery and the sufferings of their fellow-creatures, for the purpose of advancing their own sordid interests, without regard to how far they might aggravate the misery of those whom they pretended to cure. To denounce and expose such pretenders, to denounce those who come forward thus to practise on their fellow-creatures, is perhaps one of the most meritorious actions, or one of the most meritorious instances in which a public writer can exercise and use the ability, the talents, and the knowledge which he possesses. Therefore we must look on both sides of this question. It may be that the plaintiff while he makes dupes is himself a dupe. Many men have been the dupes of their own fancies, their own notions, their own enthusiasm. He may have thought that he has hit upon a great discovery, whereby a disease the most fatal that has ever yet depopulated society may be rendered comparatively innocuous. He may have persuaded himself that he has hit upon its true nature, and therefore that, understanding its nature, he has hit upon the remedy whereby it may be stayed. That is possible. On the other hand, and more especially if he has that Medical education which his counsel boasts him to possess, he may know that the best way of working upon mankind so as to bring practice to the door of the Physician is to work upon the fears of timid and nervous persons. He may know tha his pretended theory is a mere empty, vain delusion. He may know that his pretended remedy is just as delusive, and just as likely to terminate only in disappointment and death, as the ordinary treatment which he denounces. It is for you to judge between these two alternatives. Apart from the book, you are entitled to look to the circumstances of its publication, and, above all, to the method of advertising which has been adopted by the plaintiff. The Medical men who have been called tell us that this work, even supposing that the plaintiff's system were well-founded, is altogether deficient in one of those things which are characteristic of genuine, honest, scientific, Professional works. If a man comes forward with a discovery of either some new theory as to a particular disease which he thinks it would be desirable for the Profession to know, or if he comes forward with some new method of treatment by which he believes a disease may be cured, what is the course which is invariably adopted? He does not confine himself to a mere vague reference to the remedial agent which he thinks may be beneficially applied, he does not state the cases which have come under his experience, and to which this particular mode of treatment has been applied, in vague and indefinite terms, but he conveys, both with regard to the treatment to be adopted and the medicine to be given, the fullest information of which he is possessed, so that the rest of the Profession may be not only enabled to judge of the reality of his discovery, but may also be enabled to apply the remedial means to which he invites them to resort in a manner calculated to secure his success. That is what every Medical writer of any pretensions to the character of a writer would always and invariably do. In like manner, the cases to which he refers are stated with the fullest detail, in order that the Medical world, to whom he addresses himself, may be able to judge of how far the inferences which he draws from those cases are properly drawn. Now here the Medical men, the scientific men who are called, all say that in that respect this work is altogether deficient. They say that when he speaks of sedatives that term might convey sufficient information to the mind of a Medical man, but when he speaks of inhalant alteratives, they are utterly at a loss to know what that means. But more especially do they say this—It is true you may use inhalation for the purpose of allaying irritation, as you would apply sedatives, and produce a result beneficial to health; but the great characteristic feature of your system and of your discovery is the introduction of oxygen by artificial means into the lungs, so as to supply the want of that amount of it which would otherwise be passed into the lungs through the respiratory organs, if those organs were in a healthy and normal condition. The great point you profess to have in view is to show how consumption should be cured. You do not say that consumption may be cured or tubercle be removed by the application of sedatives; it is by the application of oxygen. That is the great and important feature of your work. We all know that sedatives may be applied in the shape of inhalants; what we want to know is how oxygen is to be introduced to cure tubercle of the lung, if tubercle is to be cured by that means. You do not tell us how that is to be done, and that omission is the most important omission in your book, because the giving or withholding information of that nature in its fullest extent constitutes the characteristic difference between the honest scientific writer and the quack. The man who wants to impose on mankind keeps his remedy a secret. The man who desires that it shall benefit not only those who are brought into contact with himself as patients, but mankind generally, by its being placed at the disposal of every Medical Practitioner throughout the world, gives the fullest particulars as to all those matters which it is essential should be known. That is wanting in the present instance. But then it is said, 'Oh, yes, but this was not a work intended to enlighten and instruct the Medical Profession; it was to popularise knowledge on the subject of consumption.' Now, I would be the last man for a single moment to deprecate the idea of popularising knowledge upon such important matters, so far as they can be brought within the sphere of popular knowledge. I quite agree that if you can really make people sensible of what are the causes which lead to such a disease as consumption; if you can make them sensible of what are the symptoms against which they ought to be upon their guard; if you can make them understand what they ought to do with a view to prevent consumption, or what they ought to do when consumption has once been established, you are doing a vast amount of good to the mass of the community. In every branch of science, so far as you can make science matter of popular knowledge, so much the better. I rejoice when it is done in the profession to which I have the honour to belong. And we have seen in our days one of the most learned, most instructive writers, possessing erudition in the highest degree, who has published treatises which are the admiration of the scientific scholar, has popularised a vast amount of legal knowledge, and has brought it within the sphere of every man's understanding. The public ought to be eminently obliged to him for what he has done. But it is a very different thing when you come to write a treatise of this kind, in which you denounce the whole Profession as ignorant of a disease, and put forward a theory by which the fatal disease can be cured; where you hold them up to contempt and obloquy for masking the disease and doing nothing to cure it, and say that you are the only person who can cure it, and you invite persons to come and be cured; but where you do not put the rest of the members of the Profession on the same footing as yourself, and enable them in their several spheres of action to carry out the beneficial purposes which you profess to have at heart, and so do the same amount of good amongst those who are their patients that you may be able to do amongst those who are yours. That I take to be the distinctive characteristic of a man who acts honestly, for the purpose of giving knowledge to those to whom it may be important that knowledge should come. Whether they are the Medical Practitioners or the patients who happen to be benefited by it, it is to every one, and not only those whom he invites to become his patients, that an honest and well-intentioned writer on a subject of this kind will take care that the full amount of his knowledge is imparted. But that is not all; I have not quite done with this work yet. Let us see the circumstances under which it is published, and see whether those are also characteristic of imposture, or whether they are consistent with the honest intention to which the plaintiff lays claim. This book goes through, as I said, edition after edition with unexampled rapidity. I can hardly see why it would be necessary to advertise it again in the *Times* to the public in the shape of an advertisement of the whole of its contents. The whole public must have been occupied in reading this book, if we judge from the rapidity with which these editions follow one another. Yet, do you believe that these editions, which are said to have come out in the course of a month or two, and to have reached the fifth and sixth of their number, were really editions of the work in the ordinary sense in which that term is taken? Besides that, it has prefaces prefixed to it, and one preface is written by Dr. McGregor, and another by Dr. Melville. The outside world supposes that Dr. McGregor is an independent Physician, and that Dr. Melville is also an independent Physician, who had both become so sensitively alive to the extraordinary merits of this all-important discovery that they cannot allow the work to go out into the world without giving it the stamp of their approval in the shape of a preface. Would it not have been as well to tell the world that these were both gentlemen acting as assistants to Dr. Hunter? There would have been more honesty, I cannot help thinking, if that course had been pursued; but besides that I think it is not an altogether unimportant circumstance that at the end of the work there is appended a card which announces that "Dr. Robert Hunter, author of the foregoing letters, will during his sojourn in England give his personal attention and supervision to the treatment of all forms of bronchial and pulmonary disease. Hours from ten to four o'clock." There may be no harm in it, but I hold that any member of the Medical Profession in this country, if he published a treatise upon any branch or department of that science to which he belongs, would not resort to the quack-like expedient of appending such a card as that to his publication. So much for the book. Now a word upon the advertisements. We find that the plaintiff, not satisfied with these rapid and successive editions of the book, thought proper to have recourse to the unprecedented expedient of having the book published by instalments in the columns of the *Times*, and not only in the *Times*, but in all the leading journals of the day. . . . . . Now, the learned counsel for the plaintiff candidly acknowledges that he cannot altogether justify, or in any way approve, this course of proceeding; but, says he, this gentleman comes from America, and in America they do strange things in the way of advertising. It is thought nothing of there; you may advertise to any extent; it is only a legitimate and ordinary mode of pushing yourself into notoriety. Gentlemen, we are not in America, we are in England; and whatever the practice may be in America, I am happy to think that such a practice has not hitherto obtained in this country. Empirics advertise, professional men do not; and no one, I think, can doubt—and I am sure that that highly gifted and distinguished member of the bar would be the last man to think what I am about to say is not true—that if it were open to professional men thus to advertise their theories and modes of treatment in the *Times* or any of the other great journals of the day, the dignity, the honour, and the respectability of the profession, members of which were allowed to do so, would be tarnished and sullied to a degree perfectly lamentable. A man who invents a machine or is the author of any of those discoveries which are connected with the commerce of the day has no other means of making them known than by advertising. No one blames him for doing it. But members of a profession do not resort to that means of making themselves known to the public and endeavouring to acquire professional position and professional advancement. What would be thought of a member of the bar who, having published one of those treatises by which we are all from time to time enlightened and instructed in our professional knowledge, were to take portions of it and from day to day advertise them in the columns of the newspaper, taking care to append this important piece of information, that 'Mr. So-and-so, the author of this very learned and valuable treatise, sits in his chambers from four till six, and will be happy to advise all those who may come to him upon the subject of the treatise?' Why such an individual so acting would be scouted from the profession which he would be thought to have humiliated and disgraced by such conduct. What difference is there between the two professions? They are sister professions, equally guided by the same rules of professional honour and professional propriety; and therefore I must say, whatever may be said of America, that I do not believe, and will not believe, until I have it on some evidence of which there is at present none, that such proceedings are resorted to on the part of members of the Medical Profession, or of any other profession, in America. All I can say is, that it is not consistent with the notions of professional propriety and honour to do so here, and we must not forget that the writer of this article, who is now sought to be made responsible for its contents, was writing with reference to that which is done in England, and which he thought, as a member of the Profession, was inconsistent with professional propriety. I say, therefore, gentlemen, that you are at liberty to take that into consideration as well as the other remarkable things which are to be found in this book and in the conduct of the plaintiff; and the question for you upon all this will be whether you are of opinion that substantially the plea of justification is made out, that the plaintiff did seek to work unduly for sinister purposes on the fears of those into whose hands his work should fall; that he sought to exaggerate the symptoms of these various complaints, with the view, when he had excited the apprehensions of readers to a sufficient extent, to make them believe that there was only one remedy for these diseased organs, and that his was that remedy, and he was the only person that was capable of applying it." He then examined the evidence of the witnesses who believed themselves to have been cured or benefited by the plaintiff, and showed that their evidence did not prove them to have been really suffering from consumption. He continued—"Now you, gentlemen, must say upon the whole, whether you think, taking all the evidence into account with the various parts of the book, that the plea of justification is made out or not. But now for one moment suppose it to be your opinion that you could not go the length of saying that imposture, in the proper sense of that term, was established as against the plaintiff. Imposture as used in this article, and I take it as used in the ordinary parlance of mankind, means intentional deception practised on the rest of mankind. If a man deceives himself and deceiving himself deceives you, he deceives you no doubt; but it cannot be said that you would be justified in saying that he was an impostor. It may be, but it is entirely or you to form your conclusion, that although the plaintiff's theories are delusive, although his treatment would not be attended with the beneficial results which he holds out to the world, nevertheless he may have honestly believed in that which he professed to write and in the practice which he purposed to administer; but that does not conclude the question, but only brings the defendant to his second ground of defence, which in that case it would be necessary for you to consider. Under his second head of defence he says—This was a matter of public concern. The plaintiff put forward in these advertisements his system, his theory, and communicated to a certain extent the remedies by which he proposed to cure this malady. He invited persons to come to him for the purpose of being treated and cured by him. I could see from his account of the theory on which his treatment was based, and from his account of the treatment that he proposed to use, that the whole was a mere idle delusion, and looking at the mode in which his work was published, looking at the secresy in which his discovery was shrouded, looking to the mode which he adopted to bring himself into notoriety—a mode which was utterly at variance with the received habits of the profession to which he professed to belong—I was warranted in drawing the inference that he was a mere pretender, and not only a pretender but a quack, who intended to impose on mankind as quacks do. I was warranted in drawing this inference, and I denounced him accordingly. It may be that I was wrong, it may be that now the matter has been fully investigated, and that the plaintiff has had an opportunity of being heard, and vindicating this theory which he has put forward, of showing that his practice has not been wholly unsuccessful, that a jury may think I have gone too far, but the question is not thereby concluded, if it should appear, under all the circumstances of the case, that, bringing to the discharge of my duty as a public writer caution and moderation in criticising what I thought to be a mischievous and noxious pretence, I have exercised a reasonable and careful judgment, have not been over-hasty and precipitate, inferring sinister design and wicked motive against the person whom I have assailed. If I have brought to the discharge of my duty only an honest desire to do good and benefit in the department to which I belong, in that case, if a jury should be of that opinion, I am entitled to their verdict. And, gentlemen, I endorse that proposition. Here is a man challenging public criticism by bringing forward what professes to be a scientific book, inviting the public to come to him to be treated for the saddest disease that is known amongst us. If he does that he challenges public criticism, and then if a public writer of competent knowledge deals with his theory, and, looking upon all the circumstances, using that forbearance and moderation, and exercising that temperate judgment which every man is bound to exercise who not only criticises the conduct of another, but proceeds to impute to him evil motives and designs—if the public writer executes his task with that spirit, goes beyond the limits to which a more sound knowledge of the facts would have warranted him in going, he is nevertheless privileged; the occasion is a privileged one, and if the privilege is exercised honestly and faithfully, and with reasonable regard to what truth and justice require, he is exempt from the consequences if he shall have gone beyond what the limits of truth more carefully ascertained would have justified. It is, therefore, not necessary that justification should to all intents and purposes be made out, if you think the defendant or the party who wrote this article for which the defendant is made liable was, in the reasonable and honest exercise of his duty as a public writer, warranted by the circumstances in drawing the inferences which he has drawn as to the motives and conduct of the plaintiff, although it may turn out that he has not been to the fullest extent accurate. Upon what you may think upon one or other of these grounds of defence will turn your verdict. Let me assume that you are in favour of the plaintiff. You will have to consider all the circumstances. Undoubtedly, if the attack was unwarranted, it was most painful, and one likely to be very disastrous in its consequences, and I cannot help thinking it was made at an inopportune moment. All those allusions to Mrs. Merrick's case at all events should have been sunk for the time, but, as I have said before, that does not appear to have done the plaintiff very much harm. At the same time it is unquestionably an article conceived and written in a spirit of extreme bitterness and extreme severity; the language is of the strongest description, and there can be no doubt that it must have inflicted great pain on the man who was the object of an attack of that description, and that unless conduct so assailed and impugned can be vindicated by the verdict of a jury, it must place him in a very disastrous position as regards his future life; but, on the other hand, you must not, if you think your verdict ought to be for the plaintiff, forget the circumstances under which this article was written. The learned counsel suggested for the plaintiff that it must have been some Medical man who wrote it. I think that is extremely likely, and I hope it is so, because in that circumstance I find that which would induce me to look with indulgence, and perhaps would induce you to look with indulgence, upon the article, even if you think it cannot be justified in itself; because it is plain to a man who reads it that that article was written in a spirit of honest indignation, that that indignation was such as a member of the Medical Profession might well feel at seeing the way in which a member of the common profession, although not a member of the English part of it, was lowering, degrading, and soiling the profession of which he was a member. I think, therefore, that if it be the fact, as suggested, that it was some Medical gentleman who wrote that article, great allowance is to be made for it. Here was a system of advertising resorted to which of course was humiliating to the profession of which we will suppose the writer to be a member. Moreover, he believed (he may have been right or he may have been wrong) that the system put forward by the plaintiff and the treatment to which he professed to resort was altogether illusory, perfect moonshine, and only put forward for the purpose of deception. Moreover, there had happened a thing which had startled the world. This gentleman had not been in practice for more than a very short time when a charge was made against him by a female patient of having violated the honour of his Profession by seeking to abuse the opportunity of her resorting to him as a patient, to further his own purposes, in a way to which I need not further allude. If the writer of that article was satisfied, as I think you cannot fail to believe he was in his own mind, that the advertiser—the plaintiff—was an impostor, a pretender, and a quack, and further was led to think, until the imputation was disproved by the verdict of a jury, that this man whom he believed thus to be an impostor, so far as regarded his practice as a Medical man, was also a man capable of abusing the confidence which a patient placed in him as a Physician to further his own purposes, one cannot wonder that a man should have sat down, and in the honest indignation of the hour put gall into the ink with which he exposed and denounced, as he thought he honestly might do, the conduct of the person who he believed had so disgraced himself and degraded his Profession. You must look at all the things taken together. It is not like a man sitting down deliberately and writing that which he knows to be false with the view of injuring another. It is not like the case of a man who from political antagonism, or any other cause of rivalry in the breast of man, sits down and draws hastily unwarrantable inferences of bad motives from circumstances which do not warrant such inferences. It is the case of a man who honestly believes he is exposing and denouncing an abominable system of quackery and puffery, who may have been mistaken, who may be responsible, whom you may hold to be liable to a claim for damages for the purpose of vindicating the plaintiff's character, but we must not have it said of him—because I think it cannot be said justly of him—that he was actuated either by personal or professional malice, or any other than an honest desire to discharge his duty towards the profession of which he was a member, and the public in whose interest he was writing. Gentlemen, I have made all the observations which I think it necessary to make to you. The case is one of great importance. You have paid the utmost attention to it, and therefore you are in a condition to discharge your duty and to say which way your verdict shall be given.

"After two hours' deliberation, the jury returned a verdict for the plaintiff. Damages, one farthing."

REVIEWS.

The Tropical Resident at Home: Letters addressed to Europeans returning from India and the Colonies on Subjects connected with their Health and general Welfare. By E. J. Waring, M.D., F.L.S., M.R.C.P.L., Surgeon in Her Majesty's Indian Army, formerly Acting Health Officer, Port Morant, Jamaica. London: John Churchill and Sons. 1866. Pp. 242.

Though the pages of this little work supply ample evidence of its having been written by a thoroughly well-informed Physician, yet as it is in no way addressed to the Profession, but purely and simply, as its title states, to the "tropical resident at home," we do not propose to offer any serious criticism of it. It deserves, however, a word or two of commendation. The Englishman who leaves his native land for any of our colonies very often, if not generally, goes with the intention of making his home there, and if he sees England again it is only as a visitor; but to the members of all the Indian services England ever remains their home, and they count the years and months that must elapse before their return, much in the same spirit that a schoolboy counts the weeks and days to the holidays. And that the "old Indian" generally stands in need of wise and kindly counsel and guidance on his return to England will be denied by no one. It is true that the difference in thought and habit between the old Indian and the home Englishman is not nearly so great as it used to be. India is practically much nearer than of old, and communication of all kinds between the two countries and between the English in India has very largely increased. The genuine old Nabob has almost become a being of history and tradition, and has even disappeared from modern fiction. Most people have heard of the Indian of the old style, who, as he was standing outside Claridge's Hotel a few days after his return home, was run against by a sweep, and when sooty, instead of falling in abject fear at his feet, demanded, with an expletive, "Now then, stupid, where are yer a shoving to?" he was so disgusted at the brutality and licence of the English that, turning into the hotel again, he ordered his luggage to be instantly repacked, and returned to the land of *his* liberty and consideration. Such a story would not find credit now; but, if not true, it was at least *ben trovato* of men who came home after an uninterrupted residence in India of thirty or forty years, during the latter, at least, of which they had lived in princely luxury and ruled with despotic power. And even now, when it is remembered that men go out to India from school or college without any independent or responsible experience of domestic life, and do not return to "settle down" at home till after an interval of twenty or thirty years—an age in these days of progress—it will be easily believed that they are likely to be extremely ignorant of English life and customs. They are verily "children of a larger growth" in all that concerns England, and as such Dr. Waring treats them. He gives them advice on the proper time of year for coming home, and the spirit and temper in which they should build their "old-England" castles; on the necessity for and choice of occupation at home; on the climatology of England, and the choice of a place of residence; on clothing by day and clothing by night; on food and drink, exercise, and bathing; on medical needs; on lodgings, house-rents, rates, and taxes; and on the income required. The details he goes into may sometimes seem to us home birds unnecessarily minute and commonplace; but we believe they will really not be at all superfluous to those for whom they are intended. And the whole is written in such a genial and kindly tone, and with so much good sense and wisdom, that we suspect the book will be very useful and acceptable to those addressed.

Elementary Treatise on Physics, Experimental and Applied. Translated and edited from Ganot's "Eléments de Physique" by E. Atkinson, Ph.D., etc., Professor of Experimental Science, Royal Military College, Sandhurst. Second edition. London: Baillère. Pp. 799.

A good manual of physics has for some time been a desideratum, so far at least as Medical students are concerned. The work of Golding Bird and Brooke, though excellent at the time of publication, has been too long before the public for it to embody the results of the latest researches in physical science. The work of Dr. Neil Arnott was without doubt, at the time of its appearance, one of the highest merit; but the rapid strides made in the departments of knowledge of which these volumes treat would require an annual revision of their contents. This, of course, is out of the question; but we are always at liberty to welcome a book got up in the elegant style of the present edition of Ganot. Of the numerous advances made in physical science within late years, none are, we think, of greater importance than that of the correlation of the physical forces, the applications of which are only now beginning to reveal themselves, and that of spectrum analysis, which is probably in a still more infantile condition. The present volume contains a coloured illustration of the spectra of potassium, sodium, rubidium, and cæsium, which shows the mode in which the various coloured lines are brought to bear on the discovery of hidden substances. The work has been issued in two parts, as well as in the complete form; the former of these deals with such subjects as matter, force, and motion, the various kinds of attraction, of liquids and gases in their different relations, and on acoustics, heat, and light; whilst the second is chiefly occupied with electricity and magnetism, but contains a short sketch of meteorology and climatology. In its new edition we doubt not that a book which has already established such a reputation will meet with a reception quite as favourable, if not more so, than the last did. For our own part, we can most heartily recommend it to the use of our students, who are too often inclined to forget the bearing which physical has upon Medical science. Probably a translation of Fick's work on "Medical Physics" might be of some use in showing this. We recommend the idea to the New Sydenham Society.

GENERAL CORRESPONDENCE.

THE WALSALL FREE SURGICAL COTTAGE HOSPITAL.

Letter from Messrs. Burton.

[To the Editor of the Medical Times and Gazette.]

Sir,—We have the pleasure of forwarding by book post three annual reports of the Walsall Free Surgical Cottage Hospital, which detail at some length the origin and progress of that institution. By your making public so much of these reports as in your judgment may seem requisite to that end, you will be instrumental in disseminating a kind of information which (to judge from the number of private inquiries made on the subject) seems to be more and more in request daily.

The "Surgeons' reports" will give you a general idea of the kind of work which our manufacturing district turns out for its Surgeons; and when it is considered that the localities and construction of the dwellings, and the habits and "*modus vivendi*" of our manufacturing population are precisely those most hostile to a prompt and successful treatment of Surgical accidents, the institution of a Free Cottage Surgical Hospital (as might have been anticipated *à priori*) has proved a great boon in this locality. Our treatment is founded upon what the Northern Professor of Clinical Surgery calls "sound Surgical principles," so far as we know them, but with this difference: that we have in most amputations performed the skin flap operation introduced here from the United States' Army Hospitals by Mr. Redfern Davis, the late Surgeon of the Cottage Hospital. This, in its main features, resembles Mr. Teale's operation, but the flap is not always single, the principle being that muscular tissue in flaps is unnecessary, as they are always absorbed, and that the skin and cellular tissue (as they do at last) form from the first a sufficient cushion for the stump. Our experience at present does not enable us personally to decide positively upon this point, but up to this time we have certainly seen nothing militating against the truth of this proposition.

We also for the last six or more months have dispensed with any dressing or covering for our operative wounds, amputations, resections, etc., leaving the stumps, etc., after suturing q. s., exposed entirely to the air, supported upon a cushion impervious to moisture, and protected by a superincumbent cradle from the friction of bedclothes. The healing process has gone on well, cleanly, and more free of offensive odours than in dressed cases, and the patients, instead of meeting one with that face of horror so indelibly stamped by the much dreaded and painful "first dressing," receive one's visits with cheerful countenances, and expose their stumps with alacrity. The nurse's care—with sponge and warm water removing from time to time the discharges as they flow upon the impervious cloth—keeps all sweet and innoxious. In one case of amputation of the humerus at its upper third, where the integuments were much bruised and a portion of the flap sloughed, a cloth, wet with dilute carbolic acid, laid loosely over the stump, kept all nice and sweet, and an insignificant portion only was lost. Sir J. Y. Simpson certainly, in this matter as in many others, has pioneered in the right direction, and, after all, what can be more soft, elastic, universally applicable, or contributive to sanitary conditions, than pure air? Whilst under its free admission a cooling evaporation from the hot surface goes on much to the patient's comfort. In the treatment thus alluded to we number three amputations of the thigh, one of the humerus, and several resections of the tarsal and metatarsal bones. All did well except one lad (thigh amputated below trochanter major), who died three weeks after the operation (of disease of the kidneys), the cause of the operation in his case having been strumous disease of the knee-joint and necrosis of the femur.

We use acupressure and metallic sutures in all our cases, and have done so for about two years without one case of secondary hæmorrage or difficulty, except in one case of thigh amputation in which the short needle and loop was used. Something held the looped wire (after the needle was extracted) so tenaciously that it was only after some days wasted in fruitless attempts to extract it we at last, by threading the wire through a piece of small silver catheter, and pushing that down the wire to the lower end in the wound where it was held, succeeded by using force enough to break the wire loop in extracting it. We can form no satisfactory opinion of the cause of the detention of the wire loop.

In the treatment of fractures of leg and thigh, when applicable, we give preference to the "American method," as it is called—viz., by extension over a pulley with cord and shot-bag, and sand-bags to steady the limb. In other cases the usual Surgical resources in long and short and Liston splints are adapted to the cases; but in all, stiff bandages are applied so soon as opportunity of properly doing so arises. As yet we have had only three cases of primary application of this latter means, secondary action having generally set in before the patients are brought to the Hospital.

Without admitting generally of what may be called "heroic" stimulation, we find advantage in a rather liberal scale of alimentation after injuries and operations.

The latest and best acupressure pins we have had are made by Mr. R. Turner, needle manufacturer, Redditch, Worcestershire; they have a triangular point and a looped eye instead of a bead, by which they afford a perfectly firm hold, and lie flat in a case or pocketbook. They are of steel, electro-gilt, and thus keep clean and ready for repeated use; the points, being bare steel, can be readily "set" on a hone or strop after use and so kept bright (I enclose one for your inspection); they are made in three sizes, of which the enclosed is the smallest. (It is three inches in length.) We also use the common sewing needle for acupressure with wire loop. After several trials, we find electro-gilt soft (that is, annealed before gilding) copper wire answer all purposes safely, and to be much more pliable and economical than any other we have tried—viz., silver, iron, and compound metal wires plated.

We have used the American carded oakum dressings, but they do not seem to merit any especial commendation; are not equal to carbolic acid vapour as disinfectants or deodorants, and are in no respects equal to "no dressings," as recommended by Sir J. Y. Simpson; so that our experience would lead us to recommend the latter for a fair trial, prejudices and old teachings notwithstanding.

We are, etc.,
Jno. Burton, M.D., Surgeon.
John Burton, L.R.C.P.E., Surgeon.

Walsall, November 21.

P.S.—We think that a modification of Salter's spring balance, pulling from 5 lbs. to 25 lbs., could be made to replace advantageously the cord weight and pulley in the treatment of fractures by the extension method.

THE FEVER ON BOARD THE "ATRATO."

[To the Editor of the Medical Times and Gazette.]

Sir,—If your quarantine correspondent will call upon Dr. Wiblin, Medical Superintendent, who is most courteous to his Medical brethren, he will no doubt show him my "journal" for the last voyage of *Atrato*, wherein the case he refers to as one of yellow fever is there returned as "febricula."

I am, &c.
The Surgeon of "Atrato."

Southampton, December 3.

REPORTS OF SOCIETIES.

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THE PATHOLOGICAL SOCIETY.

Tuesday, November 20, 1866.

Dr. Peacock, President.

Dr. Morell Mackenzie exhibited

a lamina of sheep's bone,

three-quarters of an inch long and half an inch broad, which had passed into the larynx of a patient whilst taking soup. The bone had become horizontally fixed in the larynx, each extremity passing for about a quarter of an inch into the ventricle of the larynx on each side. The patient was brought to Dr. Mackenzie by Mr. J. S. Cumming, of Limehouse, on September 29, the bone having then been in the larynx for three days, and with the laryngoscope the bone was seen in the situation indicated, blocking up the anterior two-thirds of the laryngeal canal. With forceps Dr. Mackenzie succeeded in removing a piece of the bone, but the greater portion still remaining, and the symptoms of dyspnœa and dysphagia being very urgent, the patient was admitted into the Hospital for Diseases of the Throat, and laryngotomy was performed by Mr. Evans. The bone was so firmly fixed that it could not be moved either by instruments introduced through the mouth or through the crico-thyroid opening. The case was seen by Sir William Fergusson, Mr. Mason, and other gentlemen, but all attempts to dislodge it failed. Dr. Mackenzie, however, had an instrument made which consisted of a piece of rigid wire bent at right angles; the piece below the angle, which was rather more than two inches long, having another portion, a quarter of an inch in length, directed backwards. He passed this instrument into the larynx behind and below the bone, and with it succeeded in prizing up the bone, leaving, however, a portion in the left ventricle. The latter was removed the following day—that is, a fortnight after the bone had passed into the larynx. The canula was removed two days later, and the wound healed up at the end of the week. The patient's voice, which had been lost from the moment that he swallowed the bone, was restored after the removal. The patient is now in good health.

Mr. Christopher Heath exhibited an

aneurism of the innominate artery,

for which the carotid and subclavian arteries had been tied by Mr. Fearn, of Derby, in 1836 and 1838. Mr. Heath said that the specimen was of great Surgical and historical interest, as it was from the first case in which both arteries had been tied, and that he was particularly interested in it from the fact of having tied the same vessels at one operation a year ago in a patient who was still alive and well. After giving a brief account of the case, as published in the *Lancet* at the time of the operation, he said that the aneurism was a sacculated one springing from the outer and back part of the innominate artery, but slightly involving the aorta also at the root of the vessel. The sac was completely filled up with very firm laminated fibrine, which was perfectly smooth on the surface, its superficial layer being apparently continuous with the lining membrane of the artery all round the aperture, except at the lower part, where it had evidently been accidentally torn. The tumour pressed upon the trachea about an inch above the bifurcation, lessening its calibre considerably. The aorta was very atheromatous and slighly dilated; the carotid and subclavian arteries were impervious at the points of ligature, and the branches of the subclavian between the aneurism and the ligature were dilated. Mr. Heath regarded the specimen as one of cured aneurism, for the patient lived nearly four months after the second operation, and died from pleurisy, resulting from an accident. Mr. Fearn had expressed some annoyance that his case had not been considered a cure by a recent author on aneurism, but this was due in part to the somewhat imperfect description of the tumour, and to a sentence in it which would lead the reader to suppose that the wall of the aneurism had given way. Mr. Fearn wished the specimen to be presented to the College of Surgeons after being exhibited to the Society.

Mr. Holmes thought that any discredit that might have been thrown upon the case was due to the imperfect account of it originally given, and to the fact that the specimen had never been exhibited in public before. On a superficial examination it appeared to him to be rather an aneurism of the aorta than of the innominata, and he was not prepared to say what, if any, influence the two operations might have had in producing the deposit of fibrine found in it.

Mr. Wm. Adams remarked upon the great value of the preparation, and suggested that as its nature was disputed it should be referred to a committee.

It was accordingly referred to Dr. Bristowe, Mr. Bryant, and Mr. Adams, to report upon.

Mr. Heath also showed for Mr. Fearn

AN ANEURISM OF A BRANCH OF THE PULMONARY ARTERY

from a patient who died in 1840 from a sudden attack of hæmoptysis. The specimen consisted of the upper lobe of the left lung, containing a large vomica, into which projected a distinctly defined aneurism of the size of a nutmeg, which had burst by a cleft-like opening. This sprang from a branch of the pulmonary artery of the size of a crowquill. Mr. Heath remarked upon the rarity of the specimen, no similar one being given in the *Pathological Transactions*, but mentioned that Dr. Cotton had recorded two instances of the kind in the *Medical Times and Gazette* of the present year.

Dr. Peacock mentioned that he possessed a very similar specimen.

Dr. Wilson Fox said that the specimen must be very rare, for Rokitanski possessed only one like it, which he preserved carefully in his private collection, and had shown to Dr. Fox as a great curiosity.

Dr. Moxon showed

A BILIARY CALCULUS,

which had been discharged through the abdominal wall. The patient had, after having, as she thought, strained herself, had great pain in the right side, where she found a swelling. This, which was at first thought to be a carbuncle, proved to be an abscess, which at length pointed, and burst spontaneously; and a few days later the gall-stone was discharged from its cavity. Considerable induration was afterwards found under the skin, and this, on being cut into, turned out to be a large cake of inspissated bile. The stone was made of cholestearine.

Mr. Francis Mason exhibited a

CONGENITAL FIBRO-CELLULAR TUMOUR OF THE TONGUE

which he had removed in August last from a woman aged 30. He reminded the Society that three years ago he brought forward a similar specimen. Both tumours were taken from the same patient. Mr. Mason showed an engraving giving a representation of the patient's tongue when she first came under his observation. The tumour now under notice, which three years ago was no larger than a shilling, had increased to five times that size. A ligature was placed around the pedicle, and the growth removed with scissors. Mr. Mason believed the case to be unique.

Dr. Martyn had seen a case of growths on the tongue, but in reply to Mr. Mason said that they were not pedunculated, but had broad bases, and he was in doubt as to their being of congenital origin.

Mr. T. Holmes said the specimen was very interesting. He had himself never met with a similar instance, and had not found any recorded. He agreed with Mr. Mason in the belief that the case was unique.

Mr. Sydney Jones showed a specimen of

STRICTURE OF THE ŒSOPHAGUS,

for which he had performed gastrotomy. It occurred in a man, aged 61, who had had dysphagia for about six months. Death occurred on the twelfth day, from a low form of pneumonia. The post-mortem showed cancer (epithelial) of the œsophagus and similar deposit in the kidney. Both lungs were consolidated at the lower and back parts. The edges of the stomach wound were firmly united to the parietes, and peritonitis was limited to the immediate neighbourhood of the wound. The left kidney was the seat of encephaloid cancer.

Mr. Holmes remarked that the disease of the œsophagus was not strongly malignant, and was formidable chiefly from its position. As gastrotomy was so extremely unsuccessful an operation, it would be well to do œsophagotomy instead of it, after which the patient might be fed by a tube introduced through the wound into the œsophagus.

Mr. Jones said, in answer to Dr. Murchison, that no means had been taken previous to the operation to procure adhesions between the abdominal walls and the stomach.

Mr. Sydney Jones also showed an

ENCHONDROMA WHICH HE HAD REMOVED FROM THE SCAPULA OF A FEMALE, AGED 35.

It had filled the whole supra-spinous fossa, although attached to it merely by a narrow pedicle. It was a flattened growth, everywhere cartilaginous, except near its attachment, where it was bony.

Mr. Sydney Jones next showed

BURSA PATELLA, ENLARGED AND WITH MUCH THICKENED EDGES.

He had removed it from a woman, aged 35. It was about the size of a fist, and had a central cavity capable of holding a walnut. It was closely adherent to the exterior of the joint capsule, and its removal necessitated a careful dissection.

Mr. Sydney Jones next showed a

TUMOUR OF THE RADIUS,

for which he had amputated the arm. It had occurred in a boy, aged 14, and had been developing for twelve months. At first the symptoms resembled those of abscess with necrosis. Subsequently the tumour became very spongy and had distinct pulsation, at once controlled by brachial pressure. About three months before amputation the brachial was ligatured, with marked benefit, for a time, so far as the size of the growth. However, when the collateral circulation became well established, rapid growth again occurred, necessitating amptutation. The tumour involved the radius from the tubercle to the lower epiphysis. Its section was soft, spongy, with occasional spicula, and presented numerous vascular apertures. Under the microscope it showed crowds of nuclei imbedded in a matrix, homogeneous or finely fibrous.

At a previous meeting Dr. Thomas Ballard exhibited a specimen of

INTUSSUSCEPTION AT THE ILIO-CÆCAL VALVE.

A man, aged 37, having had two loose actions of the bowels, partook of dinner heartily, during which he was seized with pain in the abdomen, which persisted. Two days afterwards he took a dose of castor-oil, which seriously aggravated the pain, and caused him to go to stool twenty times. He was seen on the fifth day. He then had severe pain, limited to right iliac region, with constant desire for stool, and straining, voiding only blood and mucus. The symptoms increased in severity, although treated exclusively with opium. Vomiting set in on the thirteenth day; straining at stool continued, and much blood was passed. He died exhausted on the seventeenth. There was intussusception of the ilio-cæcal valve, causing a stricture of the ilium two inches above it. The small intestines were distended with fluid fæces; the large intestine was empty, gangrenous, and its surface studded with coagula. Dr. Ballard attributed this man's death to injudiciously taking a dose of castor-oil.

MEDICAL NEWS.

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Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, Nov. 29, 1866 :—

Frederick Rainbow, Lower Norwood ; Arthur Waller, Milner-square, Islington ; William Grimes Palmer, Loughborough ; William Joseph Richards, Redruth, Cornwall.

The following gentlemen also on the same day passed their First Examination :—

Thomas Dudley Saunders, Bath United Hospital ; Richard Rendle, Guy's Hospital ; Charles Frederick Bedford, St. Thomas's Hospital ; Alfred Henry Newth, St. Thomas's Hospital ; George Frederick Jones, London Hospital ; William Henry Causton, London Hospital.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Anderson, A. M., M.D., has been appointed Resident Medical Superintendent to the Dundee Royal Infirmary.

Clapton, E., M D., has been appointed Physician to the Magdalen Hospital, Blackfriars-road.

Davidson, A., M.B., has been appointed one of the Honorary Surgeons to the Liverpool Dispensaries.

Fry, F., F.R C.S E., late Senior Surgeon, has been appointed Consulting Surgeon to the West Kent General Hospital, Maidstone.

Stuart, W., M.D., has been appointed Visiting Surgeon for Woolwich and the London Lock Hospital.

Wilks, S., M.D., has been appointed Physician to Guy's Hospital, and Lecturer on Clinical Medicine.

BIRTHS.

Bowen.—On November 24, at Birkenhead, the wife of E. Bowen, M D., of a son.

Holtom.—On November 26, at Hill-street, Stoke-upon-Trent, the wife of C. Holtom, M.R.C.S.E., of a daughter.

Lade.—On November 20, at King's Lynn, the wife of G. Lade, M.D., of a daughter.

MacGowan.—On December 4, at 5, Caversham-road, N.W., the wife of Dr. MacGowan (late of 52nd Oxfordshire Light Infantry), of a son.

Milburn.—On December 2, at Aldringham House, Suffolk, the wife of Dr. Milburn, of a son.

Millar.—On November 26, at 48, Albany-street, Edinburgh, the wife of J. Millar, M.D., of a daughter.

Saidler.—On November 28, at Gilmore House, Liberton, M.B., the wife of James Saidler, Esq., M.D., of a son.

Steele.—On December 3, at Guy's Hospital, the wife of Dr. Steele, of a daughter.

MARRIAGES.

Condon—Knighton.—On October 18, at St. James's Church, Roy Bareilly, Oudh, Dr. J. H. Condon, Civil Surgeon, Gondah, to Emma Louisa, daughter of W. Knighton, L.S.D., J.P., Officiating Deputy Commissioner, Roy Bareilly.

ane—Codd.—On November 12, at the Cathedral, Bombay, H J. Gane, Esq., Surgeon H M.'s Bombay Army, to Emily Jane, fourth daughter of the late G. Codd, Esq., of Cottingham-grange, Hull, Yorkshire.

Jackson—Knight.—On November 27, at St. Andrew's Church, Farnham, P. N. Jackson, Esq., Staff-Surgeon, to Mary, second daughter of J. Knight, Esq., Vernon House, Farnham.

J ffcoat—Hertzog.—On September 18, at Cape Town, Cape of Good Hope, J. H. Jeffcoat, Esq., Assistant-Surgeon, H.M.'s 9th Regiment of Foot, to Anna Margarita Sophia, eldest daughter of the late F. W. Hertzog, Esq., Cape Town. No cards.

Macpherson—Cotton.—On November 28, at Christ Church, New Catton, Norwich, S. N. Macpherson, Medical Superintendent of the Norwich Borough Lunatic Asylum, to Eliza, eldest daughter of H. P. Cotton, Esq., 12, Foulis-terrace, Onslow-square.

DEATHS.

agley, John, M.D. Edin., of Hunmanby, Yorkshire, on November 21.

Coles, H., F.R.C.S.E., F.G S., at Coburg Cottage, Hammersmith (late of Cheltenham), aged 60.

Edmonds, E., M.R.C.S.E., of Stoke Newington, formerly of Hayle, Cornwall, on November 16, aged 58.

VACANCIES.

Bloomsbury Dispensary.—Resident Medical Officer.
Charing-cross Hospital.—Physician-Accoucheur.
Dartmoor Convict Prison.—Dispenser.
Westminster Hospital.—Resident House-Physician.

Professor Trousseau.—It will give great satisfaction to the numerous friends and well-wishers of this celebrated man in this country to learn that the reports concerning his death are unfounded, and that the latest accounts from Paris state that his health is quite re-established.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Exeter Incorporation.—Mr. Arthur J. Cumming has resigned the Eastern District ; salary £55 per annum.

Howden Union.—Mr. George Newstead has resigned the Bubwith District ; area 13,763 ; population 1813 ; salary £25 per annum.

Newton Abbot Union.—Mr. R. B. Sullock has resigned the Eleventh District ; area 5780 ; population 6996 ; salary £50 per annum.

South Molton Union.—Mr. George Allarton has resigned the Eleventh District ; area 7799 ; population 1139 ; salary £18 per annum.

APPOINTMENTS.

Buntingford Union.—Benjamin Cocks, L.R C.P. Edin., M.R C.S.E., L.S.A., to the North-East and South-East Districts.

Chard Union.—Walter A. Harvey, M.B. Lond., L.R.C.P. Lond., M.R.C.S.E., to the Third District.

Gainsborough Union.—Robert P. Tickler, L.R.C.P. Edin., M.R.C.S.E., to the West Butterwick District.

Stroud Union.—Robert Blagden, L.R.C.P. Lond., M.R.C.S.E., to the Fourth District.

Royal College of Surgeons in Ireland.—Henry Carden Herbert, Esq., M.D. and L R.C.P. Edin., H.M.'s 85th Regiment (a Licentiate of the College 1856), having passed the usual examinations at meetings of the Court of Examiners, held on the 23rd and 30th ult., was admitted a Fellow of the College.

Royal Institution of Great Britain.—At the general monthly meeting, Monday, December 3, 1866 – Sir Henry Holland, Bart., M.D., D.C.L., F.R.S., President, in the chair—John Augustus Seymour Morse Davies, Esq. ; Thomas Dell, Esq., F.R.A.S. ; Frederick Thomas Elworthy, Esq. ; Mrs. Ellen Hawkins ; Robert Pilkington Linton, Esq. ; and Alfred Sandilands, Esq., were elected members of the Royal Institution.

University of Edinburgh.—We understand that there is a proposal before the Senatus of the University of Edinburgh for the opening of a refectory for the use of the students within the walls of the University. There is some fear, however, we hear, that the whole project may suffer shipwreck in the pint stoup, as some of the reverend, grave, and potent seniors hold that neither beer nor tobacco should be allowed within the College precincts. We hope, however, that the national modesty in reference to siclike creature comforts, which seems to be remarkably developed amongst the Professors of the ancient University (the dislike to tobacco being also probably an inheritance from the founder, James I. of England and VI. of Scotland) will not prevent the young men having a room where they can eat their luncheon and look at a paper.

Decline of Cholera in London.—Three deaths only from cholera were registered during the week ; and the epidemic is now virtually extinct. The fifteen deaths from diarrhœa are below the average number of previous years.—*Registrar-General's Weekly Report.*

Cholera Statistics in Austria.—The *Wiener Med. Presse* says that it results from authentic reports that the number of cholera cases which occurred in the Austrian Empire from its outbreak at the beginning of July to the middle of October amounted to, in round numbers, more than 200,000, nearly 100,000 proving fatal. These cases were distributed as follows in the various provinces :—Lower Austria, 21,595, with 12,625 recoveries and 7971 deaths ; Vienna, 7443, with 2493 recoveries and 3242 deaths ; Bohemia, 37,597, with 17,716 recoveries and 17,570 deaths ; Moravia, 67,192, with 33,735 recoveries and 27,624 deaths ; Silesia, 2835, with 1421 recoveries and 1063 deaths ; Bukowina, 8582, with 4116 recoveries and 3805 deaths ; Lemberg, 19,809, with 7730 recoveries and 9737 deaths ; Coast Districts, 1166, with 432 recoveries and 637 deaths ; Carinthia, 1087, with 388 recoveries and 430 deaths ; Hungary, 48,845, with 20,470 recoveries and 21,556 deaths. The discrepancies of the numbers are explained by the number of cases still under treatment when the report was made up.

An Example that ought to be Followed.—Paris milk is infinitely superior to London "sky blue," but then on the other side of the Channel the State looks much more sharply after its adulteration, and punishes delinquents, when detected, in an effective manner. Last week eight *marchands de lait* were had up before the tribunal of correctional police, and though the milk seized was adulterated only with water, seven out of the eight offenders were sent to prison for six days, and all were fined either 25 or 50 francs.—*Pall-mall Gazette.*

The Queen's University in Ireland.—The motion for an interlocutory injunction against the Senate of the Queen's University in Ireland to restrain them from granting degrees or taking any other proceeding under the Supplemental Charter, was decided on Monday last by the Master of the Rolls. His Honour delivered an elaborate and learned judgment, entering very fully into the law of the case, not with the view of deciding the general questions which arose, but merely to show that they involved considerations of great difficulty. He would not undertake to decide those points without further argument, observing that, notwithstanding the great assistance he had derived from the able arguments which he had heard, he was wholly unable to share in the confident opinions expressed on either side. He did not regard the present suit as disputing the power of the Crown to grant the Supplemental Charter, but merely as intended to prevent a particular body within the Corporation, who, it was contended, had no power to accept it, from acting with the presumption that it had been accepted. The objection that the petitioner could not maintain this suit, and that the Court could interfere in such a case only on an information filed by the Attorney-General, he regarded as untenable. He was clearly of opinion that the Court had authority to deal with the case, and, under the circumstances, he would grant an interlocutory injunction until the hearing and further order.—*Saunders' Newsletter.*

The Paris Academy of Medicine.—The Section of Accouchements presented to the Academy a list of three accoucheurs—MM. Tarnier, Joulin, and Mattei—whence to select one to fill up the vacancy. That learned body, however, probably thinking that the mere accoucheurs, six in number, are numerous enough in the Academy, added the names of MM. Barthez and Bernutz, the one well known in relation to diseases of children, and the other in relation to diseases of women. M. Barthez, the co-editor with the late Rilliet of the best work in the French language on the diseases of children, was elected by the votes of fifty-six of the seventy-five members present.

The Odontological Society of Great Britain held its ordinary monthly meeting at 32, Soho-square, on the 3rd inst. The paper was by Mr. Hepburn, "On the History, Progress, and Manipulation of Vulcanite as the Base for Artificial Teeth."

Samandarine.—The poison of Salamandra maculata is obtained in the form of a milky liquid by grating the posterior parts of the head and back of the animal on the edge of a spoon or the back of a scalpel. The liquid which exudes is white, viscous, strongly alkaline, and bitter; and contains a quantity of globules which disappear when alcohol, ether, and acetic ether, are added. The symptoms provoked by the absorption of samandarine, or of the secretion itself, succeed each other in about half an hour in the following order:—anxiety, trembling, epileptic convulsions, opisthotonos, and death. Dr. Zalesky's method of isolating the poisonous body is given in the *Bulletin of the Chemical Society of Paris*, 1866, p. 344. Its composition is, carbon, 34; hydrogen, 60; nitrogen, 2; oxygen, 5.

Bromide of Potassium as a Sedative.—In the December number of the *Edinburgh Medical Journal*, we have a remarkably good paper on the therapeutic effects of the above agent from the pen of Dr. Begbie, senior. As a sedative to the nervous centres he has found it do much good in a variety of diseases dependent on irritation of these. The paper will well repay perusal.

Inoculability of Tubercle.—In the *Gazette Hebdomadaire* we have a continuation of M. Villemin's researches as to the inoculability of tubercle. In rabbits he has again and again succeeded in reproducing it in this manner, not only when taken from the human subject, but still more rapidly when derived from the cow; further, the tubercular matter thus produced in one rabbit could be in like manner transmitted to another, in the same way as syphilis.

The oldest known British crab (*Palæinachus*) is figured and described by Mr. Henry Woodward in the *Quarterly Journal of the Geological Society* (No. 88, p. 403). It appears with nearly all its limbs *in situ*, showing the carapace with four segments of the abdomen united to it, resting upon a slab of the forest marble of Malmesbury, Wilts, covered with remains of Pentacrini, etc. The limbs are long and slender, and in some respects, such as the carapace with remarkably prominent tubercles in front, it closely resembles the common spider crabs living on our coasts. In the swollen form of the branchial regions and the nuchal furrow, it resembles the Inachus, with which it agrees in the form and proportion of its limbs; hence its name.

Probable Maximum of Shooting Stars in 1867.—At the meeting of the Academy of Sciences at Paris on November 19, M. Coulvier-Gravier, who has spent a lifetime in the observation and study of meteors, communicated some remarks on the brilliant showers on November 13. He referred to the first great maximum observed in 1799, and to that of 1833, stating that it is a period of 34 (not 33) years which separated them. By the examination of a curve representing the increasing and diminishing numbers per hour, he showed that in 1833 the mean number of the stars which appeared at midnight was 130. Since then the number gradually diminished to 10 in 1860, the true minimum. From that time the number has gradually risen, having been 37 in 1863, 80 in 1865, and 94 in 1866. M. Coulvier-Gravier therefore considers that the great display of the present year is merely an announcement of the maximum to be expected next November, an epoch indicated by Olbers. He also states that before midnight on November 12 and 13 he observed a mean horary number of 50 stars.—*Comptes Rendus*, t. lxiii., p. 860.

A good instance of the value of the laryngoscope was reported by M. Moura at the meeting of the Academy of Sciences at Paris on the 12th ult. He stated that a young man, aged 17, had received on October 26, 1865, several wounds by a cutting instrument at the edge of the crico-thyroid region, whereby the crico-thyroid and the lateral crico-arytenoid muscles were much affected. The edges of the wound having been brought near, healing had proceeded rapidly, but the voice was not re-established; it was completely lost. On January 26, 1866, M. Moura examined the parts with the laryngoscope, in the presence of two of his colleagues, and observed—1. The absence of any pathological lesion in the larynx; 2. Defect in tension and contact—that is to say, incomplete approach of the vocal cords; 3. The presence of a cicatricial membrane beneath the glottis. This membrane resembled that which unites the digits in palmipeds, and had the form of a crescent with very sharp horns. Its convex base adhered to the anterior concavity of the cricoid cartilage, and was situated about eight or ten millimetres below the anterior commissure of the vocal cords. The calibre of the tracheal passage was diminished about a third, and the column of air expelled from the chest, striking only against the two posterior parts of the glottis, could produce no vibrations of the vocal cords. On March 8 M. Richard removed the membrane by laryngotomy; the wounds healed well, and on April 2 the voice began to reappear. On recent examination by the laryngoscope the place which the membrane had occupied was easily perceived. The young man's voice is low and muffled, but he is able to converse so as to be understood, and has returned to his former occupation. See *Comptes Rendus*, tome lxiii., p. 822, for further details.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Moriarty's communication is in the printer's hands.

D.—The preliminary classical and mathematical examination at the Apothecaries' Hall and Royal College of Surgeons is not accepted by the London University in lieu of their matriculation examination.

A. C., Liverpool.—1. Parkes on Hygiene. For the other question look out for our article on the 35th Section of the Sanitary Act, which we are obliged to postpone until next week. Children ought to have as much space as adults, but the Secretary of State sanctions their only having one half.

M.D., King's Lynn.—An M.R.C.S. who practises dentistry or any other speciality, has rights equal to those of any other member of the College. With regard to the licence in Dental Surgery, we have already given our opinion. We did our best at the time to protect the rights of the Medical Profession, and now we think the matter had better drop.

Dr Mary Walker.—The following, we are assured, is an extract from official documents of the United States:—

"It appears from official reports that Dr. Mary E Walker, a graduate of Medicine, 'has rendered valuable service to the Government, and her efforts have been earnest and untiring in a variety of ways,' and that she was assigned to duty and served as an Assistant-Surgeon, in charge of female prisoners at Louisville, Ky., upon the recommendation of Major-Generals Sherman and Thomas, and faithfully served as Contract-Surgeon in the service of the United States, and has devoted herself with much patriotic zeal to the sick and wounded soldiers, both in the field and Hospitals, to the detriment of her own health, and has also endured hardships as a prisoner of war four months in a Southern prison while acting as a Contract-Surgeon."

Caries of the Teeth.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—While my attention has been arrested by some ingenious suggestions in the Medical journals lately as to the causes of dental decay, it has appeared to me at the time that the most considerable of these has been ignored—I mean the subjection to the influence of extreme and sudden variations of climate, and especially of temperature. This is well exemplified in the familiar instances of Spain and North America. By dentists of the latter country, it is the subject of remark how rapidly the Irish emigrant, who arrives with good teeth, becomes subject to this quite national peculiarity of the Americans. I remember to have read in the description of Batavia, which occurs in the history of Lord Macartney's embassy to China, side by side with the most fearful details of the mortality in the colony, a digression on the beauty displayed in the teeth of those acclimatised. In this chief city of Java (comparing it with Singapore in latitude), I judge the yearly range of temperature to be almost at a minimum. Our insular position in England and Ireland, favoured by the Gulf Stream, attempers the severity of the seasons, and we stand somewhere, I conjecture, about the medium point of incidence both as regards decay in the teeth and phthisis, which in part falls under the same line of causation, if we do not rather fall below this point, as the daily range, however modified by locality, is often considerable. Perhaps the most striking instance near us of the influence of abrupt and violent changes of temperature on the teeth will be found in the bleak and swampy mountain tract of the Ardennes, which occupies a considerable extent of South Belgium, and where the temperature is generally much lower than the country northward, piercing cold at night, and in winter insupportable. Here the almost universally bad condition of the teeth forms the only marked peculiarity of the district in the sense of health. It is aggravated, perhaps, by the scanty headgear of the women. Hoping that this subject may obtain development through the attention of your correspondents and readers,

I am, &c.

3, Westbourne-park, Dec. 4. Geo. Gaskoin.

COMMUNICATIONS have been received from—

Mr. H. M. Downie; Mr. William Bird; Dr. Merriman; Mr. N. Adams; Dr. Foster; Dr. Crawford; Medicus; Mr. White; Mr. J. Thuston; Dr. George Johnson; Dr. Markham; Dr. Herbert; Dr. Risdon Bennett; Dr. Samelson; Dr. Williams; Dr. Broadbent; The Surgeon of "Atrato;" Dr. Quain; Dr. Lowe; A. C.; Mr. Gaskoin; Mr. S. L. Rymer; Dr. Ballard; Dr. Hughlings Jackson; Mr. F. H. Marsh; Dr. Tilbury Fox; Dr. B. W. Richardson; Dr. Soelberg Wells; Dr. Moore; Dr. T. Skinner; Mr. Vincent; Dr. Cotton; Mr. Pirrie.

BOOKS RECEIVED—

Peters on Asiatic Cholera—Dr. Child's Benedicite; or, the Song of the Three Children—Wilson's Inorganic Chemistry—Pharmaceutical Journal, No. 90—Miller's Elements of Chemistry, part 3; Organic Chemistry, 3rd edition—Edinburgh Medical Journal, No. 138—Tripe's Report of the Cholera Epidemic of 1866 within the Hackney District—Clinical Histories, with Comments, by Henry Day, M.D.

NEWSPAPERS RECEIVED—

L'Union Médicale—Gazette des Hôpitaux—Gazette Hebdomadaire—Edinburgh Daily Review—Sunday Gazette—Scotsman—Gazette Médicale de Paris—Ringwood, Blandford, and Wimborne Telegram — Morgan's British Trade Journal, No. 48—Medical Press and Circular, Nos. 48 and 49

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 1, 1866.

BIRTHS.

Births of Boys, 1085; Girls, 1043; Total, 2128.
Average of 10 corresponding weeks, 1856-65, 1835·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	714	745	1459
Average of the ten years 1856-65	724·7	725·9	1450·6
Average corrected to increased population..	..	..	1596
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa.	Cholera.
West ..	463,388	3	5	4	1	6	2	7	..
North ..	618,210	8	6	9	3	9	16	5	1
Central	378,058	1	1	6	3	5	6	1	..
East ..	571,158	15	17	8	2	12	16	..	2
South ..	773,175	2	9	11	4	6	11	2	..
Total ..	2,803,989	29	38	33	13	38	51	15	3

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·822 in.
Mean temperature	38·7
Highest point of thermometer	49·3
Lowest point of thermometer	28·0
Mean dew-point temperature	33·7
General direction of wind	Variable.
Whole amount of rain in the week	0·02

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, December 1, 1866, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending Dec. 1.	Deaths.		Temperature of Air (Fahr.)			Rain Fall.	
				Corrected Average Weekly Number.*	Registered during the week ending Dec. 1.	Highest during the Week.	Lowest during the Week.	Weekly Mean of the Mean Daily Values.	In Inches.	In Tons per Acre.
London (Metropolis)	3067536	39·3	2128	1400	1459	49·3	28·0	38·7	0·02	2
Bristol (City) . .	163680	34·9	129	73	‡167	52·8	24·4	42·4	0·00	0
Birmingham (Boro')	335798	42·9	211	163	158	49·4	27·5	40·6	0·17	17
Liverpool (Borough)	484337	94·8	416	281	291	48·8	38·0	43·0	0·09	9
Manchester (City) .	358855	80·0	274	203	‡196	49·0	31·0	39·4	0·20	20
Salford (Borough) .	112904	21·8	113	57	66	48·8	30·8	40·5	0·18	18
Sheffield (Borough) .	218257	9·6	190	115	111	48·0	26·7	39·7	0·06	6
Leeds (Borough) .	228187	10·6	143	116	143	50·0	25·5	39·4	0·12	12
Hull (Borough) .	105233	29·5	89	49	53	..	..	..	..	..
Nwcastl-on-Tyne, do.	122277	22·9	97	65	92	47·0	29·0	32·7	0·03	3
Edinburgh (City) .	175128	39·6	127	84	101	47·7	29·0	40·2	0·10	10
Glasgow (City) . .	432265	85·4	352	252	274	48·8	27·2	41·8	0·07	7
Dublin (City and some suburbs) .	318437	32·7	151	†156	188	52·4	28·8	42·6	0·21	21
Total of 13 large Towns . . .	6122894	34·4	4420	3014	3199	52·4	24·4	40·1	0·10	10
	(1863)				Week ending Nov. 17.	Week ending Nov. 7.				
Vienna (City) . .	560000	..	..	..	316	..	..	§ 43·0	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·822 in. The barometrical reading increased from 29·34 in. on Sunday to 30·15 in. on Wednesday.

The general direction of the wind was variable.

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* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 45·6°.

APPOINTMENTS FOR THE WEEK.

December 8. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p.m.

10. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

Medical Society of London, 8 p.m. Mr. W. F. Teevan, "On the Diagnosis and Treatment of Urethral Diseases by Means of the Endoscope."

11. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

Ethnological Society of London, 8 p.m. John Crawfurd, Esq., President, "On the Ethnological Results of the Arabian Conquest of Spain." Robert Dunn, F.R.C.S., "Remarks on some of the Bearings of Archæology upon certain Ethnological Problems and Researches."

Royal Medical and Chirurgical Society, 7½ p.m. Ballot.

12. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

Hunterian Society (Council, 7½ p.m.), 8 p.m. An open meeting.

13. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

14. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.

ORIGINAL LECTURES.

ADDRESS ON

THE STUDY OF OPHTHALMOLOGY IN ITS SIGNIFICANCE TO MEDICINE. (a)

By Professor A. VON GRAEFE.

(Translated by A. Samelson, M.D., Manchester.)

(Concluded from page 578.)

If we turn our gaze from the mechanics of the muscles to the functional relations of the refracting media, we may still more confidently assert that natural philosophy has poured its light on this province, and that pathology and therapeutics have here met with a truly scientific culture. It is known that the refracting media constitute a nearly concentric system of lenses, calculated to enable the incident light to produce distinct images on the retinal screen which is endowed with specific sentient energy. Hence the functions of the refracting media, whether normal or anomalous, are subject to all the rules of dioptrics: the doctrine of them must in the main be a chapter of applied dioptrics. In order to realise this, all the parts of the refracting apparatus had to be tested like those of an optical instrument. The forms and degrees of curvature, and the axes had to be determined for all the limitary surfaces, and the index of refraction of each of the media measured. Infinite difficulties seemed to oppose this object; for the curvatures are of different, and noways throughout simple, form; the number of limiting surfaces and of indices of refraction is, in consequence of the stratified nature of the lens, enormously multiplied; and the presumed disposition of the whole system around one principal axis was found not to be pervading. But as in the construction of the organ of vision the wonder of the creating power seems to culminate, eminent optical perfections being here obtained in spite of great apparent complications, the human mind has also bestowed its best labour on the scrutiny of that organ. The research of centuries, unweariedly pursued by most sagacious men, has more and more subtilised the method of observation and deepened the calculations. Mathematicians, natural philosophers, physiologists, and physicians, have fought the battle in the field of physiological optics, and perseverance in siege and ingenuity of assault have succeeded in conquering the most arduous places, for ever to be the possession of the human mind.

The harvest reaped on physiological ground was soon to bring forth fruit in the field of pathology. On the three conditions of excessive, deficient, and irregular refraction of the media are based respectively the three principal forms of anomaly of refraction—viz., myopia, hyperopia, and astigmatism. Their causes and characters, as to which so much uncertainty had obtained, are now cleared up to evidence. Abnormal curvature of the separating surfaces, sometimes alteration of the indices of refraction, or even absence of certain refracting media, for the most part, however, abnormal length of the optic axis, were recognised to be the substrata; and the optical correctives, by the aid of which the eyes of so many become enabled to perform their functions, were regulated in accordance with firmly established principles.

We know that in former times confused notions and curious views were entertained in ophthalmic practice with regard to the use of spectacles. Now and then even able oculists repudiated the employment of glasses as something decidedly perilous to the normal functions of the eyes, as though some mysterious inimical power was lurking in the innocent piece of glass. This prejudice arose from the undeniable fact that much harm may be done by the use of unsuitable glasses. The true rules for guidance in this respect date from a recent period. A spectacle glass by its optical quality alters the direction of the rays impinging on the eye; in order to unite them on the retina after they have been subjected to the action of the glass, the eye must make a certain compensatory effort of accommodation. The latter is susceptible of exact calculation, and it can be determined with the same exactness, whether this effort implies a prejudicial expenditure of force relative to the amount of accommodative power at disposal. If the contrary can be proved, we have no reason whatever for denying the patient the free use of his glasses. Again, a resort to glasses is most proper wherever we find them equal to correcting anomalies of refraction, and thereby effecting an approximation to the normal condition. As an example, we may adduce the ordination, for regular astigmatism, of cylindrical glasses, a practice but recently adopted, by means of which we are able to neutralise excessive differences of refraction between the vertical and horizontal meridians as they occur in certain eyes, the visual acuteness and endurance of which we can thus materially improve.

Let us, further, for a moment dwell on the anomalies of accommodation. The wonderful capacity of the human eye, voluntarily to change its dioptric qualities, and thus to adjust itself, now for near, now for distant objects, has early attracted the attention of the student, but it is once more a triumph of the last twenty years to have demonstrated the physical alterations within the eye, by which this purpose is accomplished. Whereas formerly the most various hypotheses were entertained regarding this enigmatical process, and occasionally the very fact, because inexplicable, was denied altogether, it is now proved that by an act of the will performed in the service of vision, the curvatures of the anterior as well as the posterior surface of the lens are changed, whereby the focal distance of the dioptric system is respectively diminished or increased. But whilst we cannot refer to this discovery without a feeling of deep gratification, we must not, on the other side, disguise from ourselves that, in regard to the instrumental muscular agency, we are still somewhat in the dark. We are aware that the external muscles, which were thought to play the principal part in the adjustment of the eye, are inactive, and the like is proved of the musculature of the iris. But if, after these exclusions, we limit our attention to the tensor choroideæ, we must admit that, despite all the research hitherto devoted to this muscle, we still ignore its exact share in the work of accommodation. Here, then, remains a very important desideratum to be supplied. This, however, has formed no obstacle to the most exact study of the anomalies of accommodation; and to Donders, the great conqueror in this field, we are above all indebted for the dissociation of accommodation diseases from the defects of refraction. Whilst the latter solely depend on abnormal qualities of the refracting media, anomaly of accommodation implies a perturbation in that range within which the voluntary qualifications of the refracting media are realised. By this fundamental discrimination the notions throughout this chapter have experienced a material change. Thus, *e. g.*, the farsightedness which creeps in with advancing age was previously held to depend on a decrease in the refracting powers, from a belief that the curvatures of the surfaces of separation in the eye became flatter as its humours lessen with age. At present, however, we know that presbyopia signifies a shortening of the range of accommodation, with which, at a greater age and in a very subordinate sense only, a slight decrease of refraction associates itself. Presbyopia, therefore, has ceased to belong to the defects of refraction, and now ranks among those of accommodation. Nor is it any longer regarded as opposed to myopia, for, according to our present views, presbyopia and myopia may even coexist in the same eye. But, instead, a quite different defect, viz., hyperopia or hypermetropia, itself an anomalous state of refraction, stands henceforth contrasted with myopia. And in another respect still has the meaning of presbyopia undergone a thorough change. It has been discovered, namely, that the decrease of accommodation does no commence in the second half of life only, but can be demonstrated already in the earliest periods of life which admit of the necessary measurements. And thus the range of accommodation, under otherwise normal circumstances, becomes tantamount to a gauge by which the age of life may be determined.

Only after the range of accommodation had received its numerical expression by the adoption of an equivalent focal value, and after the variation of that range under the influence of varying degrees of convergence had been measured and analysed, could the correct values be found for the muscular efforts which the eye has to make according to any particular postulate of accommodation; and thence, as we hinted before, the chapter on spectacles had to be completely remodelled. A further result was the fresh insight obtained into the conditions for the occurrence of an extremely frequent form of asthenopia and the causes of many instances of abnormal position of the eyes, especially of concomitant squint.

Thus we find here an abundance of novel research, animating, reforming, and beneficially creating with surprising speed, and all this we owe to a more enlightened comprehension of the functions, based on physical science. Correspondingly, the disorders of refraction and accommodation have come to be a most interesting field of truly functional therapeutics. We here see the perturbations of function by much precede the anatomical alterations; we observe how by degrees the integrity of the organ comes to suffer if we do not remove those functional disturbances—*e. g.*, if we omit to rectify the too small or indistinct retinal images of the presbyopic, or to lessen the excessive accommodative efforts of the hyperopic. It is just this sort of information which we so frequently desiderate in Medicine. For, most diseases, and especially the chronic, are undoubtedly ushered in by functional anomalies, yet to fathom these we are elsewhere but rarely admitted.

(a) Delivered August 2, 1865, the seventy-first anniversary of the Medico-Chirurgical Frederick William Institute in Berlin (the training school of the Army Medical Officers of Prussia).

In conclusion, we would say a word in reference to the innervation of the retina. Also in this chapter, though much yet is left for the future to reveal, our recent times have seen a mighty impulse given. Apart from the eminent culture bestowed on the minute histology of the retina, many a previously obscure physiological question has been brought near its solution. As a notable progress in pathology, we must acknowledge the greater attention devoted to the condition of the visual field. The field of vision is, so to say, the functional minute of the totality of the retinal area, and an exact delineation of anomalous retinal function could only be thought of when, instead of simply consulting the faculty of perception, that comprehensive minute came to be submitted to perlustration. By this method we frequently, in case of disease, obtain as it were a map of the retina, from the living or extinct provinces of which we may draw the most weighty inferences concerning the nature and course of the disorder, whereas in regard to other nerves we are mostly limited to a summary valuation of the perceptive capacity, of which the method, too, leaves much to be wished for. Since a more perfect diagnostic procedure enables us to compare the acuteness of perception belonging to any given retinal district with its normal value, and even numerically to define it, this ground is eminently fitted for the detection of slight disturbances of innervation—*e. g.*, limited mutilations or peripheral diminutions of energy. Altogether, the standard of exploration is here of a more subtle nature. If we test the sensibility of our retina by the distance of two fixed stars which can just be separately recognised, or if by means of compasses we measure the distance of two points of skin, which can just be distinguished as separate, we employ one and the same method, indeed, but whoever has frequently tried both experiments will be able to judge where the results are more exact, where less ambiguous and fortuitous. Lastly, on the diagnostics of cerebral disease the study of the innervation of the retina has exercised a most considerable influence. I will only advert to the subject of temporal and equilateral hemiopia, from which, with due consideration of the accompanying symptoms, we often determine the nature and seat of an intracranial process.

Are we, then, again to comprehend in one expression the advantages flowing from the perspicuity of the ocular functions, we find them in the close amalgamation of pathology and physiology, just as heretofore we noticed the intimate concourse of clinical and post-mortem observation as characterising the pursuit of ophthalmology. Since this harmonious co-operation, however, will be admitted to be the highest object of a true and potent art of healing, it follows that ophthalmological studies are eminently fitted to lead the van of progress.

Penetrated with this truth, we are most anxious to encourage propensities for such study; but far from desiring that the beginner, standing, as it were, on the threshold of Medicine, should venture on the occupation with a subject so complex and requiring so much preparatory knowledge, we do advise that the thoroughly trained student, conversant with the tendencies of Medical science, should go to sharpen his senses and exercise his thinking faculties in this devoted though minor temple of observation.

As is the fate of all specialities, ophthalmology also has been reproached with its separation from Medicine. This reproach can only apply to that degenerated specialism which forgets that the organ has its root in the organism, and that the mechanism of the former cannot be successfully explored without an insight into the life of the whole. But the reproach does not affect those special studies which, on the foundation of the great organic science, consistently arise, and the results of which redound again to the growth of the mother science. That with the present dimensions of Medicine, its progress mainly depends on such special studies, is a fact sufficiently confirmed by the annals of the science, and every day and everywhere attested by the voice of the public.

As regards, finally, the academical position which ophthalmology is entitled to occupy, this can no longer be a matter for doubt. We can well understand that in a time overflowing with requirements of the most multifarious order, not every claim, however solid, can be satisfied, and in this we are willing to see the reason why, just in our Prussian country, the want of a distinct representation of ophthalmology at the Universities is yet so imperfectly supplied; but we would be at a loss to understand how a question could be raised now-a-days as to the real necessity of such representation. It is more than half a century since the revered Beer mounted the first chair for ophthalmology, and nearly as long since a generally acknowledged want caused professors of ophthalmology to be appointed at all the Universities of Austria. What has become of ophthalmology since? Surely it is a difficult matter to define the measure in which the material of knowledge increases, yet if we assume it to have increased tenfold in ophthalmology, we trust we shall not be charged with exaggeration by those competent to judge. Were we to assume, however, that since the period when the necessity for separate academical representation was generally admitted at the nursery of German ophthalmology, the capacity of our Medical colleagues has likewise increased twenty times, so as to enable them to represent still another most comprehensive discipline besides ophthalmology—we say, were we to assume this, we should at all events not be deemed to have progressed in modesty since the days of our deserving forefathers. One example may serve to give an approximate idea of the augmentation of material in ophthalmology. The chapter on diseases of accommodation and refraction was, no longer than twenty years since, generally treated in a few pages, or, at most, a few dozens of pages. Two years ago, a man, the clearness and precision of whose style is known to the world, published a book on this subject, which in extent somewhat exceeds the size of many treatises on special pathology and therapeutics, whilst yet casuistic matter is but most charily admitted in the work; this, moreover, is written in English, a language which necessitates, as much as it favours, conciseness. And if men like Donders and William Bowman, who, after having, with the impulse of genius, sounded the depths of Medical science, betook themselves to ophthalmological studies—if they admit that now-a-days it is no easy task for any one to master the whole science of ophthalmology, the academical average minds—*sit venia verbo*—for whose capacity the plan of lectures is devised, will have to abstain from the venture of teaching with one corner of their brain the present ophthalmology, and with the bulk another discipline.

The position which I am here defending is, I believe, one generally admitted among the Profession in Germany. But in France there are still Surgeons who do not flag in their attacks upon the separate study of ophthalmology, and in whose opinion, though sufficiently proved to be untenable by their own ophthalmic performances, yet ignorance and indolence are here and there still content to acquiesce.

Here, in this worthy school, ophthalmological studies, so long as I can remember, have met with a lively response and often an enthusiastic reception. For the continuance of this spirit vouches the flourishing state of the institution which owes so much to the protection of our beloved king, the benevolent interest of the curator, and the indefatigable industry of the Board of Directors, who are unremitting in their exertions to perfect and extend the plan of studies. Thus we may trust that these halls, over which a history of seventy years sheds its lustre, will ever send forth men of thorough culture, and fitted for original labour, to the honour of our exalted science and the glorification of the sacred art of healing. Let that happy augury be the crowning sentiment of this festive day.

Errata.—P. 578, col. 2, line 27 seqq., read:—"It is especially the deficiency in perseverance of many myopic eyes, and the rapid increase of myopiæ, that have found their explanation in such derangements of the dynamic equilibrium, by the proper treatment, and, chiefly, by the operative removal of which we become enabled," etc.

HORSE BEEF.—The working men of London are promised horse beef at from 2d. to 6d. per pound. French cookery has made it "go down" in Paris; we doubt, however, its success in London. The starter of the proposal is a Frenchman, M. Susanne. Our Paris correspondent assures us that it is very tough.

ORIGINAL COMMUNICATIONS.

ON THE

DISTINCTIVE CHARACTERS OF SOME KINDS OF NON-LIMITED INFLAMMATIONS (DIFFUSE) AND THE LEADING PRINCIPLES OF TREATMENT DEDUCED THEREFROM.

By J. H. JAMES, F.R.C.S., etc.

The characters of these differ essentially from those of the limited kind ; in the latter there is a constant effort to set up a barrier which shall prevent the indefinite extension of the disease, and this is connected with the effusion of organisable lymph.

But there is another subject which deserves consideration—and that is, the disposition of the nerves to counteract or promote the tendency to spread—a subject which has engaged comparatively little attention. This can only be dealt with by the process of reasoning, for no investigation of themselves, however minute, is likely to throw light on this subject. But I may mention a very striking circumstance which seems to establish the fact as highly probable—namely, in erysipelas "a spreading inflammation" seems to be propagated rather than opposed by the disposition of the nerves, for before inflammation in its true sense takes place the skin to a considerable distance becomes tender to the touch. Now this does not proceed from the mere peculiarity of the skin ; for if we take the case of a scald or burn (which produces more decided inflammation), yet that inflammation does not spread, which it would do if it were merely an affair of tissue.

The essential difference between the spreading and the limited inflammations is, that there is in the latter a constant struggle to confine the diseased action within certain limits, and to protect the system at large from contamination ; whereas, in the spreading inflammations, whatever struggle there may be, it is too apt to fail before the superior influence of the disease itself. From the want of a barrier, these spreading inflammations may rapidly occupy a large portion of the body, may corrupt the circulating fluid, may be repeated in distant parts, and, from the indefinite extent of the danger and its rapid extension, produce a great degree of constitutional alarm. Time, which is a great element in every case, and which in limited inflammations is afforded to a considerable extent, in these, on the contrary, is too often denied, and if the immediate moment is lost when we may successfully combat them, it often happens that it is never again afforded.

The term which is applied to many of them (diffuse) again marks an essential difference in the processes. Lymph around their margin, and pus in the centre, are characteristic of limited abscesses ; but extensive effusion of serum and sero-pus are the common results of the spreading inflammations.

Limited inflammations are, with a few exceptions, the result of constitutional causes ; but these may be either the result of such causes, as in the various forms of erysipelas, or may be produced by external irritants, as in the case of inflamed absorbents, either with or without poison being added or by infection, in which they remarkably differ from the limited, or may be produced by extensive external injuries, as in the case of limbs crushed or lacerated, where the inflammation, which often spreads rapidly from the disorganised part in all the different tissues, and produces extensive effusion of serum into the whole cellular structure of the limb, while the skin itself is less rapidly invaded ; so that a Surgeon looking at that limb only might be deceived by supposing that the mischief is much less than it really is—a mistake which will at once be corrected by comparing it with the other, which would show the amount of tumefaction.

A few words on the cases from injuries. The state of the system, and especially of the blood, produced by the injury itself, reacts upon the part, and greatly increases the mischief : and this I conclude from the following circumstance—namely, that if a mangled limb be removed, even before inflammation be commenced, and the amputation be performed in sound parts, yet the injury inflicted by the accident, in a large proportion of cases, shall have produced such an immediate effect upon the system, and, I believe, so disorganised the blood, as to produce destructive inflammation in the stump ; and hence a similar train of symptoms occur as would have taken place had the limb been actually severed in an injured part ; and hence the frightful mortality after amputations where the lower limbs are concerned.

In the limited inflammations the condition of the skin affords the most material indication of treatment. In these inflammations, the condition of the skin is subordinate to the extension of the inflammation to the deeper-seated tissues of the limb.

The widely spreading disease renders the treatment required much more complicated. We have here not one abscess well limited, but many collections of matter diffusing themselves extensively into the various structures : the skin may load and be tense, but does not thicken in the remarkable way described in limited abscesses. We can readily detect the point where matter exists, and not a moment should be lost in giving it vent, which prevents their burrowing, for, no limiting barrier existing, they multiply to such an extent as to undermine a whole limb, or to form large collections in the chest or side. In one case from anatomical inflammation, where there was a long conflict between life and death, I had to make no less than eleven openings in the hand, forearm, and upper arm, and have the satisfaction of knowing that the subject is now alive and in possession of a very useful limb.

These spreading inflammations are frequently the result of the peculiar physical condition of the part in which they commence, and they do not necessarily imply any previous disorder of the constitution or morbid contamination of the blood. Thus an inflammation may begin in the theca of one of the tendons from a constitutional cause, but it may also from a prick of any kind ; in both it spreads, simply from the peculiarity of structure, the inflammation running along the membranous capsule, while the tight theca and fascia binding it down produces those formidable results known as paronychia agralis ; and in the end there is little difference between the two—that is, those arising from accident, and those from the constitution.

Vessels are frequently the subject of spreading inflammation, the absorbents particularly. This may be either from simple irritation or from the addition of morbid poison ; in both it is rapidly communicated to the adjacent skin and cellular membrane ; in the former kind often arrested by lymphatic glands ; in the latter, producing rapid and extensive effusion of a serous character, at the same time also tainting the constitution so speedily that it has been known to produce death in twenty-four hours, the frightful case to which so many Medical men have fallen victims.

Veins also frequently inflame, as from wounds in bleeding, or the irritation of morbid secretions in some puerperal cases, both not unfrequently combatted by the adhesive process, as in the phlebitis from venesection, or in the phlegmasia dolens, in cases of inflamed uterine veins, but it also not unfrequently passes towards the heart, thus inducing true pyæmia.

Arteries, on the contrary, have a remarkable power of producing the adhesive inflammation, probably from their superior nervous and vascular supply. Without this, almost every wound would prove fatal from hæmorrhage. They sometimes are the subjects of spontaneous limited inflammation, a remarkable instance of which I will mention. Some years ago I was sent for to Weston-super-Mare to see a lady who had some very distressing and anomalous symptoms in her right leg and thigh, which came on shortly after taking too long a walk. When I saw her, the superficial femoral from the origin of the profunda down the course of the thigh, had been converted into a solid and painful cord, the limb being supplied by the profunda. This lady I saw, after a considerable interval, in consultation with an eminent Physician and Surgeon in London, who recognised the case as I have stated it. The other limb has been subsequently, but slowly attacked in the same way. I mention it, as such cases are rare.

I have confined myself to speaking of external inflammations, whether limited or otherwise ; but internal inflammations also seem to range themselves into two classes, mainly analogous in character. Thus in the throat we have quinsy, and also erysipelas, to say nothing of diphtheria. In the lungs we have pulmonic inflammation, with consolidation and often with abscess ; but we have also that much more dangerous form so well described by Sydenham as peripneumonia notha, in which extensive and rapid serous effusion is a leading character. In the pleura, we have more frequently effusion of organisable lymph and adhesions, or it may be large collections of matter (empyema) ; but, on the other hand, we have not unfrequently large sero-purulent effusions. In the abdomen, in like manner, we may have peritonitis, forming adhesions or good pus; or, on the other hand, peritoneal inflammation, with sero-purulent effusion, is by no means uncommon, especially from strangulated hernia, or in the puerperal inflammation. In the latter instance it seems to have a peculiar tendency to generate a poison (if I may be allowed the expression), not only injurious to the patient herself, but also to those who may have the misfortune to be inoculated with it. I infer that such a poison is generated from the fact that its effects are more intensely manifest when it is inoculated soon after death than when its virulence has been destroyed by putrefaction.

I shall not extend this notice of the distinct characters of limited and diffuse inflammation internally.

A few additional remarks may be made as to the treatment of external diffuse inflammations. In those frightful cases which arise from extensive injuries or amputations for these injuries, little indeed can be said of any available means of treatment, the state of the blood being rapidly converted into what O'Haleran has described as cacochymia, and with regard to the other cases, much must depend upon the state of the constitution, whether influenced by morbid poisons or not. No absolute rule can be laid down, as in the case of limited inflammations. Each case must be dealt with according to its peculiar circumstances; but one thing I should say, that in these, as in the cases of limited inflammation, the rule should be to evacuate matter the moment it is ascertained to exist, and this is much less difficult than in the limited abscesses; at the same time, in these so many occur in succession, and all with a tendency to undermine the limb, that the incisions require to be frequently repeated.

Speaking of erysipelas, it is well to observe that, like gout, it is often an effort of nature to free the constitution, and, if so, cannot be safely repelled; on the other hand, it often arises in Hospitals from infection, especially beginning from a sore, however slight, in this respect greatly resembling Hospital phagedæna, the blood, no doubt, being tainted in both forms of the disease, but in this form of erysipelas, local remedies, as well as general, are of high value.

I shall endeavour now to sum up the principal characters of spreading diffuse, or I would rather say, non-limited inflammations, and show the leading differences between them and the limited.

First, the carbuncular abscesses invariably begin below the skin; the non-limited inflammations generally begin in the skin, and while the former are restrained from spreading indefinitely by the disposition to limit, the latter have a prevailing tendency to spread indefinitely along the skin, and so leading it into the tissues below.

In the limited inflammations the matter forms in one cavity; in the non-limited several collections form at different points, so that while the former may be relieved by one opening, the latter may require several.

The limited abscess is a single enemy, but the non-limited arise in succession as to time, so that while one portion may be getting well, it may be spreading with formidable severity in other directions.

In the non-limited inflammation the skin does not thicken in the same degree, nor refuse exit to the pus as in the limited; but, on the other hand, the matter may diffuse itself (before openings are effected) in the deep-seated tissues of the limb or part.

Again, while in limited inflammations there is a barrier set up which prevents the contamination of the blood, in the non-limited this very frequently takes place, and often with fatal rapidity, as in the case of anatomical inflammations, and in the conditions which follow extensive and disorganising injuries.

The limited abscesses are the result of constitutional indisposition; the non-limited may arise in the same way—*e.g.*, idiopathic erysipelas—but also may be produced from external causes, as in the inflammation of the absorbents, whether from simple irritation or morbid poison, also from injuries and thecal inflammation, etc.

The limited abscesses, although they produce a much more noisome pus, yet do not appear to create a poison, as the non-limited inflammations certainly do, as in the case of absorbents inflamed from morbid poison, and in puerperal peritonitis, also in erysipelas, etc.

We seldom see limited inflammation repeated in other parts of the body, but in the non-limited nothing can be more common—in point of fact, if I may so say, they produce what may be called suppurative fever, in which abscesses will form in all parts of the body, frequently in the joints.

If such are the leading differences in the character of these respective kinds, so is the treatment; in the limited kind free openings are paramount, although of course other suitable treatment must also be employed constitutionally and locally. But in the non-limited kind, independently of incisions, the local treatment must be most energetic, and the constitutional has perhaps a paramount claim. But while in the limited inflammations the principles of treatment are the same in all cases, in the non-limited each case must be treated according to its own peculiarities.

But it is not the object of this memoir to go into any detailed account of treatment, but I may just mention *en passant* three important methods now little acted upon, as I believe—viz., Desault's treatment by tartarised antimony, Copland Hutchinson's by incisions to anticipate suppuration, and M. José's, of Amiens, by irrigation, etc. A few more observations will be offered on phagedæna thomo, and what I have ventured on calling resolving inflammations.

ANIMAL TEMPERATURE AFTER DEATH FROM CHOLERA.

By HENRY McCORMAC, M.D.

During the disastrous period of 1832—disastrous as regards the invasion and ravages of cholera—I was Physician to the Cholera Hospital in Belfast. Between some two and three thousand cases of this terrific malady, in the Hospital and otherwise, then passed through my hands. As it may be well supposed, in such an emergency, every means of saving life and retarding death was eagerly grasped at. I gave calomel and opium, along with general diffusible stimuli; I applied counter-irritants to the abdomen and extremities; I contrived a variety of hot-air apparatuses to conjure away, if I could, the terrible chill of death; in some cases, also, I even tried the cold douche, transfusion, venesection, and the sulphate of zinc or antimonial emetics. I believe that I saved a couple of lives or so by means of emetics; and some few persons oppressed with præcordial constriction and great general plethora seemed much the better of partial bloodletting. In general, when I got hold of the patients pretty early, and could have them warmed, the purging, vomiting, and spasms allayed, and realised a good perspiration; after four or five hours' work they did well. Sometimes the cases relapsed; indeed, there was often a tendency to relapse, owing, it might be, to exhaustion, the imprudent exhibition of purgatives, or overloading the stomach with food, the persistence of the poisonous influence, and causes which it was not easy to appreciate.

The serious complication of pregnancy of course subsisted in many instances; and, if the woman were near her term, the results were frequently—nay, too commonly—fatal. In one of these instances a well-made vigorous woman, just at her term, was brought into Hospital, as it turned out, moribund. I was very anxious, if I could, to save at any rate the unborn infant; and I gave notice to my assistants that immediately after the poor sufferer's decease (which then was imminent) it was my intention to perform Cæsarian section. This was accordingly done with all possible care and circumspection, and with the least avoidable delay; but the infant, as I feared, was dead.

Now I perceive, in the *Medical Times and Gazette* of the 17th ult., a statement from the *Medical Record* of New York, by Dr. Nelson, President of the Medical Board for Montreal, to the effect that the viscera of pregnant women in cholera were cold even before death. I can only say, however, in respect of the case which I have given, that this was quite otherwise. The viscera and uterine contents, I particularly noticed, were, as nearly at least as the hand could appreciate, of the natural temperature. How, indeed, could the viscera even find time to chill within the brief period that too often elapses between seizure and death? I performed post-mortems, indeed, in other cases, and found the viscera, when the interval after death was long enough, quite cold. But when the post-mortems were performed speedily after death the viscera were not cold. The bodies, I further observed, exhaled the peculiarly unpleasant fœtor which characterises this terrible and so highly communicable malady, which, so to speak, clove day and night to the fauces and palate, and which, during the continuance of the epidemic, in my case at least, I may say never entirely intermitted.

Belfast.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

CASE OF ADDISON'S DISEASE—DEATH—AUTOPSY.

(By Dr. SYMONDS ROOTES, of Ross.)

We published in our number for August, in our report of cases at Guy's Hospital, a case of Addison's disease occurring in the practice of Dr. Rootes, of Ross, and now we are favoured with the history of another case by the same gentleman. As it bears on our previous report, we give insertion to it in this place. Dr. Rootes remarks "that it is strikingly confirmatory of the views so ably advocated by Addison and Wilks of the connexion between disease of the supra-renal bodies and a peculiar cachexia, marked by discoloration of the skin, extreme feebleness, and loss of nervous and muscular power, without cognisable disease in any organ (as far as we know) immediately necessary to life."

"M. A. T., aged 32, married, without family, was known to me for some time. About four years ago she was a patient of mine in the Ross Dispensary. She described herself as being a laundry-maid, having been a domestic servant, and as having generally had good health. She came to the Dispensary for varicose veins of the left lower limb, and general swelling of that limb. She was then a well-grown, plump, good-looking woman, of a purely blonde complexion, with very light hair and very clear skin. She had some dyspeptic ailments in addition to the swelled leg; these were remedied. An elastic stocking was ordered for her leg, and she soon discontinued attending at the Dispensary, save on one or two occasions, and then not as a patient. I lost sight of her till the 15th of this present month of August, when her mother asked me to see her. This I did, and learnt from her that on or about Christmas she had gone to live in the neighbourhood of Birmingham; that soon after Christmas she had (as she stated) been taken ill of jaundice, for which she was under Medical treatment. She got better, and was married on the 9th of last May. A fortnight after marriage she again was obliged to have a Doctor. She continued to get worse, and at the end of July she came home, and I saw her on the 15th of August, as above. I was immediately struck by her altered complexion; having known her as a pure blonde, I found her as dark as a Creole. She was lying, dressed, on a sofa when I went into her room, and eagerly got up to welcome me, but immediately apologised for the necessity of lying down again, 'she was so weak.' I told her to remain the next morning in bed, when I would see her again. I did so, and carefully interrogated every organ and function. I could find nothing amiss anywhere. She seemed a good deal excited, but pleasurably so at my visit. The same evening her husband came down from Birmingham, and she seemed again excited. At 12 midnight she and her husband were left together. At 2 a.m. she was much excited, and her friends were called up; at 3 a.m. she became comatose, and she died at 7 a.m. of the 17th.

"On the 18th I made an examination of the body. Permission was not had to examine the heart. The body was that of a well-formed woman, certainly not emaciated, and having on the abdomen nearly an inch of subcutaneous fat. The discoloration noticed in life was still evident, more especially in the face, neck, sides of axillæ, pubic and inguinal regions, the hair being everywhere light, and on the pubic region more so, apparently from contrast with the dark hue of the skin. There was a good deal of hypostatic congestion of, and serous exudation into, both lungs, which is common in death by coma. There was a small clot in the right ventricle of the heart; otherwise its cavities were empty. The ovaries and uterus seemed more vascular than usual, and there was a viscid glutinous matter in the cervix uteri, but otherwise there was no disease, no cognisable change of structure in any organ of the chest or abdomen except in the supra-renal capsules."

These were sent to Dr. Wilks for examination, who reported that they showed in a most characteristic manner the advanced stage of Addison's disease, one organ being converted into a cheesy substance, and the other being shrunken into little else than a few nodules of cretaceous matter.

Dr. Rootes further states, in reply to Dr. Wilks, that there was not a single tubercle to be found in the lungs or other part of the body; also, that the patient saw several Medical men in Birmingham, and, amongst others, Drs. Marshall and Russell, but both these gentlemen regret that they have preserved no record of the case.

HOSPITAL FOR DISEASES OF THE THROAT.

PARALYSIS (OF THE ABDUCTOR) OF THE RIGHT VOCAL CORD—DYSPNŒA AND STRIDULOUS BREATHING—PRESSURE ON THE RIGHT RECURRENT NERVE (?) FROM ANEURISM OF THE COMMON CAROTID ARTERY (?).

(Under the care of Dr. MORELL MACKENZIE.

The notes of the following case were furnished by Mr. Wasdale Watson:—

Charles S., aged 55, an engineer, applied at the Hospital April 2, 1863, on account of shortness of breath and slight hoarseness. The symptoms had been coming on for two years, but had become greatly aggravated during the last six months. On making a laryngoscopic examination, it was seen that, on inspiration, the right vocal cord was not drawn outwards, but remained with its inner edge near the median line. There was, in fact, paralysis of the abductor of the vocal cord on this side. This was considered to be due to pressure on the right recurrent nerve, and a careful examination of the neck and chest was made to ascertain its cause. There was no tumour to be discovered, but a distinct bruit could be heard an inch above the right sterno-clavicular articulation, and the pulsation of the artery on this side was much stronger than on the left side.

Remarks by Dr. Mackenzie.—Pressure on the right recurrent nerve has often been observed in connexion with subclavian aneurism, but has been less seldom noticed in carotid aneurism. In this case there are not only negative signs, indicating that the subclavian is not affected—that is, there is an entire absence of pain and œdema in the right extremity, and a corresponding beat of the radial pulses—but there is the positive sign of a bruit in the situation of the carotid. Still the symptoms present might be produced by an enlarged gland or other tumour pressing on the lower part of the carotid artery and on the recurrent nerve. Paralysis of the vocal cords might for practical purposes be divided into (1) bilateral paralysis of the abductors of the vocal cords (paralysis of both crico-arytenoidei postici); (2) unilateral paralysis of the abductor of a vocal cord (paralysis of one crico-arytenoideus posticus); (3) bilateral paralysis of the adductors of the vocal cords (paralysis of both the crico-arytenoidei laterales and arytenoideus); and (4) unilateral paralysis of the adductors of one cord (paralysis of one crico-arytenoideus lateralis and certain fibres of the arytenoideus proprius). Paralysis of the abductors gives rise to stridulous breathing and dyspnœa; paralysis of the adductors to aphonia. Some Physicians believe that pressure on the recurrent nerve gives rise first to spasm, and at a later period to paralysis; but, according to my observations, pressure on the recurrent nerve gives rise to progressive dyspnœa and stridor, the loss of power of the abductor being in proportion to the degree of pressure exercised on, or the amount of disease produced in, the recurrent nerve. Spasm of an abductor would give rise to aphonia, but would prevent the vocal cords being placed in a position which could give rise to stridulous inspiration. But these symptoms—*i.e.*, aphonia and an absence of stridor—are rarely, if ever, found in connexion with pressure on the recurrent nerves. Spasm of the adductors would, it is true, produce both dyspnœa and stridor; but if produced by this cause, these symptoms would be both more intense and more intermittent in character than is found to be the case. Modification of voice and the loss of certain notes in singing are caused by paralysis or spasm of the tensors (crico-thyroidei), or of the laxors of the vocal cords (thyro-arytenoidei), or to a disturbance of the proper balance of these muscles; for though, anatomically speaking, they are opposing forces, they probably both act together in vocalisation. Probably, also, disturbance of the higher vocal functions (if artistic singing may be so called) may be due to an asynchronous action of the two cords The interest of the subject has carried me away from the case under consideration; in connexion with which I have only to observe that, whilst pressure on the left recurrent nerve and consequent paralysis of the left crico-arytenoideus posticus is by no means uncommon, paralysis of the right muscle is very rare. The greater frequency of aneurism of the arch of the aorta than of aneurisms of the innominate or its branches, and the greater frequency of tumours above the aortic arch than in the neighbourhood of the subclavian and carotid arteries, explain this fact.

THE LONDON HOSPITAL.

CASE OF PARALYSIS OF THE VOCAL CORDS—TRACHEOTOMY—DEATH—AUTOPSY—REMARKS.

(Under the care of Dr. HUGHLINGS JACKSON.)

Everyone is familiar with paralysis of parts supplied by the higher motor cranial nerves, but affections of nerves arising from the medulla oblongata have been little studied. In the first place, paralysis of the ninth nerve rarely occurs, and probably the spinal accessory is affected more rarely still. Then the disposition of the spinal accessory is more intricate, and lesions involving its deep origin are more likely to prove fatal at once; finally, it is not easy when aphonia occurs to establish whether it be really due to paralysis of the vocal cords or not. The laryngoscope alone can enable us to decide with certainty, and its use was, in the case we are about to relate, of great value.

No doubt, in the following case the disease was central, although an ordinary examination after death did not discover any morbid change. It is well known that symptoms, undoubtedly of central origin, are not in the proportion to post-mortem changes one would *à priori* think them to be. Thus we have known a case in which, with paralysis of the motor —not the sensory—division of each fifth nerve, with wasting of the paralysed muscles, nothing wrong was found post mortem, even after an examination on Clarke's method. This patient had had double paralysis of all the motor cranial nerves which supply parts about the head.

The relations of the spinal accessory nucleus to the lingual are of great interest in our studies of affections of the geographically allied—although physiologically distinct, things—voice, articulation, and swallowing. In the first volume of the *London Hospital Reports*, p. 361, Dr. Hughlings Jackson reports a case in which there was paralysis of one vocal cord, one side of the tongue, and of one side of the palate—each of the same side. The condition of the larynx was ascertained by Dr. Morell Mackenzie, by aid of the laryngoscope. Lockhart Clarke's researches give a reasonable explanation of the concurrence of these carelessly assorted symptoms. Dr. Hughlings Jackson gives a *résumé* of Clarke's researches bearing on the case. In the group of symptoms first described by Duchenne, very conveniently called by Trousseau *paralysie labio-glosso-laryngée*, no doubt the disease is usually central. There would, of course, be all varieties of combination of symptoms, according to the exact part of the medulla affected, and thus the name would vary with each case. Such names are only useful so far as they serve us, and can be altered for particular cases, but worse than useless when we serve them, and try not to see what a case is, but whether it be a case of *paralysie labio-glosso-laryngée* or not.

In speaking of the spinal accessory nerve in connexion with the larynx, the part which joins the pneumogastric is meant. The following quotation from Dr. Hughlings Jackson's article above referred to gives a brief account of Lockhart Clarke's views on the deep connexions of the two nerves commonly called by one name :—

"Lockhart Clarke has remarked (Beale's *Archives*, No. iii.) that, according to Bendz and Claude Bernard, the *lower* rootlets of the spinal accessory nerve are collected into the *external* branch which supplies the trapezius and sterno-mastoid muscles; while the *upper* rootlets go to form the *internal* branch which joins the pneumogastric, and is through it distributed to the larynx, pharynx, and palate. Now, the *lower* roots forming the external branch have been shown by Lockhart Clarke to arise, in common with the anterior roots of the spinal nerves in the cervical and brachial regions, from the anterior grey substance of the spinal cord; while the *upper* roots, forming the *internal* branch of the spinal accessory, have an entirely *different* and a *double* origin—one from its own special nucleus, continuous *behind* the central canal with that of the pneumogastric; the other from the proper nucleus of the lingual or hypoglossal nerve in front of the canal (see *Phil. Trans.*, 1858, part 1, p. 252). On the other hand, some of the fibres of the lingual nerve *appear* to take their origin from the spinal accessory nucleus (*Phil. Trans.*, 1858, p. 253, and Plate xvii., Fig. 35)."

Of course, the spinal accessory nerve may be affected by disease outside the medulla oblongata, as by syphilitic disease of the pia mater. Dr. Hughlings Jackson (*Royal Lond. Oph. Hosp. Rep.*, vol. v., part i., January) alludes to such a case in a footnote. The object of the allusion was to point out that the laryngoscope, like the ophthalmoscope, helps us both as Scientific Investigators and as Practitioners. In a case undoubtedly syphilitic, attendant aphonia might be put down to actual syphilitic disease of the larynx as the easiest way of explaining it. In the case referred to, however, Dr. Morell Mackenzie found the larynx structurally healthy, but discovered paralysis of one vocal cord. The autopsy showed that the paralysis was due to disease affecting the rootlets of the spinal accessory within the cranium, and the larynx was healthy, with the exception that the crico-arytenoïdeus posticus muscle was partially atrophied. This muscle Dr. Mackenzie had during the patient's life blamed for the derangement of the vocal function of the larynx.

T. T., a labourer, aged 35, was admitted into the Hospital December 5, 1864, on account of great difficulty of breathing. His general appearance gave no indication of constitutional disturbance, and his body was fairly nourished; his tongue clean, bowels open, and appetite good. The thorax appeared of natural shape, size, and capacity, and was normally resonant; the respiratory murmur was distinct, and heart sounds healthy. Pulse about 80; very compressible, and corresponding at each wrist. Each inspiration was incomplete, apparently accomplished with great difficulty, and accompanied by a crowing or croaking noise; expiration was normal. His memory was bad, and he appeared dull. Urine, sp. gr. 1020—35; no albumen, but sugar freely. He was unmarried, and, though of rather intemperate habits, he had always enjoyed pretty good health; he had had primary venereal sores, but no secondary syphilis. About two years previously, whilst making a great muscular exertion, he suddenly experienced extreme difficulty of breathing; at the same time a noise was heard on inspiration. This difficulty of breathing had remained more or less ever since, being much increased when he exerted himself or laid himself down. About six months before he came under observation, he had one day been seized with sudden giddiness and confusion of ideas, and had fallen down without becoming quite insensible. For about a week after this he was very weak in the left leg, in which limb he had also a sensation of numbness. He had not experienced other symptoms of paralysis or anæsthesia.

Dr. Hughlings Jackson examined the man with the laryngoscope, and although he (Dr. Jackson) tells us he had little skill in using this instrument, it was in this case very easy to see the two cords flapping together. It was clear that both cords were paralysed. He, however, wishing for more exact information, sent the patient to Dr. Morell Mackenzie. The following is Dr. Morell Mackenzie's report:—

"1. *Inspiration.*—At the commencement of the act the vocal cords are separated to the extent of the rim of a sixpence; at its conclusion they are approximated.

"2. *Expiration.*—In quiet expiration the vocal cords remain approximated; in forced expiration they separate to the extent of the rim of a penny.

"3. *Vocalisation.*—This is not materially affected, as the vocal cords always remain in the position suitable for the production of sound. There is no organic disease of the larynx—that is to say, there is no tumour, ulceration, or cicatrix to interfere with the action of the cords. The mucous membrane is healthy. I regard the case as one of paralysis of the crico-arytenoidei postici, dependent on disease situated within the cranium. It might, of course, be due to pressure on both the recurrent nerves, but it is highly improbable that both the nerves could be pressed upon in the chest; whilst there is no reason to believe that the nerves are pressed upon between the œsophagus and trachea—that is to say, there is no dysphagia. Of course the case might be one of peripheral paralysis, and there are several features in the case pointing to general paralysis. I think that tracheotomy ought to be at once performed, as I fear the patient may die if the operation be not done."

December 16.—He now makes more noise. He says he slept badly, and that the disturbance in his breathing awoke him. The other patients in the ward were also greatly disturbed by the noise in his breathing. The noise is only in inspiration, and he spontaneously remarked that his only "difficulty in breathing was in getting air into the chest, not in getting it out." The stridulous noise was certainly greater, and prevented the respiratory sounds from being heard; the expiratory murmur could be clearly recognised. The noise ceased when he talked, but he had to stop talking for it to begin again, or to breathe. He was weak in both legs, especially in the left one, but his arms were not affected. He complained of numbness in the legs. His voice was broken and hollow, but not thick or hoarse.

January 1.—He had a gouty attack of the left wrist, which gradually subsided. The patient was usually about the ward, but towards the 23rd his breathing became more difficult, and on the morning of that day, the patient being almost asphyxiated, laryngotomy was performed by Mr. Colman, the House-Surgeon. Though there was considerable venous hæmorrhage, the patient rallied well from the operation, and when seen again by Mr. Colman at midnight his symptoms seemed to be most favourable. Mr. Colman was called up the next morning at 5 a.m., and found the patient dying, or rather dead. Artificial respiration proved of no avail. It was Mr. Colman's opinion that "the patient had been dying of asphyxia for some time previously to his seeing him, as he found the tube almost entirely out of his trachea and filled with viscid gummy mucus, and there was extreme lividity of the face and lips."

Autopsy.—The brain, medulla oblongata, and other parts of the body were apparently healthy. The heart and aorta were carefully examined.

Examination of the Larynx by Mr. Walter Rivington.—On looking into the larynx the vocal cords were seen to be in close approximation, leaving only a fine fissure in the centre, admitting the point of a scalpel. Gentle separation of the cords showed a blood-stained film of mucus occluding the rima glottidis; but this was dispelled easily by a moderate current of air. The mucous membrane above the glottis was perfectly sound to the naked eye, and neither injected nor covered with accumulated secretion; only in the space on the left side between the arytenoid epiglottidean fold and the ala of the thyroid cartilage was there any collection of mucus, and nowhere was there anything like a foreign body visible. Tracheotomy, or rather laryngo-tracheotomy, having been performed (for the cricoid cartilage was divided), there were indications of inflammation of the lining membrane both above and below the opening made in the air-tube. Below spots of lymph dotted its surface, and above vascular injection extended up to the vocal cords. Dissection of the pneumogastric nerves on each side, with the course and distribution of their superior and inferior laryngeal branches, threw no light on the cause of death; for to all appearance they had not been the subjects either of irritation, or of pressure, or disease. Nothing unusual was met with in tracing the recurrent nerves, with the exception of the left vertebral artery arising from the arch of the aorta between the left common carotid and left subclavian trunks. Proceeding to the dissection of the muscles, I removed the mucous membrane which conceals the arytenoid and posterior crico-arytenoids. The former was red, plump, well nourished, and normal; the latter were pale, thin, atrophied, and, as far as I could judge, incompetent to balance the power of the former when combined with its coadjutors, the lateral crico-arytenoids. The other muscles—viz., the crico-thyroids, thyro-arytenoids, and lateral crico-arytenoids—appeared to be sound, but none of them were fine specimens. In thus pronouncing the posterior (especially the left posterior) crico-arytenoid muscles atrophied, some subtraction must be made for the generally inferior development of the laryngeal muscles, and a little for immersion in spirit for four-and-twenty hours; but with every fair deduction a comparison of the muscle in question with its neighbours and with the corresponding muscle in other dissections, forbids the adoption of any other conclusion. Standing positively on this ground, we can satisfactorily (in one sense at least) account for death, whether we consider the atrophy primary and independent, or a secondary and dependent phenomenon. If the atrophy was merely a local disease, earlier tracheotomy might have prolonged life; if it was dependent on cerebral mischief (as the slight accompanying paralysis indicated), such a success would have been but problematical. On either supposition, the increasing difficulty of opening the glottis during life, ultimately necessitating tracheotomy, is explained by the progressive atrophy of the muscle of inspiration.

UNIVERSITY COLLEGE, LONDON.—At a meeting of the Council on the 9th inst. Mr. Christopher Heath, F.R.C.S. Eng., of Cavendish-place, was appointed to the offices of Assistant-Surgeon to University College Hospital, and of Instructor in Operative Surgery in University College.

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Medical Times and Gazette.

SATURDAY, DECEMBER 15.

◆

THE CHOLERA EPIDEMIC IN LONDON.

ONE death only from cholera was registered in London last week—that of a child in the district of Poplar—and thus, so far, at least, as the present year is concerned, we may safely assume that we have arrived at the vanishing point of an epidemic which, in twenty-three weeks, has caused the deaths of 5518 persons within the area of the metropolitan districts. Whether it is really dead, or only sleeping, the wisest amongst us cannot know. While, therefore, we felicitate ourselves upon the relief which its departure affords, it is most earnestly to be hoped that an eye may be kept on future possibilities, so that, if the unwelcome guest return, we may not be, as it has so often found us, unprepared. Our foe works, to some extent, in the dark. We know generally the conditions which give us the advantage, but there are powers of combination, and forces brought into play against us whose operation we do not fully apprehend; hence the issue, which often appears almost purely fortuitous, is, after all, the result of design.

> "All nature is but art unknown to thee;
> All chance, direction which thou canst not see."

We have from time to time posted up the account of the epidemic's progress, and now that its course is ended, the Registrar-General gives us a summary view of his observations upon it, as compared with its predecessors.

In a former number of this journal (p. 446) we gave a table showing the weekly progress both of cholera and diarrhœa in the three epidemics of 1849, 1854, and 1866, for corresponding weeks up to the date of our then current issue. We subjoin the numbers for the subsequent weeks, so as to complete the comparative series.

Weeks of the Years.	CHOLERA.			DIARRHŒA.		
	1849.	1854.	1866.	1849.	1854.	1866.
42nd (Oct. 20) .	41	163	144	51	78	55
43rd . .	25	66	112	42	46	32
44th . .	11	31	73	31	33	28
45th . .	6	23	67	25	35	33
46th . .	8	12	32	21	31	22
47th . .	2	8	8	16	21	26
48th . .	1	7	3	17	19	15
49th (Dec. 8) .	—	5	1	17	19	10

In 1849 the estimated population of London was 2,286,635, and the deaths in the whole of that year from cholera were 14,137, from diarrhœa 3899, and from cholera and diarrhœa together 18,036. In 1854 the population had increased to 2,504,300, and the deaths from cholera in 52 weeks were 10,738, from diarrhœa 3147, and from both diseases 13,885. In 1866, out of an augmented population of 3,037,991, the deaths from cholera in 23 weeks were 5548, from diarrhœa 2692, and from both diseases 8240. The distribution of the three epidemics over each of the five groups of districts was as follows:—

	CHOLERA.		
	1849. (52 weeks).	1854. (52 weeks).	1866. (23 weeks).
LONDON . . .	14,137	10,738	5,548
West districts. .	1,223	2,051	185
North ,, . .	956	779	419
Central ,, . .	1,724	644	329
East ,, . .	3,097	1,509	3,909
South ,, . .	7,137	5,755	706

	Diarrhœa. 1849.	1854.	1866.
London . . .	3,899	3,147	2,692
West Districts. .	486	439	366
North ,, . .	675	508	548
Central ,, . .	550	397	364
East ,, . .	882	683	825
South ,, . .	1,306	1,120	589

The remarkable difference in localisation which the recent epidemic exhibits as compared with those of 1849 and 1854, will, however, be more correctly appreciated in the subjoined calculated ratios of deaths to population :—

Proportional number of Deaths to 10,000 *living.*

	Cholera.			Diarrhœa.			Cholera and Diarrhœa.		
	1849.	1854.	1866.	1849.	1854.	1866.	1849.	1854.	1866.
London . .	61·8	42 9	18·3	17·1	12·6	8·9	78·9	55 5	27 2
West districts	33·8	50 8	3·6	13·4	10·9	7·2	47 2	61·7	10·8
North ,,	20·4	14·7	6·1	14·4	9·6	8·0	34 8	24·3	14·1
Central ,,	44 0	16·4	9·2	14 0	10·1	10·1	58 0	26·5	19·3
East ,,	66·0	29 3	64·3	18·8	13·3	13·6	84·8	42 6	77·9
South ,,	120·1	86·8	8·1	22·0	16 9	6·7	142·1	103·7	14·8

In applying these results we must not lose sight of the lesser duration of the epidemic of 1866 ; for instance, in 1849 and 1854 the deaths for the whole year are taken, while in 1866 the period of observation is less than half a year, and therefore the *annual* mortality rate from cholera in 1866 for London differs little from that of 1854. The Western districts show a decline on the former cholera death rates, which is most gratifying in so far as it is due to increased vigilance in sanitary matters, but the change in the relative positions of the East and South districts is undoubtedly the great fact which the Registrar-General's returns disclose in connexion with the recent epidemic. If the cholera had extended over 52 weeks this year instead of 23, the mortality in the East districts would have been more than twice as great as in 1849, and nearly six times as great as in 1854 ; while the districts south of the Thames, which were visited so exceptionally in both the former epidemics, have this year, save in one or two instances, been singularly free from the disease.

In dealing with the several districts, the Registrar-General has grouped them according to their water supply, so as to show what effect may be attributed to a difference of source or quality, after making allowance for other considerations.

No. of Districts.	Companies furnishing the greater part of the Water Supply.	Persons to an acre in 1866.	No. of Deaths in 23 weeks to 10,000 persons living. Cholera.	Diarrhœa.	Cholera and Diarrhœa.
37	London	39	18 3	8·9	27·2
14	Districts supplied by the Thames Water Companies, viz :—				
	5 by Grand Junction, West Middlesex, and Chelsea	74	3·4	7·9	11·3
	9 by Southwark and Lambeth . . .	90	5·8	7·4	13·2
18	Districts supplied by the Lea Water Companies, viz. :—				
	9 by New River, drawing its water from upper part of Lea River, Chadwell Spring, and other sources . . .	167	7·6	9·5	17·1
	6 by East London from Old Ford Reservoir	130	79 2	15·1	94·3
	3 by New River and by East London from Lea Bridge	161	12·8	7·5	20·3
3	Districts supplied by the Grand Junction, New River, and West Middlesex Companies .	99	5 3	7·3	12·6
2	Districts supplied mainly by the Kent Company from artesian wells, and partially by Southwark and Lambeth Companies . .	16	14·3	5·0	19·3

Of the five districts supplied with water by the Grand Junction, West Middlesex, and Chelsea Companies, the following are the death-rates from cholera to every 10,000 of their inhabitants :—St. George, Hanover-square, 1·6 ; Chelsea, 3 5 ; Westminster, 6·2 ; Marylebone, 2·9 ; Kensington, 3·7.

Nine districts on the south side of the Thames were supplied by the Southwark and Lambeth Companies :—Newington, 2·6 ; St. George, Southwark, 7·0 ; Wandsworth, 4·9 ; Camberwell, 5·9 ; Rotherhithe, 9·0 ; Lambeth, 6·5 ; St. Olave, Southwark, 8·5 ; Bermondsey, 5·6 ; St. Saviour, Southwark, 7·4.

The New River, taking 82 per cent. of its water from the River Lea, supplies nine districts :—St. Martin-in-the-Fields, 4·2 ; London City, 5·3 ; Strand, 6·8 ; Islington, 4·4 ; Holborn, 5·6 ; St. Luke, 15·9 ; St. Giles, 9·6 ; Clerkenwell, 11·1 ; West London, 11·8.

The death-rate in the six districts supplied by the East London Company from their Old Ford reservoir is conspicuous throughout by its excess :—Bethnal-green, 63·1 ; Mile-end Old Town, 65·2 ; St. George-in-the-East, 92·7 ; Poplar, 85·1 ; Whitechapel, 77·5 ; Stepney, 110·9.

In three districts supplied jointly by the New River and East London Companies, the death-rate was intermediate :—Shoreditch, 12·7 ; Hackney, 11·7 ; East London, 15·9.

Of the five remaining districts, the following are the death-rates :—Hampstead, ·8 ; St. James, Westminster, 4·4 ; Pancras, 6·0 ; Lewisham (including Charlton), 6·1 ; and Greenwich (including Deptford and Woolwich), 19·5.

Whatever diversity of opinion there may be about the causation of cholera—whether air or water is the chief agent for its propagation—few, we imagine, will differ with the Registrar-General in the remarks with which he closes his review of its history as written in the records of his department :—

> "In London cholera has not only been less fatal than it was in previous epidemics, but its fatality has been reduced almost to insignificance in several of the districts by the mere force of hygienic science, before which the destroyer has retreated step by step ; never, however, losing an opportunity of asserting its full power wherever negligence or ignorance presented an opening, either in England or in the cities of the Continent of Europe.
>
> "Cholera obeys certain laws, and the knowledge of those laws renders its subjugation in Europe practicable, provided all the people as well as the governments will co-operate in the work. This, it may be hoped, will be done, and it only remains for the metropolis of this empire to hold its own, and to keep the lead."

ELECTIONS TO THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS.

At the last election of Fellows into the Council of the Royal College of Surgeons, notwithstanding all the agitation of the opponents of the present system of personal attendance in Lincoln's-inn-fields on the day of election, it is stated that out of the 376 Fellows of the College who are members of the British Medical Association (by whose organ the agitation was commenced), only *ninety-two* voted, and of this number no less than forty-one were Fellows by *examination*, leaving only sixty-four who had not recorded their votes ; whereas, out of the 271 Fellows by *election* only fifty-one attended the annual meeting. There is no doubt but that the Fellows by examination are those who take the deepest interest in the affairs of the College. In commenting upon this subject in December last,(a) we stated that "it is out of this body the Surgeons of the future must come—the Hospital Surgeons and lecturers of the coming generation." We might have added the councillors also, for the suggestion then made in this journal is likely to be adopted at the next annual election. The Fellows by examination feel that the time has now arrived when their class should have its representatives in the Council of the College of Surgeons. Acting on this feeling, the gentlemen who so successfully defeated the agitation of the Association last year have fixed on four or five Fellows by examination, any one of whom would do honour to the electors and to the College of Surgeons. Of the safe return of one of the gentlemen named to us there can be no doubt. Perhaps it would be impossible to select a candidate so deservedly popular as the Fellow in question, who, by his valuable contributions to anatomical science, may be said to have chalked out a royal road to the acquisition of a knowledge of anatomy, and who moreover fills the appointment of Surgeon to one of our large metropolitan Hospitals.

(a) Vide *Medical Times and Gazette* of December 16, 1865, "Voting by Proxy."

The following return, in continuation of the one published last year, will be read with interest; it has been compiled with great care and a considerable amount of labour:—

Return relating to Election of Fellows into the Council of the Royal College of Surgeons of England in July, 1866.

Counties.	Members of the Med. Assoc.	Fellows of the Roy. Coll. of Surg.	Fellows by Examination.	Fellows by Election and Honorary.	Fellows by Examination voting.	Fellows, Honorary, voting.	Fellows by Examination not voting.	Fellows, Honorary, not voting.
Bedfordshire	21	2	—	2	—	—	—	2
Berkshire	22	4	1	3	—	—	1	3
Bucks	24	1	—	1	—	—	—	1
Cambs	32	5	1	4	—	—	1	4
Cheshire	71	8	1	7	—	—	1	7
Cornwall	26	2	—	2	—	—	—	2
Cumberland	6	1	—	1	—	—	—	1
Derbyshire	43	8	2	6	—	1	2	5
Devonshire	66	7	1	6	—	—	1	6
Dorsetshire	11	—	—	—	—	—	—	—
Durham	52	7	—	7	—	—	—	7
Essex	18	—	—	—	—	—	—	—
Gloucestershire	106	17	6	11	—	2	6	9
Hants	40	7	2	5	1	—	1	5
Herefordshire	11	1	—	1	—	1	—	—
Herts	19	4	1	3	1	—	—	3
Huntingdonshire	13	2	1	1	—	—	1	1
Kent	138	20	4	16	—	7	4	9
Lancashire	229	29	3	26	2	4	1	22
Leicestershire	34	3	1	2	—	2	1	—
Lincolnshire	47	5	1	4	—	—	1	4
Middlesex	322	106	46	60	27	29	19	31
Monmouthshire	7	1	—	1	—	—	—	1
Norfolk	31	6	3	3	—	—	3	3
Northampton	41	8	1	7	1	—	—	7
Northumberland	24	2	—	2	—	—	—	2
Notts	25	1	—	1	—	—	—	1
Oxfordshire	7	—	—	—	—	—	—	—
Rutlandshire	2	—	—	—	—	—	—	—
Shropshire	77	11	2	9	—	—	2	9
Somersetshire	101	11	5	6	2	—	3	6
Staffordshire	44	4	2	2	—	—	2	2
Suffolk	50	7	2	5	—	—	2	5
Surrey	82	17	6	11	5	4	1	7
Sussex	59	12	4	8	1	—	3	8
Warwickshire	139	16	1	15	1	1	—	14
Westmoreland	1	—	—	—	—	—	—	—
Wiltshire	20	2	1	1	—	—	1	1
Worcestershire	40	6	1	5	—	—	1	5
Yorkshire	144	22	5	17	—	—	5	17
Anglesey	5	—	—	—	—	—	—	—
Brecknockshire	4	1	—	1	—	—	—	1
Cardiganshire	2	—	—	—	—	—	—	2
Carmarthenshire	5	2	—	2	—	—	—	1
Carnarvonshire	10	1	—	1	—	—	—	2
Denbighshire	20	2	—	2	—	—	—	1
Flintshire	14	1	—	1	—	—	—	—
Glamorganshire	18	—	—	—	—	—	—	—
Merionethshire	1	—	—	—	—	—	—	—
Montgomeryshire	11	1	—	1	—	—	—	1
Pembrokeshire	1	—	—	—	—	—	—	—
Radnorshire	3	—	—	—	—	—	—	—
Channel Islands	4	1	—	1	—	—	—	1
Scotland	50	2	1	1	—	—	1	1
Ireland	24	—	—	—	—	—	—	—
Foreign countries	39	—	—	—	—	—	—	—
Totals	2456	376	105	271	41	51	64	220

“A GLOOMY RITE!”

Readers of the *Medical Times and Gazette* do not need to be told our opinion on the operation of clitoridectomy (a). In fact, complaint was made that our remarks passed the due limits of criticism, and were animated by personal hostility to Mr. Brown. Such hostility we absolutely disclaim. We have not, and never had, a word to say upon the personal character or motives of the Surgeon who has made this operation so unfortunately prominent. Our criticisms were, and are, directed against a proceeding of which not only every journalist but every Practitioner is bound to form an opinion. We let the matter drop for a time, for the purpose of letting any prejudice die out that we might be supposed to have raised—till a time should come when we might again discuss it calmly, impersonally, and strictly on its own merits. That occasion has now come. The operation was last week the subject of a very animated discussion at the Obstetrical Society. This must be looked upon as a disagreeable necessity. It was right that this Society especially should be forced to contemplate and pass an opinion upon this repulsive subject.

It is claimed for the operation by its supporters that it cures idiocy, prevents mania, makes the barren woman fruitful, arrests menorrhagia, destroys the tendency to masturbation, and inclines the frigid woman to marital embraces, besides being almost a specific against hysteria, epilepsy, and other most grave maladies—and this on the ground that they are caused by self-abuse. But let us consider the nature of the operation. Perfect clitoridectomy—by this we mean the removal of the whole of the clitoris, and such is the operation contended for — takes away the chief organ and centre of sexual sensation in the female. All anatomists and physiologists will agree in this. No doubt there is some amount of aphroditic sensation in the vagina, the os uteri, and the breasts, but in the main the clitoris, with its glans, crus, and bulbus, is, as far as sensation is concerned, the true representative of the penis in the male. To remove this organ is infinitely more severe than mere circumcision. Any woman from whom it is removed must to all intents and purposes be considered as maimed and imperfect, so far as sexual and reproductive life is concerned. She may bear children, it is true, but she must of necessity be more or less reduced to the state of the *mulier frigida* of Heberden.

From the conflicting evidence we get these facts apparently proved—namely, that in some cases the sexual sensation is so widely distributed that clitoridectomy neither cures the patient of masturbation nor destroys her aptitude for coitus. But these must be the exceptions, and they show that as regards masturbation the operation does not cure the worst and most debased and depraved cases. The mind is at fault in such cases, and not the body.

Then the question comes—Is self-abuse, especially in young women, so common and so injurious that they should on a large scale be rendered impotent for life, to guard them against this fault and relieve them of its threatened consequences? Shall we, in effect, exchange moral control for the knife of the Surgeon? No doubt there may be cases of local disease of the clitoris, especially in old age, requiring its removal, just as is the case with the penis, but this is already a recognised part of Surgery. It is, however, our conviction that such a wholesale performance of clitoridectomy as that contemplated by the originator of the present operation—when the most he can do is to promise to find as many cases of success as his opponents can produce failures—and when it is admitted by Dr. Tanner, who certainly cannot be accused of any attempt to overstate the case against the operation, that patients require to be watched for “some months” after the operation, and that it was a fair question whether the watching would not succeed as well without the operation as with it—it is, we say, our conviction that such a proceeding cannot be sanctioned by English Medicine in the 19th century. A kindred mode of practice—a "gloomy rite," as it is called—exists already in Asia and Africa, but it would tend to reduce our Profession to contempt in this country to make the mutilation of women a recognised operation.

(a) See review of Mr. Baker Brown's work “On the Curability of certain Forms of Insanity,” etc., *Medical Times and Gazette*, 1866, vol. i., p. 479, and leading article on the “London Surgical Home,” p. 563.

Already foreigners are not stinting in their condemnation of our tolerance in this matter, and we believe it only requires the light of public discussion to put an end to it. We are sorry for the necessity of such discussion, but are constrained to accept it, and act accordingly. Better that girls and women should suffer from malpractices than that this degradation of our Profession should flourish. Let the class of cases be noted in which this operation is recommended. Every one knows that, in dealing with hysteria and epilepsy, strong impressions on the minds and bodies of patients have a wonderful effect in relieving their maladies for a time, and in rare cases it may be effecting a perfect and abiding cure. Without, in the present instance, dealing with the question of motive, we may say that it is on this account that women afflicted with these and kindred maladies have ever been the victims of delusive modes of cure.

We can only express the hope that the good sense of the Profession will put down the evil which we have been considering. It would be easy to develope the ill results of such a procedure as clitoridectomy in its relation to social and family life, but we should be very glad indeed to be relieved from the necessity of referring further to the matter. Its supporters must, we should suppose, see on which side the moral sense of the Profession is arrayed.

In conclusion, we think the whole matter may be summed up thus. Malpractices in young women are caused by low moral and intellectual state, usually with enfeebled health, and occasionally with some physical cause of irritation in adjoining organs. The epileptic and hysterical conditions are more frequently causes than consequences. The proper remedies are moral teaching; watching to prevent mischief, even unconsciously; cold bathing, open air, and a tonic *regime;* and the removal of local irritation, if any exist—piles, ascarides, fissures, or polypus in the rectum; eczema, and other local irritation of the skin in the vicinity; and, above all, irritating discharges from the os uteri, the specific for which we have found to be Condy's fluid, very highly diluted, and used as bath and injection. Removal of the clitoris or other part, justifiable only when diseased. No operation of any kind whatever justifiable without full knowledge and consent of patient and friends. The published and recorded results of the operation condemn it as rarely useful, generally useless, and sometimes mischievous.

THE WEEK.

RECENT PROFESSIONAL LAW SUITS.

There have been lately two causes tried which illustrate the truth of a proverb we quoted last week, that it is wise to wash dirty linen at home. We should not have referred to either of them in this journal had it not been for the fact that in one case the defendant was a Surgeon, in the other the plaintiff a Dentist of some repute. In the first, Mr. Ashton, of Cavendish-square, was sued by a former manservant for damages for false imprisonment. The simple facts in this case were that the servant had taken more than he could carry, and consequently had forgotten where he had left his master's plate-basket. The master, believing that his plate had been wrongfully stolen, gave the servant into custody. The next morning the plate-basket was found, and in process of time the action was brought. The jury gave a verdict against Mr. Ashton, with £150 damages. We think the amount thus awarded excessively high. But really, if we may express an opinion, such a matter would have been far better settled out of court. The man was no doubt entitled to some damages for being locked up. Surely a fourth of the sum which the jury gave, wisely and opportunely used, might have set the matter finally at rest. The other trial arose out of a miserable squabble about a few sacks of coals. Mr. Stokes, the dentist, of Brook-street, shares his house with a Mrs. Kellock, who keeps a boarding establishment. Mr. Stokes, having only a coal-cellar that will hold half a ton, is often short of fuel, and his servants borrow from the boarding-housekeeper's cellar. One morning, Mr. Stokes, entering his consulting-room at eleven o'clock, finds one of his neighbour's boarders smoking a cigar and trying on waistcoats within precincts sacred to his art and mystery. Mr. Stokes naturally requests the gentleman to leave the room, and on account of this or some other trifling cause, coolness arises between himself and his neighbour. Mr. Stokes's servants continue, nevertheless, to borrow the coals, and on Mrs. Kellock becoming aware of the fact she consults her attorney. Mr. Stokes, in the meanwhile, has his attention directed to the affair, and immediately writes Mrs. Kellock a very proper letter, stating that the borrowed coals shall be immediately sent in, and his coal merchant accordingly sends the full amount to Mrs. Kellock's cellar. That lady, however, acting under the advice of her attorney, refuses to accept them, and the result is that Mr. Stokes is summoned on a charge of felony before the police magistrate, who, of course, immediately dismisses the charge. Mr. Stokes, naturally enough, brings an action against Mrs. Kellock for having maliciously obtained the summons against him, and the great coal-cellar case terminates by the lady's counsel making a full and handsome apology to Mr. Stokes, and consenting to a verdict for the plaintiff with substantial damages. It was only to be expected that an affair of its nature should end in smoke; but surely it was a pity that it was not consumed at home. For this, however, Mr. Stokes was clearly not responsible.

HENRY JEAFFRESON, M.D.

Another victim to Professional duty has been taken from our ranks during the past week. In this instance it was no untried junior, or unseasoned student, but a Physician enjoying one of the largest and most lucrative practices in London, and second only in seniority in the Medical staff of St. Bartholomew's Hospital. Dr. Jeaffreson has fallen before the same fever—typhus—which but a short time ago carried off Dr. Warter, a young Physician of high promise, who might reasonably have looked forward to attain in his turn as high a position on the staff of that Hospital. The only consolation that can be offered to survivors is, that both have met death in the noblest and best cause. Hospitals have their martyrs as well as churches, and of them St. Bartholomew's can boast no scanty roll.

Dr. Jeaffreson was the son of a well-known general Practitioner of Islington. He graduated at Cambridge M.D. in the year 1838, and in the following year, as was the privilege in those days of graduates of the two English Universities, he was elected a Fellow of the College of Physicians. He was related by marriage to the family of Mr. Wormald, and there can be no doubt that to his family connexions was due his early introduction to public and private practice. He had also a brother in the Profession who succeeded his father in the confidence of his large circle of patients at Islington. Whatever advantages, however, he derived from his Professional connexions Dr. Jeaffreson had the talent and power to turn to good account. He was essentially a practical Physician. We believe he never wrote a line for publication or gave a lecture in his life, and yet, as we have said, he attained to most extensive practice, and his opinion was eagerly sought by his pupils. It would be difficult, perhaps, to furnish more convincing proof of his tact, professional acumen, and we of this writing and lecturing age may add originality, than this fact gives us. Dr. Jeaffreson was a hale, energetic, kind-hearted man, and a painstaking, sagacious Physician. He was cut off in the prime of his age, for he had only attained fifty-six years. He had just completed the erection of a country house, where he reasonably looked forward to spend a lengthened retirement after the work and hurry of a London life. He was a Censor of the College of Physicians and Consulting-Physician to the City of London Hospital for Diseases of the Chest.

RESIGNATIONS IN THE COURT OF EXAMINERS OF THE ROYAL COLLEGE OF SURGEONS.

We are not disciples of Auguste Comte, nor do we approve that philosopher's scheme of forcing men to resign office because of age simply. On the contrary, we hold that to force a man to give up duties which he can perform well, merely because he is old, is an execrably tyrannical waste of human force and happiness. The question comes—What are the duties which old men can perform as well, or better, than young ones, and what are the duties they cannot? Under the first we reply, such as are concerned chiefly with accumulated experience, on subjects whose principles are fixed and definite. Thus, we see not why the oldest man may not make a good legal judge, so long as his sight and hearing remain. This is well put by Lever, in his novel of "Sir Brooke Fossbrooke." One of his *personæ* is supposed to be an old judge, who says:—

> "You have heard, I suppose, of the attempts—the indecent attempts—to induce me to resign. You have heard what they say of my age. They quote the registry of my baptism, as though it were the date of a conviction. I have yet to learn that the years a man has devoted to his country's service are counts in the indictment against his character. Age has been less merciful to me than to my fellows—it has neither made me deaf to rancour nor blind to gratitude."

Let us, then, keep our old judges so long as we can. But for old Physicians and Surgeons? Assuredly their ripe experience is of enormous use, especially in cases of obscure disease whose diagnosis is uncertain, and in which the memory of "similar cases" in an old man's mind may be the only clue to prognosis and treatment. But as to all that relates to the progress of the scientific part of Medicine—to the ever-shifting and widening field of anatomy, physiology, and physical diagnosis—that should be left to younger men. Hence we hold that seniors—the right men for the offices of Consulting-Physicians and Surgeons to Hospitals (posts that need be no sinecure, by the way)—are not the right men for Courts of Examiners. This was Mr. Lawrence's opinion once, as we gather from a corrected report of the speeches delivered by him, as chairman, at meetings of members of the Royal College of Surgeons held at the Freemasons' Tavern. Speaking of the constitution of the College, and with especial reference to the Court of Examiners, Mr. Lawrence stated that—

> "At present the admission into the Council depends on seniority (a), not absolutely, but nearly so. A similar rule regulates the subsequent promotion into the Court of Examiners, and, as the appointment is for life, it must often happen, as it frequently has, that the duties of that Court, which, if properly performed, would require men in the active period of life and the full vigour of their faculties, have been executed by persons nearly approaching or actually arrived at the extreme verge of existence. In an imperfect and progressive science like Surgery, such individuals must be far behind the actual state of knowledge, consequently unable to estimate the acquirements of those recently educated, and not the best qualified to represent the Surgical Profession. Hence we cannot be surprised that, although the Council and Court of Examiners have always numbered among their members individuals of justly earned and acknowledged eminence, their acts, as public bodies, have not commanded the respect of the Profession at large. If, moreover, the members hold their offices for life, all the elements of misgovernment are combined, and we may safely anticipate that the public good will be sacrificed to private interests."

CHILD MURDER.

The case of Caroline Hurst, acquitted at Winchester of murdering her infant child, although it has no particular pretensions to Medical interest, yet it points so clearly to the necessity, long recognised by our Profession, of a change in the criminal law relative to child murder, that we think it worth while to note the facts. The accused, Caroline Hurst, the daughter of a tradesman at Portsea, became the mother of an illegitimate child before she reached the age of 16. The child was put out to nurse, and the girl had to maintain it. After a few months she got into arrears with the woman who took care of her baby, and at last owed her twenty-five shillings. One afternoon she called on the woman, and saying she was going to take the child into Portsmouth, she went out with it. The next day it was found drowned in a channel into which the tide flowed at Port-mill dam. On being charged with murdering her child in the Mill-dam, she did not at first speak. Her sister said, "Oh! Carry, did you do it?" The accused replied, "Yes, I did," and fell to crying very much, exclaiming "Do you think they will kill me? Do you think they will hang me?" Certainly, a clearer case of acknowledged crime was never brought into a court of justice. Baron Bramwell, who tried the case, was evidently thoroughly convinced of the prisoner's guilt, and yet, after an hour's absence, the jury returned into Court and delivered the following verdict:—"We give her the benefit of the doubt, and find her not guilty." Now, thoroughly alive as we are to the most painful nature of the case, we must protest against such a miscarriage of justice. It is to be deplored for every reason. But the cause of the miscarriage was not in the jury, but in the law. Innumerable instances have shown that English juries will not send to the scaffold the seduced and deserted woman who has taken the life of her babe. This may be right or wrong, but it is a fact. The result is that crimes of great magnitude escape punishment, and verdicts clearly and undoubtedly false are wrung from honest men. Surely it is time for Parliament to interfere, and, by diminishing the penalty, insure the punishment of the crime.

THE BIRMINGHAM LYING-IN HOSPITAL.

Things are not going well with the Birmingham Lying-in Hospital; the whole of the resident staff have resigned, as have the greater portion of a certain Ladies' Association connected with its management. The *fons et origo mali* would seem to be some dispute as to the exact status and powers of the latter body, and the annual meeting held the other day was very far from a pleasant one for the Hospital Committee. We sincerely hope that no trifling matters such as seem to form the basis of this misunderstanding will be allowed to interfere with the success of an institution which has done, and seems destined to do, much good.

QUICKLIME AS A DISINFECTANT.

We are surprised to see, in Dr. Goodeve's able communication to the Epidemiological Society on the "International Sanitary Conference," that the Conference recommends the coffins of those who have died of cholera to be filled up with quicklime. Will Dr. Goodeve, or any other reader who has had practical acquaintance with this matter, tell us what are the actual effects of quicklime so employed? When the lime comes into contact with the fluids of the body, does it not *heat* and raise vapours even before burial, and has not the same effect been noticed where quicklime has been put into graves upon the coffin—that is, that the lime heats and raises vapours which are not perceived over graves into which

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(a) This was previous to the establishment of the Fellowship, and consequently of the election of Fellows into the Council, where seniority is not always respected.

no lime was put? This we know to have been the case at Amiens during the late epidemic; and as quicklime is so often recommended under such circumstances, we should be glad to know what its observed effects are.

DEATHS AND SUICIDES IN VIENNA DURING 1865.

According to the Report of the Vienna Stadtphysiker, or Sanitary Officer, it appears that in 1865 there were registered 21,128 deaths. The following were the chief causes of death:—Phthisis pulmonalis, 4842; pneumonia and pleurisy, 1315; typhus, 795; croup, 411; brain diseases, 380; apoplexy, 202; heart diseases, 310; measles, 152; scarlatina, 94; pertussis, 103; variola, 137. There were registered 109 (85 males and 24 females) suicides, though these really were supposed to amount to between 120 and 130, as some of the "found dead" were really suicides. Of the 109 deaths, 26 (15 males and 11 females) were caused by poison, 7 (5 males and 2 females) by falls, 14 (all males) by firearms, 7 (6 males and 1 female) by wounds, 3 (all males) by the fumes of charcoal, 6 (5 males and 1 female) by drowning, and 46 (37 males and 9 females) by hanging. Thus hanging was the commonest means of suicide, being especially affected by labourers and mechanics, while officials, merchants, and students gave the preference to poison or firearms. It is worthy of observation that while the number of women who hanged themselves was exceeded by that of those who took poison, the number of men who poisoned themselves was not half so great as that of those who chose hanging as the means of death. Poisoning by cyanide of potassium occurred in 12 instances, death usually taking place in a few minutes. Mineral acids were taken in 8 cases, death occurring in from two to twenty-four hours.

THE MEDICAL HISTORY OF ENGLAND

By B. W. RICHARDSON, M.A., M.D., F.R.C.P.,

Senior Physician to the Royal Infirmary for Diseases of the Chest.

THE MEDICAL HISTORY OF NOTTINGHAM.

(Continued from page 594.)

THE GENERAL HOSPITAL, NEAR NOTTINGHAM.

Economic Statistics. By Mr. White.

"These statistics extend over a period of thirty-five years, from 1831 to the present time, and show in the first place the number annually admitted into the Hospital, and those attended to as out-patients. Both these bear a proportion to the rapidly increasing population of the town, and the latter is also somewhat affected by the state of trade, which in times of activity causes a number of accidents of a comparatively trifling kind to swell the number of out-patients. It is a remarkable fact that in a population whose occupation brings them constantly into contact with weighty and complicated machinery, the vast majority of injuries received by those engaged in the lace and hosiery manufactures are of so slight a kind as to render admission into the Hospital unnecessary. As I have mentioned before, the number of more serious accidents occurring amongst the large manufacturing population of the town and suburbs is far outweighed by those from the colliery and agricultural districts of the county.

The average number of patients in the house of course varies nearly in a direct ratio with the numbers admitted, but not absolutely so—as it is influenced by the number of days during which each remained in Hospital. This has always been considered a most important point in the economy of the Hospital. Various causes tend to prolong the stay of some of the patients beyond the time which may be considered absolutely desirable; and for this reason it has been the practice in the Nottingham Hospital to have on the first Tuesday in each alternate month a general inspection, by the whole of the Medical staff, of such patients as may have been in the house upwards of eight weeks. Those patients whose cases require further treatment in the Hospital are then recommended to be retained, while those who would be equally benefited as out-patients, or those who are not likely to be further relieved by remaining in the wards, are recommended to be removed as soon as possible. By the careful carrying out of this arrangement a great saving to the Hospital is effected, and room is thus made for the admission of those urgent cases which are generally waiting for beds. By these and other means, the average number of days during which the patients have remained in Hospital has fallen in thirty years from 50 days to 35.7.

In the cost of Medical appliances there is one item which has in a few years undergone a remarkable change. This is the cost of leeches, which in 1835, with an admission list of 750 in-patients and 1650 out-patients, amounted to the sum of £90, whilst ten years later, in 1845, with 1214 in-patients and 3069 out-patients, the same item of expenditure had fallen to £53 10s. 6d. Since this time, with a rapidly increasing number of patients, there has been a rapidly decreasing cost of leeches, so that in 1857, with 1379 admissions into the Hospital and an out-patient list of 7520, the cost was only 12s. 10d., and in the following year, with 1361 in-patients and 7724 out-patients, the cost was still only 13s. 1d. Since this time the sum paid for leeches has been so small that its notice as a separate item of expenditure has been discontinued.

Average Cost of In-patients.

The average cost of each in-patient in each of the thirty-five years varies from £4 12s. in 1836 to £2 8s. 2¼d. in 1845. But as the comparison of those years was rendered difficult by the varying time during which each patient remained in the Hospital, the cost per day of each patient during that period has been calculated. It thus appears that the highest cost was 2s. 2½d. per day in 1834, the lowest 1s. 3¾d. in 1848 and 1850.

Average Cost of Out-patients.

The average cost of each out-patient has varied from 5s. 10d. in 1836 to 1s. 3d. in 1859, a difference which has, I believe, been in a great measure owing to the rapidly increased number of minor accidents occurring amongst our manufacturing population, and which, whilst they add little to the cost, tend greatly to swell the number on our out-patient list, and considerably reduce the average cost of each.

Results of Economical Supervision.

There is one result which will tend to illustrate the important bearing of careful statistical returns upon the economical working of a large institution. In 1837 it was observed that for several years the Hospital expenditure had been gradually increasing in a ratio greater than the increase in the number of admissions would account for. The cost of provisions had risen in three years from £1386 12s. 11d. to £1954 5s. 10½d., although the price of meat had fallen from 7s. to 6s. 4d. per stone, and the price of bread from 2s. 6d. to 1s. 10d. The cost of wine, spirits, and porter had risen in the same period from £48 19s. to £120 17s. 6d.; the cost of medicine, from £433 2s. 7d. to £764 2s. 1½d.; the average cost of each patient, from £3 13s. 2d. to £4 12s. 0¼d.; and the average cost of each out-patient, from 3s. 9d. to 5s. 10d. A sub-committee was appointed to investigate the cause of this increased expenditure, and for many months this Committee was employed in instituting a rigorous investigation into the whole domestic management, and into every portion of the expenditure of the Hospital, and in carrying out a laborious series of experiments for the purpose of ascertaining as nearly as possible the precise quantity of each article of provision required for the given number of patients, officers, and servants. A plan, based upon these investigations and experiments, was adopted for making a careful periodical examination of every article of consumption, so as to insure that, whilst there should be a liberal allowance of every necessary wherever required, there should be no waste or extravagance; and the plan then adopted has been since that period assiduously carried out.

The beneficial result was soon apparent. In one year, with about the same number of patients, the cost of provisions had fallen from £1954 5s. 10½d. to £1669 10s. ½d.; of wine and spirits from £120 17s 6d. to £84 4s.; of medicines from £764 2s. 1½d. to £448 4s. 6½d.; the average cost of each in-patient from £4 12s. ¼d. to £4 2s.; and of each out-patient from 5s. 10d. to 3s. 6d. And now for nearly thirty years the effect of the labours of that and subsequent committees has been apparent in the continued diminution of expenditure and the continued reduction of average cost of patients."

The Wards.

The General Hospital contains one hundred and forty-two beds, in which number is included the Fever Hospital for the reception of cases of contagion and lock cases. The fever department contains twenty-six beds, thirteen for each sex.

The remaining wards contain one hundred and sixteen beds, sixty-seven beds being set apart for male and forty-nine for female patients. The wards are all small, with two exceptions. These exceptional wards are for accidents and Surgical cases; one contains twenty-four beds, the other eleven. The wards are deficient in decoration. The ventilation is mainly by the natural process, and the heating by the open fire-grate. In other particulars the wards are almost identical with those of the other Hospitals founded in the last third of the last century, and which have already been fully described in these histories.

CUBIC SPACE.

The cubic space allotted to the patients is very variable. It ranges from a maximum of 1597 cubic feet to 759. Oddly enough, the beds which have least space are in the Fever Hospital, a building only eleven feet in height and sixty-six feet in floor space. This Fever Hospital cries out to be pulled down and to be reconstructed on modern principles worthy of advancing Nottingham. I was taken aback to find so bad a Fever Hospital in so good a town.

SUMMARY OF INCOME AND EXPENDITURE—DIET.

Year ending March 1.	Annual subscriptions.	Dividends and Interest.	Anniversary.	Apprentice Fees.	Donations, Legacies, and Sundry Receipts.	Total Receipts, exclusive of Legacies and Donations.	Total ordinary Expenses.	New Buildings and Extraordinary Repairs.	Number of in-patients admitted in the house.	Average number in the house.	Number of relatives attending sick patients.	Number of out-patients.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.				
1851	1181 6 0	1119 14 8	199 14 9	..	1447 19 10	2530 2 5	3356 3 1	..	1144	120	46	6788
1852	1175 5 0	1116 2 4	229 1 9	..	193 3 7	2526 7 7	3540 5 11	150 14 9	1201	119·4	55	7126
1853	1249 17 0	1093 8 0	235 0 3	262 10 0	1206 12 0	2708 16 5	3465 11 10	158 4 0	1202	119·7	63	5744
1854	1387 0 0	1209 12 4	365 10 7	262 10 0	276 0 0	2818 8 11	3957 16 9	..	1261	123·4	58	5410
1855	1561 6 6	1040 17 4	221 16 7	..	1258 17 0	2842 8 7	4179 16 5	..	1301	123·9	75	5567
1856	1622 19 0	975 2 8	240 4 9	133 15 0	279 0 5	2938 1 4	4490 19 11	..	1383	124·8	67	5124
1857	2144 14 0	895 17 5	339 19 8	262 10 0	1091 2 3	3286 15 2	4850 3 7	..	1504	136·1	84	6954
1858	2114 3 0	948 10 3	246 3 9	131 5 0	1876 0 11	3430 6 1	4931 18 10	..	1466	135·5	81	7520
1859	2151 5 0	933 9 6	236 7 10	393 15 0	1335 14 6	3311 0 3	5091 1 1	..	1361	134·1	90	7724
1860	2071 12 2	943 12 5	226 5 9	131 5 0	788 17 0	3293 11 10	4723 5 5	714 12 6	1348	139·5	86	6837
1861	2077 17 10	952 18 0	147 2 3	..	745 7 8	3261 14 0	4728 6 4	..	1335	137·7	88	7085
1862	2183 9 6	1104 9 0	170 12 0	..	2254 18 11	3498 17 7	4774 9 3	..	1311	140·6	89	7124
1863	2440 8 0	1172 9 9	178 5 7	..	1713 8 0	3822 7 4	5035 18 6	..	1284	134·1	82	6417
1864	2373 9 0	1172 10 3	138 19 0	..	1401 4 8	3707 9 6	4298 9 9	..	1289	135·6	96	6349
1865	2331 5 0	1220 9 2	215 8 4	..	1167 14 3	3888 0 2	4728 11 10	..	1330	138·3	76	6743

	1862-63.	1863-64.	1864-65.
Average number of In-Patients, taken from daily account of them	134·1	135·6	138·3
,, ,, Days each was in the house	38	38·3	38·6
,, ,, Out-Patients on the Books	1284	1215	1249
,, ,, Days each Out-Patient was on the Books	71	69	67
	£ s. d.	£ s. d.	£ s. d.
Average cost of each In-Patient	3 4 8¼	2 19 0¾	3 2 9
,, ,, Out-Patient	0 1 7¼	0 1 6¼	0 1 7¼

The following statistical account is added for the information of governors of this and similar institutions:—Each servant consumes—Unlimited allowance per day, meat (raw) average 15 oz., bread 14 oz.

Limited allowance per day, beer 1½ pint, butter ½ lb. per week.

Thirteen to fourteen servants are allowed per day, 3½ oz. of tea, 1 lb. of sugar.

100 lbs. of raw beef and mutton will produce, boiled, 60 to 62 lbs. dressed and carved.

100 lbs. of mutton will produce of cutlets 45½ lbs. dressed and carved.

100 lbs. of beef will produce roasted 51 lbs. dressed and carved.

To make rice pudding (26 lbs.) use rice 4 lbs., sugar 13¼ oz., milk 14 pints, water 6 pints.

To make milk pottage (28 pints) use oatmeal 1 lb. 2 oz., milk 16 pints, water 12 pints.

To make tea (50 pints) use tea 6½ oz., sugar 24 oz., milk 3 pints.

To make coffee (12 pints) use coffee 3¼ oz., sugar 11 oz.

(To be continued.)

DR. WHITMORE, in his monthly Report of the Health of St. Marylebone during November, says:—"The greater portion of the sanitary work which has been carried out during the last six months has been confined to the district of Christ Church, because of its being the most unhealthy of all the districts, and containing the largest number of poor and destitute persons. Many entire streets have undergone a large amount of cleansing and purifying, and but few places have escaped sanitary supervision and improvement. Now, if it is asked what benefit has resulted from all this, I may answer—For the last two years—viz., 1864 and 1865—the annual death-rate of this district was 28 per 1000 of its living population; whilst for the month just ended, and which, be it remembered, immediately follows the extensive sanitary operations that have been carried on, the annual death-rate amounted to only 18·9 per 1000, or nearly 10 per cent. less than in the two years above quoted."

NOTES OF A VOYAGE TO AND FROM AUSTRALIA.

LETTER NO. III.

(From a Correspondent.)

WE left Hobson's Bay on April 2 with about 250 passengers, forty-seven of them in the saloon, of whom fifteen were children—altogether, a far less healthy assembly than those we took out. Four of the saloon passengers were decidedly phthisical, going home in search of health. There were several sickly children, one of whom, who had been suffering from diarrhœa during dentition before he came on board, died about a fortnight after we left. This was the only death during the voyage. After the first week we began to feel that we were coming near Cape Horn. April 9th was rough and wet; a heavy squall on the 12th. Up to the 24th there was really nothing to record, but on that day we had our introduction to the ice. The first bergs we saw, where partially visible beneath the fog which still overhung them, looked not unlike the low dark hulls of some great ironclads, while the mist which gave them their sombre gloomy tint made the likeness more complete. As the fog cleared off they changed to two dark grey mountains, and then, as the sun shone out, their solid ice glittered like huge masses of opal, at times reflecting the deep blue of the sky, which, contrasted with the dazzling white of the snow that lay on most, made them so beautiful that we almost forgot what dangerous neighbours they were. I did not perceive that their proximity made any perceptible difference in the feeling of the air. Up to May 1 we were daily and nightly more or less beset by the ice, and three nights we hove to as a matter of precaution.

On May 2 we reached our most southerly point, in lat. 57° 4′ S., and long. 67° 19′ W., but our coldest day came on the 7th, when we were 8½° further north. On the 28th we crossed the line. June 1, some locusts were seen flying about us; one was caught, and I have it still. We were then about 500 miles or more from Sierra Leone, so that they must have flown at least that distance. From the 9th to the 13th we passed through great masses of seaweed, which mostly floated in long lines, coming with the stream from the Gulf of Mexico. A good many little crabs and shrimps and a few small shells were fished up among this weed. On the 16th we put into Fayal, one of the Azores, and anchored in the pretty little bay of Horta. The town lies along the shore, and on the side of a gently sloping hill. The bay looks to the S E., and is sheltered to the N.E. and S.W. by rocky promontories, while opposite the middle of the bay is the island of Pico, with the extinct volcano from which its name is derived, rising to more than 7600 feet. I must not go into the details of our visit, but I would just say that if any one wants a pleasant winter residence with thorough rusticity and cheapness, he might find it at Fayal. He would not find much English society. There is an English and an American Consul, and one or two English and American gentlemen besides, and I think these are all.

We left the island on the 17th; on the 26th we sighted the Lizard, and anchored during the night in Plymouth Sound.

The Medical history of the homeward voyage was happily not an eventful one. The only death which occurred has already been mentioned. The general improvement among the passengers, and especially among the children, was as marked as on the voyage out. Of the phthisical patients, the first, a lady who had suffered from severe hæmoptysis, and had been told that both her lungs were unsound, improved rapidly. She was laid up once with a bad sore throat in consequence of her having been so imprudent as to run up on deck to look at an iceberg without waiting to put on her hat and shawl. She soon got better, and when we landed was looking in the best possible condition.

The next, a gentleman who had signs of tubercular deposit to a considerable extent, and had suffered from hæmoptysis, had some slight recurrence of it during the cold weather, and had also a very teasing cough, with a good deal of expectoration, till we gained warm latitudes, when he improved in every respect, and he landed very much better than when we left.

The third was a Medical man from New Zealand. He had a bad cough, but no expectoration. He had been subject to hæmoptysis; but this did not recur during the voyage, nor, in fact, was there any appreciable change for the better or worse during the whole voyage.

The fourth, a gentleman about 26 years of age, had been living at a station up the country. He had extensive disease on both sides, bad cough, and much expectoration. In this case there was no improvement. He got through the cold weather without any marked aggravation of his symptoms, but during the latter portion of the voyage he gradually and steadily got weaker; the expectoration became very profuse, and he lost flesh, so that he appeared to me worse on landing than at the beginning of the voyage.

I should also mention that the purser of the vessel was suffering from chronic phthisis. Originally a very powerful man, his health had been first impaired by frequent exposure to cold and wet, when engaged in superintending the despatching of ships from the Mersey. He then, about eight years since, went to sea and improved very much; then his ship sprang a leak; he was exposed to the wet; got an attack of pneumonia; recovered; again, after exposure to wet and cold, got worse. During the homeward voyage he, I regret to say, deteriorated, for when we lay at Sandridge I examined his chest very carefully, and found evidence of a good deal of deposit, mainly on the left side; but I could discover no signs of softening. A few days after landing there were evident signs of the existence of large cavities on the left side. I do not think that the progress of mischief would have been so rapid here had it not been that his duties involved a good deal of talking—giving directions to steward, storekeeper, etc.—as well as troublesome and tedious book-keeping, so that he had not nearly the same opportunity for improvement as the passengers.

My own experience on the homeward voyage was that I remained about as well as when we sailed until after we passed the Azores. I then found gradually coming on a feeling of huskiness in the throat, especially in the morning, which increased very much after my landing, so as to make even a few minutes' conversation quite a painful effort. The dyspnœa brought on by exertion I found much worse than it had been in Australia, and my weight had been reduced by eight pounds; but my cough had not got worse, and the physical signs in my chest remained much the same as when I left England. I certainly had thought myself improving up to within a short time of our landing, for I felt particularly well the day we spent ashore at Fayal, and in looking back I cannot assign any cause for the change for the worse, unless it were the difference of climate which we found on nearing England. In reference to this sore-throat, I may just say that it remained very troublesome for five weeks after my return, no remedy making any real change in it. At the end of that time I began the use of the Turkish bath three times a week, and found a gradual and steady improvement to follow.

Lastly, a few hints as to what is necessary to secure benefit from the voyage. The choice of a good and well-provided ship is most important, and for a Medical man who goes out as I did I believe that it will be far better to take charge of a first-class passenger ship, where he will be sure of a good supply of fresh meat, etc., than to take an emigrant ship, in which, if there be but few cabin passengers, the food will not be so good, though the remuneration will be much better. The duties of the Surgeon Superintendent of an emigrant ship are such as may be very light for any one who feels in full health, but, if I can judge from what I saw, they must involve much more work and worry than would be advisable for any one not quite strong.

One little point with regard to cabin arrangements will be found worth notice—viz., where it is possible, to have your bunk on the opposite side of the cabin to that on which the port is; for if, as I found by experience, a port does not fit with extreme accuracy, any heavy sea striking it will send in considerably more water than is either pleasant or profitable. This will not signify so much if the bed is out of its reach.

With regard to clothing, it must be remembered that provision must be made for both very hot and very cold weather. For the tropical nights, when it is almost impossible to keep any bedclothes on, the thin "pyzama" trousers and jacket used in India will be found very useful. For any one who does not want to keep always below in rough weather some kind of waterproof coat is necessary, and for any one who may have, as the Surgeon of a ship must, to go about the ship in such weather, a pair of sea-boots are equally necessary. I would recommend all *not* to do as I did and get a pair of the boots sold by the makers of waterproof coats, etc. These things keep out the wet certainly; but they keep in the perspiration, and keep the feet damp and chilly. The best are those ordinarily used by sailors, made of leather, saturated with "dubbing." These should be large enough to pull on over the trousers, and to reach well up to the knee.

With regard to the time of year at which it is best to go, I need only remind your readers that the times of the Australian seasons are precisely the reverse of our own, so that, allowing from sixty to ninety days, according to the character of the ship, they can calculate the season they will find out there.

As to who should go, my own inference from what I saw and heard is that when phthisis has reached its third stage, and the patient's strength is much reduced, the voyage is unadvisable; mere debility, which is not due to evident organic mischief, need be no hindrance. If the voyage out and home be contemplated, it would be, I think, a good plan to avoid the cold and storms off Cape Horn by returning *viâ* Panama—a route which, for an invalid especially, would be easier than the overland journey, with its frequent changes and the heat and other annoyances experienced on the Red Sea. A line of steamers is, I believe, already established from Australia to Panama direct. For any one suffering from the effects of overwork or making a tedious recovery from almost any malady, I could most confidently recommend the voyage. Further, I would say that no one ought to be advised to take this voyage for their health who cannot go in the saloon. The reasons for this I have sufficiently referred to already.

Lastly, I would give one hint not strictly Medical,—that no one without capital should go to Victoria on speculation at present. The ranks of our Profession are certainly very closely filled, and from all I heard I should judge that employment in any branch of commerce is just as difficult to obtain as at home. Skilled artisans and domestic servants would stand a far better chance of doing well than others. Money, however, has a higher value there than here, and a man with moderate capital and sufficient brains to know how to use it might find very profitable employment for both in the almost boundless resources of Australia.

FOOTBALL.—GUY'S AND ST. BARTHOLOMEW'S.—This match was played on Saturday last on the Guy's ground, Ladywell, in the presence of a large number of spectators. The play was good on both sides, and resulted, after a closely contested game, in favour of Guy's by one goal.

REVIEWS.

On Intra-thoracic Cancer. By John Cockle, M.D., etc. Parts I. and II. John Churchill and Sons.

The first part of Dr. Cockle's work is devoted to an historical sketch of the literature, the second consists of original contributions to the pathology, of intra-thoracic cancer. We scarcely know for which task the author is more thoroughly fitted —to be the historian or an original delineator of a disease. Few of our modern Physicians are so minutely acquainted with the writings of their predecessors, and very few have enjoyed a wider field of public practice, or have made better use of it. If we add to these advantages considerable literary powers, we shall have no difficulty in accounting for the excellency and value of the work before us.

An historical sketch of the literature of intra-thoracic cancer does not at first sight promise much. Intra-thoracic cancer ! we think we hear our readers exclaim; why, who ever thought of such a thing before the time of Bayle and Laennec ? But the fact is, we of this nineteenth century are accustomed to pride and plume ourselves on our superiority over our Medical ancestors somewhat more than strict facts warrant. It is a thing to be remembered that one of the best descriptions of a case of thoracic cancer extant was written by the Caroline royalist, Dr. Thomas Willis, and this at a time when the bills of mortality still retained under the causes of death "meagrims," planet-strucken," "rising of the lights," and "lethargie." Nay, more, as Dr. Cockle observes, Willis is the earliest recorder of a particular sign of cancer of the lungs which must have attracted the attention of all who have had many opportunities of watching the disease—viz., a peculiar fœtid condition of the breath. We have not space to follow Dr. Cockle from Thomas Willis to De Hahen, Schenkius, Van Swieten, Bonetus, Valsalva, Morgagni, and many more who all, in their day and generation, threw some light on this rare disease. We would only notice that whilst more or less good descriptions of cancer of the lung occur in these old authors, the merit of assigning to the cancerous change of lung tissue its due place by the side of the tuberculous was due to Bayle, who, in his work on phthisis, placed in a separate category certain cases as "cancerous phthisis." For the rest of the chain of literary history which Dr. Cockle traces, link by link, we must refer our readers to his work, where also they will find a very full catalogue of references to recorded cases and papers on the subject in nearly all the languages of modern Europe, as well as in the Latin.

The second part, on the pathology of the disease, would be valuable were it only for the record of eight carefully observed cases it contains. When we recollect the comparative rarity of intra-thoracic cancer, this is a large number to fall under the observation of one Physician. But besides the description and commentary on cases, Dr. Cockle has written probably the best essay extant on the pathology, signs, and symptoms of cancerous chest affections. Intra-thoracic cancer is by no means always situated in or confined to the lung proper ; and its physical diagnosis is by no means a simple proceeding requiring only ordinary tact and ordinary common sense. A disease that may present itself in the lung proper, in the pleuræ, in the mediastina, in the pericardium, or in the thymus, and in the first-named seat may either develope in the nodulated, the infiltrated, or the acute miliary form, at least requires careful study for its certain recognition. Intra-thoracic cancer may simulate other diseases. It may be mistaken for empyema, for aneurism, for phthisis, for mediastinal abscess—nay, even for a form of pericarditis. To any of our readers who have doubtful cases—where they suspect, but are not certain, that malignant disease is advancing within the chest—we strongly recommend Dr. Cockle's work. They will find in it all that the present state of science can teach them, and they cannot fail, from the author's cases and the careful commentary he has supplied to each, to receive some hints which will help to remove their doubts, or at least to point to their most probable solution.

Elements of Chemistry. By William Allen Miller, M.D., Professor of Chemistry in King's College, London. 3rd edition. Part III. Organic Chemistry. London : Longmans. Pp. 1014.

Chemistry is at present, so far, at least, as notation goes, in a transition state ; insomuch that persons educated under the old system must bestir themselves, or be left behind in the race. The present volume completes the third edition of Professor Miller's well-known and highly-appreciated work on chemistry. As in the others, the new notation is adopted, with, in addition, the system of nomenclature proposed by Berzelius, and strongly advocated by Professor Williamson. According to it, nitrate of potash is known as potassic nitrate, carbonate of lime as calcic carbonate, and so on ; somewhat pedantic-looking, it may be, but more precise than the other. Those substances whose equivalent is changed in the new system of notation have their symbols barred, thus :—$\cancel{C}_2H_6\cancel{O}$ (alcohol), which, however, for the sake of those but slenderly acquainted with the new plan, is also written on the old scheme—$C_4H_6O_2$.

PROVINCIAL CORRESPONDENCE.

LIVERPOOL.

An inquiry was recently held under the 49th Section of the Sanitary Act, 1866, as to the nuisance occasioned by the deposit of the town refuse in public wharves in the lowest and most densely populated parts of Liverpool. As the result of this inquiry Mr. Walpole has requested the immediate consideration of the borough authorities to the matter. The question is a very important one, and the magnitude of the evil is proved by evidence of an insuperable character. It is one, however, which can only be effectually removed by the conversion of all the privies of the town, of which there are still more than 14,000, into water-closets. And this latter object can hardly be effected until a still more serious evil is dealt with—viz. the scanty supply of water to the borough. It is only the great rainfall of the present year which has averted the water famine that threatened the town in 1865. As Mr. Taylor remarks in his report, "To make water-closets without providing the means to flush them would be to render bad worse." And, certainly, to provide means to flush them under existing circumstances would be to leave the inhabitants unsupplied with water for the commonest domestic purposes. It is a significant fact that the Vauxhall Ward, in the midst of which lies a wharf containing constantly many tons of the most disgusting filth, is one of the unhealthiest in the whole borough. While the mortality generally during nine months ending September 29 was 35·6 per 1000, in the ward in question it was 39·53 per 1000 ; and during the same period, while the general mortality from cholera was 3·44 per 1000, in this same ward it was 8·82. If the same death-rate had prevailed in this locality as in the town generally, only 85 persons would have died of cholera in the period instead of 219. Of course, there are other causes which tend to render the district unhealthy, but the one set forth in the report alluded to is certainly one of the greatest.

IRELAND.

Dublin, December.

The cholera has unmistakably declined of late in Dublin. In the fourteenth week of the epidemic 93 deaths attributed to the disease occurred, in the fifteenth 82, in the sixteenth week 73, and in the seventeenth week but 53 deaths were registered as from cholera, and 9 from diarrhœa; and we have every reason to hope that each week may now find us with a diminishing number of deaths from this awful and mysterious visitor.

Since writing the foregoing we have unfortunately had some reason to mistrust the apparent improvement, and we hope the warning given in a recent partial increase of the death-rate may cause continued and increased action in sanitary matters instead of a blind faith in immunity during the winter months from the epidemic.

We will now place before your readers the Registrar-General's returns for the Dublin district as far as regards the present visitation of cholera up to the present time.

July 27th, a girl recently from Liverpool died on City Quay, and on 31st a child of three died in same house.

Deaths Registered from Cholera.

1st week, ending August 11 . . .	5
2nd ,, ,, ,, 18 . . .	13
3rd ,, ,, ,, 25 . . .	15

4th week, ending Sept. 1	41
5th ,, ,, ,, 8	52
6th ,, ,, ,, 15	55
7th ,, ,, ,, 22	65
8th ,, ,, ,, 29	98
9th ,, ,, October 6	81
10th ,, ,, ,, 13	98
11th ,, ,, ,, 20	118
12th ,, ,, ,, 27	118
13th ,, ,, November 3	93
14th ,, ,, ,, 10	82
15th ,, ,, ,, 17	73
16th ,, ,, ,, 24	53
17th ,, ,, December 1	65

We should remember, however, that we cannot reckon with any certainty upon immunity from the disease next year, and we should also bear in mind the existence among us of fever, as well as of scarlatina, measles, diphtheria, etc. This, indeed, is not to be wondered at when the circumstances in which many persons of the labouring classes exist are taken into account.

It may not, perhaps, be out of place to give a few particulars of some of the dwellings in which epidemic disease has been lately found existing in this city. Several of the tenements occupied by the poorer classes are still in a disgraceful hygienic state. Thus Fanssaught-lane, Phibsborough, where some most severe cases of cholera occurred early last month, is mentioned by the Registrar as having, "within a few yards of the houses where the first cases occurred," an immense heap of decaying vegetable matter, which the Registrar considered renders this portion of the lane most injurious to health ; he recommended its removal, and also observed that the cabins in that lane are almost all without necessaries.

I have already stated that a considerable mortality arose from cholera in the Donnybrook district. It appears much of this occurred in a line of cottages by the side of the River Dodder —the stream which gives this well-known locality its name. The cottages are built generally under and within a few yards of higher ground, the surface drainage of which gravitates towards the foundations of the buildings, while the elevated ground itself tends to exclude from the cottages a free current of air. Moreover, the drainage from these dwellings, as well as from Clouskeagh, Milltown, and other villages, and from many dwelling-houses, some mills, factories, dairies, etc., pollutes most materially the river, which, as is the case in many other localities, serves the double purpose of sewer and water supply for the inhabitants. Indeed, it is not alone in the quieter villages in our environs that the epidemic has forcibly pointed out our shortcomings in many matters essential to health ; even the fashionable watering-places near Dublin show much need of amendment in this respect.(a) The evils of contamination of watercourses, of wells, and of other sources of water supply are supplemented by the overcrowding of the lower classes, and their "agricultural tendencies," which lead them to collect close to their dwellings matters most useful in the field, but most pernicious to human life and water supply. It is not alone in the suburbs that large collections of manure are made. In the very centre of Dublin great quantities are constantly collected, the illegality of the practice notwithstanding. It is not alone in the highly tilled land around Dublin, which rents at from £7 to £14 per acre per year, that this manure raises large crops ; it also produces a large return of fevers, etc., among our people whose circumstances oblige them to live in the less favoured parts of the city. Very many dairymen stall-feed in winter and graze their stock in the Phœnix Park in summer, with results to Dublin which your Medical readers will readily conceive.

Besides different forms of fever, many other diseases are, as it seems by our investigations, and by the public returns, traceable to our deficient hygiene.. Very many, therefore, of the diseases of this city are within the power of removal or mitigation by greater sanitary diligence.

We must give credit to our Corporation for a greatly increased activity of late in the scavenging of Dublin, but we cannot commend them for collecting in large depôts in many of the thickly inhabited parts of the city the highly offensive matters swept up in every street and lane within the municipal boundary.

The great importance of having Hospital accommodation convenient to affected districts has induced the guardians of the south city to construct an Hospital for cholera cases in the grounds on which the Meath Hospital stands, and we have no doubt this will prove of inestimable value to the many poor in the immediate vicinity.

The experience of the present, as well as of the past, epidemics of that disease show the great saving of life effected by easy and short carriage to Hospital. The fatality arising from physical exhaustion in cholera, as in fever, should be kept in mind by every one having the care of such cases.

It would not be just to our local authorities or to our citizens if we did not mention that though the cholera found us to some extent (owing to causes which as citizens we must deplore, yet of which happily as a profession we are perfectly innocent) unprepared, still measures were taken for the care of the sick, and large collections have also been made for the relief of relatives, and for the support of those who have lost their parents, etc.

Notwithstanding certain difficulties with which we, as Irishmen, have to contend, and to which we have alluded above, it is satisfactory to find that not a few have devoted themselves, with a considerable share of success, to the improvement of our labouring classes by the construction of excellent model lodgings, dining halls, ragged schools, etc. We congratulate our citizens on these institutions, which may now fairly rank among the other establishments for the relief of the labouring and poorer classes for which our city has long been remarkable.

(a). At Kingstown and at Bray the disease has been extremely severe.

The Cholera at Bray.—Two fresh cases of cholera were reported to have taken place at Bray to-day.

Unwholesome Water at Bray.—A resolution was some time since unanimously adopted by the town commissioners prohibiting vendors taking water from the river below the bridge, where it becomes contaminated by sewage from the adjoining premises. The practice, however, is still continued, to the detriment of the public health. The board should see that their order in this respect be rigidly carried out.—*Saunders' Newsletter*, December 8, 1866.

GENERAL CORRESPONDENCE.

SUBCUTANEOUS INJECTIONS OF CANCER AND OTHER GROWTHS.

LETTER FROM DR. THOS. SKINNER.

[To the Editor of the Medical Times and Gazette.]

SIR,—As your journal was in 1857 the medium of first communicating to the Medical world the above method of removing adventitious growths—as I believe that, giving all due credit to Dr. Broadbent for originality of invention, Sir James Simpson, of Edinburgh, is fully and honourably entitled to priority of claim—and as Dr. Markham, in his editorial capacity, has thought proper to burke the principal portion of the following letter, I send a copy of it for publication in your pages, if you do not object. I may state that, as I was the only one who assisted Sir James in his first operations, I consider myself entitled to judge whether or not the operation and its results are or are not the same as have lately been introduced to the Profession by Dr. Broadbent, of London. Certainly I may, without boasting, claim to be as good a judge as the editor of the *British Medical Journal.*

I am, &c.

Liverpool, Nov. 28. THOS. SKINNER, M.D.

" *To the Editor of the British Medical Journal.*

" Sir,—With all deference, I beg to differ from your remarks upon my letter on the above subject claiming for Sir James Simpson, as I still do, the sole right as having been the originator of the *methodus operandi et medendi!*

" You say that glacial acetic acid acts as 'a powerful caustic.' It may do so, but I am certain that every member in the Profession practically acquainted with the action of caustics will agree with me that glacial acetic acid is a very weak caustic, and consequently in practice it is limited to the production of vesication and to the destruction of corns and warts and other diseased conditions of the epidermis. It is, moreover, highly probable that its success as a caustic in these affections lies chiefly in its stimulant action, like ammonia, and in its power of dissolving albumen in dead tissues while under microscopic observation or in healthy or diseased tissues possessed of low vitality. There can be no doubt that, however powerful as a caustic it may be said to be in books, in practice its action is decidedly superficial.

" In your remarks you draw a distinction without a difference. You say that Dr. Broadbent's 'dilute acetic acid does not act as a caustic,' that it 'dissolves the cancer cells.'" [Instead of the term "dissolves," Dr. Markham has lately substituted the word "*absorbs*," with what justice I allow others to judge.] "Pray, let me ask, how can any substance *dissolve* the albumen in living cell-formation without first of all destroying the vitality of the cells—without, in other words, acting as a caustic and destroying as well as disintegrating the structures so operated upon? Any substance that dissolves vital tissues—healthy or diseased, highly or lowly endowed with vitality—must of necessity be a caustic. To all intents and purposes it destroys the life of the part—the *débris* passing away by disintegration, by sloughing, or by suppuration. In the majority of cases, when operating upon adventitious tissue, even with much more powerful caustics than glacial acetic acid, as instance, a saturated solution of sulphate or chloride of zinc—just as in Dr. Broadbent's cases—there is not necessarily any inflammatory action set up, consequently there is no suppuration. The adventitious tissue, the result of abnormal nutrition, dies, disintegrates, and is discharged through the opening in the skin, which enlarges more or less, the discharge being generally serous or sero-sanguinolent." [There may be absorption of any surrounding inflammatory induration, but I have never observed *absorption* of the disintegrated cell-formation or of scirrhous induration.]

"In many, if not in all, growths the result of abnormal nutrition, it is very well known that if we once succeed in setting up a *destructive* action, it frequently, if not always, continues until the whole growth is disintegrated and removed; particularly is this the case with fibrous tumours of the uterus. When Sir James Simpson made the discovery I very well remember the following scene:—He was lying in bed suffering from a severe attack of lumbago, so he sent for me to come to his bedside to receive my orders for the day. The bed was covered, as usual, with Medical and other books, and he was perusing 'Walshe on Cancer.' When I returned from my round of Professional visits, he said to me with great glee—'Doctor, I have found it.' 'Found what, Sir?' said I. 'Walshe has it that one of the terminations of cancer is sphacelus or mortification. What is to hinder us inducing it artificially?' From that moment Sir James never rested until his discovery was tested." [Speaking of cancer, does Professor Walshe mention *absorption*, natural or induced, as one of the terminations of cancer?]

"For the benefit of those who may not have it in their power to consult the *Medical Times and Gazette* of February 7, 1857, the following quotation may be of advantage:—'Dr. Simpson, of Edinburgh, has been experimenting on the removal of tumours by a method novel in this country. He introduces a hollow acupuncture-needle, or very fine trocar, into their tissue, and injects a few drops of some irritant liquid, such as a solution of chloride of zinc, perchloride of iron, or creasote. The effect has been to destroy the vitality of the tumours so treated, and they have been separated by a process of enucleation.' It is not my object to defend or to illustrate the practice, although I may probably have seen more of it than even Dr. Broadbent. My present object is simply to show that Sir James Simpson adopted the identical instrument now used by Dr. Broadbent; that the effects produced were the same in every respect, and seemingly, to a very great extent, irrespective of the chemical composition of the caustic or of the strength of the solution used. Query—If the instrument, the mode of operating, and the effect are the same, does it not stand to reason that, however much credit is due to Dr. Broadbent as an original inventor or discoverer, the claim to *priority* is unmistakably due to Sir James Simpson?"

"In conclusion, it would appear that the only difference between Dr. Broadbent's mode of procedure and of Sir James Simpson's is, that Dr. Broadbent 'dissolves' ["'absorbs'" is the latest improvement] 'and disperses the tumour without producing sloughing or destruction of the tissues' [the healthy, the cutaneous, areolar, and parenchymatous are here meant, I presume] by means of a weak caustic or destroying fluid, and that Sir James does the same thing in probably one-half or one-twentieth of the time with a stronger one. Another difference is worth noticing—namely, Sir James made his discovery in 1857, Dr. Broadbent in 1866. It may be well to add that, while Sir James made the discovery to effect a cure in cancer, he did not limit it to cancer, but applied it to the removal of non-malignant growths—a much more legitimate and successful line of practice." [I hesitate not to predict that long before another nine years are over our heads we shall hear no more of the *cure* of genuine cancer by subcutaneous injections!]

"The fact that Sir James Simpson's solutions have a much wider range than those of Dr. Broadbent, only adds to the superiority of the practice, and shows the far-sightedness and practical bearing of the discoverer.

"I am, Sir, your obedient servant,

"Thos. Skinner, M.D.

"Liverpool, November, 1866."

THE INJECTION OF ACETIC ACID INTO OVARIAN CYSTS.

Letter from Dr. W. H. Broadbent.

[To the Editor of the Medical Times and Gazette.]

Sir,—The following experiment was performed as a companion to that of Dr. Junker with membrane taken from an ovarian cyst. Two similar dialysers were constructed with portions of a recent stomach. In each was placed an equal quantity of acetic acid diluted with two parts of water, but one only was put in water, the others being set on props, so that the column of fluid rested on the membrane.

In the last-mentioned, though the transudation of fluid was favoured by pressure, not a drop appeared on the under surface of the membrane during the twenty-four hours. In the one in which the apparatus was completed, acid had not made its appearance in the outside fluid at the end of fifteen minutes; it was evident in half an hour, but the dialysis was not complete in twenty-four hours. In both the membrane was decolorised, thickened, and partially gelatinised, being much softened, but not to the degree described in the case of the ovarian cyst.

The effect was thus the same in kind, the difference in degree being explained by the fact that the walls of the stomach consist of three distinct membranes, and that the muscular structure of one is less amenable to the action of acetic acid than the fibrous constituents of the other.

This experiment may probably not convince Dr. Junker of the harmlessness of injecting acetic acid into ovarian cysts. Perhaps it may be sufficient to show that I was not ignorant of the process of dialysis, and that I am capable of appreciating the action of acetic acid on organic membranes.

In a second letter Dr. Junker mentions a number of points respecting the stomach and ovarian cysts, with which I scarcely need say I am familiar, and new contingencies which appear to him to constitute dangers. These had not escaped consideration, and if I do not discuss them in detail I hope Dr. Junker will still credit me with a due regard for human life, which would prevent me from thoughtlessly doing anything to endanger it. Will he provide me with the *corpus vile* he recommends, and let us make the experiment together?

I am, &c. W. H. Broadbent, M.D.

23, Upper Seymour-street, Portman-square.

POSTURAL TREATMENT OF PROLAPSE OF THE FUNIS.

Letter from Mr. N. Adams.

[To the Editor of the Medical Times and Gazette.]

Sir,—A few days after reading in the *Medical Times and Gazette* of the 17th inst. the cases of postural treatment in prolapse of the funis, by Dr. Dyce, a similar case came under my care. The subject of it was a woman, of about 36, the mother of several children, and whom I attended a few years ago in labour. On that occasion the membranes had ruptured before my arrival, and a coil of the funis was projecting before the head low down in the vagina. The head was rapidly advancing, and I used my utmost efforts to push up the funis and keep it above the head during the pains; but, notwithstanding all my exertions, the funis got jammed between the head and the pelvis, and the child was born dead.

The other day, on being called to the same patient, I found a similar state of things. The membranes had broken, a large coil of funis was lying in the vagina, and the head was advancing into the pelvis. Taught by the cases related by Dr. Dyce, I had the patient placed on her elbows and knees, with the shoulders lower than the pelvis; and during every pain I pushed up the funis, and kept it there, but could only do so partially; and after the pain was over it descended again, but not to the same extent. In short, by degrees, and by the best part of an hour occupied in this repeated replacement, I succeeded in my objects and had the satisfaction of finding the head closely impacted in the pelvis without any portion of the funis being within reach.

There was some difficulty in prevailing on the patient to persevere in maintaining this position, as she was not intelligent enough to comprehend the reason for it. She was, however, given to understand that it was important for her own sake, and was allowed to rest on her side during the intervals between the pains. I am, &c. N. Adams.

Lymington, November 30.

TUMOUR OF THE UPPER JAW — REMOVAL — SCARLATINA DURING CONVALESCENCE.

Letter from Mr. W. Bird.

[To the Editor of the Medical Times and Gazette.]

Sir,—If you consider the following case to be of sufficient interest, I shall be glad if you will give it a place in your journal:—

A. C., a healthy-looking girl, 17 years of age, applied to me on August 8, 1863, with a tumour of the upper jaw. It formed a swelling within the mouth, and bulged considerably anteriorly and externally on the right side, the right eye being pushed upwards half an inch above the level of the left eye, and was prominent. The right side of the nose was also pressed forwards. Some of the molar teeth appeared to be partially absorbed. The tumour felt firm, was slightly elastic, and tolerably well defined at the margin of the soft palate. There was no ulceration on any part of its surface. The tumour had been about six months in forming, and latterly had been extending in a direction upwards. There had been no pain, and at present there is but little on pressure. The patient is beginning to have difficulty in masticating and articulating. The general health is good. There is no history of injury.

On August 27, assisted by Dr. Walker, of Pickering, and Messrs. Keyworth and Marshall, of this town, I proceeded to remove the tumour. The patient sat in a chair during the operation, and was partially under the influence of chloroform. I first made an incision through the middle of the upper lip to the columna, carried it round the ala and upwards by the side of the nose to within a short distance of the inner canthus of the eye; then another incision in a circular direction from the zygomatic process of the malar bone to the angle of the mouth. Here the facial artery was tied, then an incisor extracted, and an incision carried along the hard as far as the soft palate, and a transverse one from this to a point behind the last molar. The flap was next reflected. With cutting forceps introduced through the right nostril, the alveolar and palatine plate of the superior maxilla were divided; next the nasal process of the maxilla, zygomatic process of the malar, and then the frontal process of the same. The tumour was now easily removed with the lion forceps. The patient bore the operation very well; there was scarcely any hæmorrhage, and no arteries required tying. The cavity was filled with lint soaked in oil, the flap replaced, the wound brought together by several fine silver wire sutures, and the patient sent to bed. On examination the tumour appeared to be of a fibrous nature. The wound healed by first intention, and the lint was mostly removed on the third day after the operation. The day after this the patient was attacked with scarlet fever, and the whole of the fauces assumed a sloughy condition. The face became considerably swollen and inflamed, and an abscess formed under the right eyelid, and eventually a piece the size of a sixpence sloughed and came away, leaving an opening between the nose and lower eyelid through which a finger could be easily passed. The patient was in a very weak state for some time, but eventually regained her strength. On June 18, 1864, I pared the edges of the opening, and transplanted a portion of integument from the temporal region, leaving a good pedicle. The transplanted part exactly filled the opening, and was brought into apposition by means of the silver wire suture. It healed almost entirely by first intention, and the pedicle was then cut and laid down. Subsequently, when the parts were consolidated and sufficiently contracted, Mr. Holden, of this town, made an artificial palate with teeth, and the patient has since been able to articulate and masticate perfectly. The lines of incision show scarcely any scar, and the patient is in a good state of health. I am, &c.

York, November 27. William Bird.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, December 6, 1866.

Dr. Barnes, President.

The following gentlemen were elected Fellows of the Society:—Drs. Thomas Brown, C. Lovegrove, W. J. Pilcher, V. Saboia, and Mr. W. H. Vipan.

Dr. Greenhalgh showed a modification of his metrotome, and also a new intra-uterine stem.

Dr. Graily Hewitt showed a specimen of double placenta which he had received from Mr. Richardson, of Battersea.

Mr. George Roper gave the particulars of

A REMARKABLE CASE OF PLACENTA PRÆVIA.

The circumstances of the case were:—1. The absence of hæmorrhage. 2. The influence of cervical position of the placenta in causing lingering labour. 3. The same influence causing deflection of the fœtal head (a source of the frequency of transverse presentation in connexion with placenta prævia). 4. Arrest and impaction of the head at the pelvic brim by means of the placenta.

Dr. Newman, of Stamford, read a "Case of Cæsarian Section; recovery of Mother; Child not viable."

Dr. Henry Madge read a paper

ON THE ANATOMICAL RELATIONS BETWEEN THE MOTHER AND FŒTUS.

Dr. Madge observed that the doctrines on this subject usually taught at our Medical schools were nearly all founded on the Hunterian doctrine of a utero-placental circulation by means of blood-vessels. About twelve years ago he had had a good opportunity of examining the question for himself, when he arrived at conclusions quite opposed to the Hunterian doctrine. Dr. Madge then gave the details of his views, and of his microscopical and other examinations, which had helped to convince him of their truthfulness. In America these views had been accepted and corroborated by several leading men, and he now wished to lay them before the Fellows of this Society in the hope that, by discussing and re-examining them for themselves, the questions at issue might be decided and placed beyond dispute.

A paper, by Dr. T. H. Tanner, was read

ON EXCISION OF THE CLITORIS AS A CURE FOR HYSTERIA, ETC.

After some introductory remarks, the author gives his reasons for believing that the operation of clitorotomy will not prove of permanent value as a remedy for the cure of hysteria, epilepsy, insanity, etc. He first shows that extirpation of the clitoris in the female is analogous to circumcision in the male, though the latter has advantages not possessed by the former. But as castration is not curative of epilepsy and insanity, even where these diseases are supposed to be dependent on improper practices, so, *à fortiori*, circumcision is perfectly useless in this respect. Secondly, he attempts to prove that, even if it be true that many of these diseases in women are due to "peripheral excitement of the pudic nerve," excision of the clitoris will not be curative, because by it several branches of this nerve are left uninjured. By tracing the distribution of these branches, he shows that in clitorotomy, however extensively performed, the trunk of the pudic nerve cannot be removed or injured, but only that portion of it which corresponds to the dorsal nerve of the penis in the male, and which supplies the frænum and prepuce generally. Thirdly, indirect evidence is brought forward to show that, although certain nations have practised excision of the clitoris for many centuries, yet no evidence has been obtained of any useful results. Under this head, particular reference is made to some remarks by the late Mr. Daniel on the circumcision of females in Western Africa. According to this gentleman, the excisive process is not confined to one particular part, but is more or less varied in accordance with the usages of the different countries where it is resorted to. The operation consists either of (1) simple excision of the clitoris, (2) excision of the nymphæ, (3) excision of both nymphæ and clitoris, or (4) excision of a portion of the labia pudendi, with either or all of the preceding structures. The history of the operation is involved in obscurity; but Mr. Daniel surmised that it is one among the many singular customs faithfully preserved by the African races through the lapse of centuries, having probably been originally inculcated as one of those gloomy rites which the female proselyte had to undergo prior to her initiation into certain mythological creeds. When in Old Calabar, Mr. Daniel had the opportunity of witnessing the operation, which is performed there, as elsewhere, by aged females. The girl having been placed on the knees of a woman, with the legs apart, the clitoris was seized forceps-like by two pieces of bamboo or palm-sticks, and, being gently drawn forth, was severed with a sharp razor. The rather copious hæmorrhage was allowed to exhaust itself, the parts were bathed with cold water, the body dotted with some fetish preparation to avert malign influences, and in two or three days the invalid was allowed to resume her usual occupations. That the operation does not prevent licentious and depraved conduct seems certain; for Mr. Daniel asserts that "social life in most of the pagan towns of Western Africa is darkened by scenes of the grossest demoralisation. . . . An illicit and promiscuous sexual intercourse is constantly carried on by nearly all classes of slave subjects, who, not fettered by any moral obligations, and solely intent on the gratification of their passions, give them an unrestrained rein long before the age of puberty." In girls of high birth, who have been guilty of prostitution, "another and more inhuman barbarity" is perpetrated; consisting of the introduction into the vagina of the unripe pods of the capsicum frutescens, or bird pepper, beaten into a soft mass. The active inflammation which results produces severe pain, and often a permanent obliteration of the vaginal canal. Fourthly, Dr. Tanner details three cases in which he has excised the clitoris, and been disappointed in the result; as well as the histories of two women who have consulted him, and who were operated on at the London Surgical Home without their deriving any benefit. In conclusion, the author states that he has brought forward the subject of this operation for consideration more as a learner than as a teacher. It has been published to the Medical world that very many gentlemen have adopted the operation of clitorotomy in proper cases; and amongst other names those of Sir James Simpson, Dr. Beatty, Sir John Fife, Dr. Savage, and Dr. Routh are mentioned as having done so. Is it not very desirable that these Physicians should detail the results of their experience, and especially that they should communicate to the Profession any information they possess as to the permanency of the cures which have been effected?

Dr. Wynn Williams said, as no one appeared anxious to commence the discussion on this very interesting paper, he would do so by first relating the particulars of a case of a lady who had been under his care both before and after she had undergone the operation of clitorotomy at the London Surgical Home in the year 1863. She had been an occasional patient of his several years previous to this date, and had been suffering from paralysis of the lower extremities, which he believed to have been caused by an injury to the lower dorsal vertebræ from a fall down some cellar steps. In the year 1863, she, having come to reside in London, came again under his care, with her symptoms of paralysis very much aggravated. She could extend her limbs, which she did with a jerk, but appeared to be unable to put them to the ground in the place she wished. On his visiting her one day he was informed she was going into the London Surgical Home. Being satisfied that it was not a case for Surgical interference, he attempted unavailingly to dissuade her from doing so. He did not see or hear from her again for rather more than two years, when she came under his care in a most pitiable condition. She informed him that she went into the London Surgical Home, and had been operated upon by Mr. Baker Brown, and had remained there some two or three months, but had derived no benefit from the operation; on the contrary, she had gradually become worse and worse. He now found her with both limbs drawn upon the abdomen, with the left under the right, so that the hand could not be passed between the thigh and the abdomen. There was also a sloughing sore in the groin, produced by pressure of the two opposing surfaces of integument. Dr. Williams was enabled, under the influence of chloroform, to forcibly extend the limbs, but it was with the greatest difficulty he could prevent them from returning to their old position. Ultimately anasarca of the integuments of the lower extremities and body took place, and sloughing, she dying of exhaustion. His patient informed him (being also confirmed by her sister) that she had not been in the habit of abusing herself, and that she was not at all aware what operation was going to be performed, or she would not have submitted to anything of the kind. This of course was the assertion of the patient, and would have to be taken for what it was worth. Dr. Williams stated he did not believe that clitorotomy was a justifiable operation for the cure of hysteria, epilepsy, etc. It was true we were ordered, if a member offended us, to cut it off; and he thought that the clitoris was not the offending member, but the arms and hands; these, then, were the members that should be cut off. Of course he did not seriously recommend the amputation of the arms, but there can be no reason why they should not be put under restraint by being fastened behind the back. Indeed, it appeared that something of this kind was done after the excision of the clitoris. He had witnessed on two or three occasions at the Surgical Home Mr. Baker Brown excise the clitoris, and was much struck with the fact, as pointed out by Mr. Brown, that in all these cases there existed small polypi in the rectum. Dr. Williams suggested the removal of the polypi in the first instance, remarking that he believed these were the cause of the irritation, as we knew worms to be when located in the rectum; but no polypi and clitoris should be, and were, removed at the same time. In conclusion, he believed that cases of epilepsy and hysteria curable after clitorotomy were curable without it, and cases not curable by other means were not curable by clitorotomy.

Dr. Routh was surprised to hear his name mentioned as authorising the frequent use of clitoridectomy. Indeed, he ought to say that at the Samaritan Hospital it was not adopted, not because some of the staff did not think well of it in some cases, but because others held extreme opinions on the subject, and for the sake of peace it was very rarely practised. He did not know that Dr. Savage had performed the operation more than once in the Hospital, and altogether, including a case of elephantiasis clitoridis operated on by Dr. Rogers that day, it had been done three times. He had, however, sought to obtain information on the subject, and through the kindness of Mr. Brown had seen several of his cases at the Surgical Home, and watched them closely. He would only speak of two he had seen there, which had made a great impression upon him. One was that of an idiot girl who after the operation gradually improved, so as to be able to read the Bible and converse, and who, he understood, was now in service. The other case was that of a lady who used to have seven epileptic fits daily, and who since the operation—extending over a period of several weeks—had ceased to have them altogether. We must not, he said, shut our eyes to the fact that cases were occasionally brought to us where every preventive effort had been made, and failed; others in which treatment had been persisted in for years (two or three years), specially by caustics and blisters, besides internal drugs, and failed. These were the cases in which he thought this operation—which he, with Dr. Tanner, looked upon, after all, as a kind of extended circumcision—might be tried. Suppose it failed, was it necessarily a wrong step to have taken? We might argue with equal justice against the future use of caustics and blisters. Want of success, particularly at the beginning of trials, was common both in Medicine and Surgery. Doubtless clitoridectomy was sometimes unsuccessful. Sometimes patients suffering from irritation in one part supplied by the pudic nerve, if cured in such part, but not desirous to be cured, and not morally controlled afterwards, would resume habits which would create irritation in other parts supplied by the same nerve. There were three parts especially in which this sexual irritation would be observed. 1st. In the clitoris—the most frequent. 2nd. In the fourchette. 3rd. About the anus—a rare affection, and one, he trusted, more rare even than he thought. The proper operation would be to cut the nerve nearer its origin; but this, he feared, was a dangerous proceeding. Still it was philosophical in the case of clitoridectomy—if a patient was morally controlled, also, the operation might turn out successful—not only as a salutary lesson, but by affording a break to a long-continued injurious practice which might be prolonged, and so bring about a permanent cure. He denied, however, that depravity was at the bottom of these practices. Religious, good, and honourable women had learnt it without knowing it had any evil tendency or principle. Dr. Savage's case occurred in such a woman about 76 years of age. Mere defecation induced the clitoric orgasm. Clitoridectomy cured her. This case was pathologically interesting in another point of view, because, though the orgasm was excited at a posterior point to the organ affected, the removal of the latter resulted in a cure. Stating firmly his belief that Mr. Brown had practised his operations in an honest inquiring spirit, and on scientific bases, he thought, however, that until statistics were produced to prove the contrary, clitoridectomy should not be practised until all other means, prosecuted over a long period, had failed, and never except after consultation with a brother Practitioner, wherever practicable. It was a chance of recovery a patient should have the option to try, all circumstances being freely explained to her. This was not only the fair, honest, and straightforward course to pursue, but it was also the philosophical course.

Dr. **Tyler Smith** said that as this subject had been thrown into the area of public discussion, he felt bound to relate his experience and express his opinion in the matter. In the first place, he must express his surprise that Dr. Tanner and Dr. Routh had spoken of clitoridectomy as analogous to circumcision in the male. The fact was that the prepuce or foreskin was a very unimportant structure as compared with the clitoris. As regards sensation, the clitoris was the analogue of the male penis, and was the organ of sexual sensibility in the female. It had happened to him to have at one time in St. Mary's Hospital two patients in whom the clitoris had been removed at the London Surgical Home. One was a married woman, and the other a very respectable single person. Both of them declared they had not practised self-abuse. They were not in any way benefited by the operation. They further stated that the operation was performed without their being at all aware of its real nature. On one occasion he was consulted by an unmarried lady of rank, upon whom clitoridectomy had been performed, and who declared she had only consented to the operation because she was assured that unless she did so she would become insane. This patient confessed to the existence of great sexual irritation, but she stated that the operation had not been of any service in this or any other respect. In another instance, he had been asked to see a young unmarried lady, and give an opinion upon her case and its treatment. He found a number of small fissures round the anus, producing much irritation, which extended forwards to the vulva. He could detect no other sign of disease, and advised that the sphincter should be forcibly dilated so as to separate the cracks. He was then asked if he did not think some further operation imperatively required, and, on replying in the negative, was told that Mr. Brown had seen her and had advised the removal of the clitoris; she also feared mental disease, though then there was no sign of it; and the patient strongly maintained that she had not excited herself beyond scratching to relieve the itching. He (Dr. Tyler Smith) protested against the removal of the clitoris in this case; but as he saw no more of the patient, it was probably performed. Such were some of the cases he had met with, and which had led him to the conclusion that the removal of the clitoris in cases of hysteria and self-abuse could not be justified. We might as well think of removing the penis in cases of masturbation in the male.

Dr. **Greenhalgh** considered that the frequency and evil effects of self-abuse in the female had been greatly exaggerated. He did not believe that it led to idiocy and epilepsy as had been assumed; that girls suffering from these affections were occasionally addicted to such a habit he did not deny. He did not believe that the clitoris or nymphæ had anything to do with the habit, but that it must be rather referred to a peculiar mental condition requiring moral control. As, however, the value of clitoridectomy must be determined by its practical results, he would briefly narrate some cases which had come under his notice. The first was that of a single lady, about forty-two years of age, who had been addicted to this habit for upwards of seven years, operated upon by Mr. I. B. Brown on the 5th of January, 1865. In a note dated January 6, 1866, this lady states, "The irritation has returned with its wonted force up the front and back passage. I feel grieved, having gone through so much, that there are no better results." The second case was that of S. W., aged twenty-seven, single, admitted into St. Bartholomew's Hospital, under his care, on July 14, 1866. She stated that four years ago she was admitted into the Surgical Home for a slight periodic discharge of blood with pains in the lower abdomen and about the hips, for which her clitoris and nymphæ were cut out, without her knowledge, by Mr. I. B. Brown, which operation was followed in three months by an abscess in the bowel which burst and discharged matter for three weeks, since which she has been worse in every respect, suffering, in addition, from difficulty and pain in micturition and intolerable irritation, for the relief of which she "rubs the parts." Clinical clerk's notes:—"The poor girl assured Dr. Greenhalgh and others that she never had any irritation of the vulva or rubbed 'the parts' prior to the operation. A polypus was removed from her rectum while in the Hospital. Discharged relieved." He referred to another case admitted into St. Bartholomew's Hospital of aggravated hysteria, which had been considerably worse since the operation, the nature of which she was wholly unacquainted with. She expressed great alarm when informed that the parts had been mutilated. Dr. Greenhalgh regretted that he had not taken notes of many other cases, about which he had been informed by trustworthy Practitioners, operated upon by the same Surgeon, alike unsuccessful and pernicious in their results. He did not know of one case in which self-abuse, hysteria, idiocy, or epilepsy had been permanently cured by clitoridectomy. He had, therefore, come to the following conclusions:—That the operation was based upon a false theory as to the cause of these conditions. That although self-abuse was temporarily checked by loss of blood, soreness of the parts, and moral control, ultimately the irritation and the habit recurred with increased intensity; in one case, at least, it actually produced the irritation and led to the habit it was said to cure. He consequently regarded clitoridectomy as a useless, pernicious, and most unjustifiable operation for the purposes for which it had been recommended by Mr Isaac B. Brown.

Mr. **Baker Brown**, having thanked Dr. Tanner for the kindly tone and scientific manner in which he had treated the subject, proceeded to review the various cases brought forward, and the remarks which *pro* and *con* had been made upon his practice. Dr. Tanner's first case was unsatisfactory, because the inference was, that restraint and moral influence had not been brought to bear upon the operation. His second must be considered as, at least in some degree, satisfactory, since the patient, from having been formerly bedridden, was, after the operation, able, for the first time in her life, to pursue the calling for which she had been educated—namely, that of a governess. Mr. Brown declined to deal with cases which came to Dr. Tanner, having been previously under his care, because all must acknowledge that the history given us by patients of their treatment, previous to coming to us, can never be relied upon, and least of all in this class of cases, where there is not always an honest desire to be cured. These remarks would apply to Dr. Wynn Williams' case, and, without reference to his case book, Mr. Brown must decline to deal with it; but, supposing all that Dr. Williams stated to be true, Mr. Brown had only done what many others had done—made a wrong diagnosis. With reference to polypi and fissures, Mr. Brown said that these were most frequently coexistent with masturbation, that he had frequently cured patients of hysterical symptoms by treatment of the bowels alone, but that, by experience, he knew now when to consider masturbation as the primary cause of disease, and when to treat both at the same time. Having thanked Dr. Routh for his speech, Mr. Brown passed on to the speech of Dr. Tyler Smith, and protested in the strongest terms against his remarks. Mr. Brown then argued against the soundness of Dr. Tyler Smith's physiology in considering that clitoridectomy unsexes a woman, and entered into a detailed account of the cases Dr. Smith had mentioned with a view of showing that, instead of being no better, they were now quite well. Mr. Brown begged to tell Dr. Greenhalgh that his patient was so much better that she expressed herself as most grateful for the treatment she had received, and he gave an extract from a letter lately received from her to prove it; and so far from the second case being no better, he had only left her that very day completely recovered from the operation, and with no return up to the present time of her distressing symptoms, to which Dr. Hawkesley and Dr. Harling could both testify. This patient had been under Mr. Trustram, of Tunbridge Wells, for five months, and that gentleman had recommended her to undergo the very operation which two months later he stigmatised in the grossest language. In answer to Dr. Head, Mr. Brown said that his operation did not alter sexual excitement on marriage, and that not only had many of his patients borne children after clitoridectomy, but he had now five cases in which, from having disliked marital intercourse and preferred self-abuse, the state of things had been entirely changed after his operation. Mr. Brown concluded by relating three cases, as types of several under his care. 1. One of paralysis of the lower extremities, the girl having been unable to walk since her earliest recollection. In three weeks after operation she walked unaided across the ward, and lately left quite well. 2. One of incontinence of urine, it constantly dribbling away; in April, aged 15, sent from Salisbury; she left six weeks after operation, able to hold her water for three or four hours at a time. 3. A single lady, aged 50, who had been for years subject to uterine hæmorrhage; the cause being diagnosed, clitoridectomy was performed, and since then she had been quite well. This was five years since, and many of Mr. Brown's cases had stood the test of seven and even more years. Mr. Brown regretted that his tongue was tied so frequently to secresy that he could not relate the experience of his private practice. He would, however, engage to bring forward more than one success to every failure that might be mentioned, and if he could bring forward only twenty successes, it would at least illustrate that his principle was right, and that, with increased experience in selection of proper cases, increased numbers of cures would be the result.

Dr. Rogers, having had every facility given him by Mr. B. Brown to see the patients who had been operated upon, and having conversed with several many months after the operation, felt bound to say that in some cases at least great good had resulted. It was admitted that it had entirely failed in others; but this was no reason to impute improper motives, or denounce the operation altogether. Dr. Rogers thought the Society was bound to inquire into the facts in a calm dispassionate manner. Clitoridectomy had been very rarely performed in the Samaritan Hospital, as there existed a difference of opinion among the staff with regard to the result to be derived from it. Dr. Rogers had that day removed a diseased and elephantine growth of the clitoris, the necessity for which, however, had been fully agreed to by all the staff of the Hospital.

The President observed that the discussion had, perhaps unavoidably, turned too exclusively upon the validity of particular cases operated upon. He himself could have wished for time to express himself more fully upon the main question of the relation between masturbation and epilepsy and insanity. He had had some experience in these diseases, and he could confidently say that, in the majority of cases, the vicious practice was resorted to after the disease had existed some time, when the mind had become degraded by disease, and when, being in confinement, the sexual passion could not be otherwise gratified.

Dr. Tanner, in reply, said that one of his chief reasons for bringing forward this subject was to ascertain from gentlemen who had had experience of the operation, if the cures were permanent. This fact could not be ascertained by simply describing the state of the patients when they were discharged from the Hospital. There could be no doubt that, so long as the wound remained unhealed, and even for some few weeks afterwards, no improper practices could be resorted to, as the parts were left very tender. His own opinion was, that further evidence as to the condition of the patients some months after operation would be very valuable. It had been argued that in those cases where irritation was voluntarily produced, other remedies than excision of the clitoris ought to be tried. But on this point Dr. Tanner had no hesitation in expressing his opinion that the use of caustics, blistering fluids, and the actual cautery to the clitoris, were cruel and perfectly useless proceedings. There seemed to be no lack of reliable evidence, that, where such treatment had been adopted for many months, no benefit whatever had resulted. As regards tying the patient's hands at night, fastening the legs, and so on, such proceedings had failed over and over again. The weak point in Mr. Brown's cases was, that, for some months after the operation, many of the patients had to be carefully watched; and the question could not be shirked, whether such watching would not succeed just as well without the excision as with it. In conclusion, Dr. Tanner urged that the subject was eminently deserving of the attention of all engaged in the treatment of women's diseases. He had no doubt that many distressing cases of bad health were really due to long perseverance in the practice of the bad habits which had been mentioned to the Society. If clitorotomy could effect a permanent cure, it would be a great boon; for, notwithstanding what had been said by one or two speakers, he adhered to the opinion expressed in his paper, that this operation was analogous to that of circumcision in the male.

Cholera in Scotland.—Of the epidemics, cholera proved the most fatal, having caused 203 deaths, or 8·3 per cent. of the mortality in the eight towns. The deaths from cholera constituted 13 5 per cent. of the mortality in Aberdeen, 14·9 per cent. of the deaths in Dundee, 17·6 per cent. of the deaths in Edinburgh, 19·2 per cent. of the deaths in Perth, and 26 1 per cent. of the deaths in Leith. 63 deaths were attributed to diarrhœa.—*Monthly Return of the Deaths Registered in the eight principal Towns of Scotland.*

LEGAL AND SANITARY INTELLIGENCE.

THE LODGING-HOUSE CLAUSES OF THE SANITARY ACT, 1866.—REPORTS FROM MEDICAL OFFICERS OF HEALTH ON THE PROGRESS MADE IN CARRYING OUT THE ACT.—DRAFT REGULATIONS.

Few of the provisions of the "Sanitary Act, 1866," are more salutary than those contained in the 35th section, which confers upon Nuisance Authorities the right to make regulations for the improvement of the condition of lodgers. Hitherto the power of interference was limited to the cases of houses within the provisions of the "Common Lodging-houses Acts," unless in such extreme cases as came within the scope of the "Nuisances Removal Acts." Now, all houses or parts of houses let in lodgings, or occupied by more than one family, are subjected to control. The Nuisance Authority of the neighbourhood in which such houses are situated is enabled to make provision for their registration, their cleanliness, their good state of repair, their capacity of accommodation, their water supply, and their inspection. The Authority is also provided with a means of enforcing its regulations, and is empowered, in certain special cases, to close the houses of offending landlords.

But, however willing may be the authority to act for the best in these matters, it is out of reason to imagine that the men composing it should have the time, or sometimes even the knowledge, requisite to give effect to the good intentions of the Legislature. Naturally, then, application for assistance must be made to those who, as Officers of Health, have ready for immediate use the best collection of practical suggestions, the results of actual observation. With the view of saving these gentlemen unnecessary individual labour, and also with the object of placing before the Profession in a digested form the results of practical experience, we have procured from many Officers of Health their views upon that portion of the Sanitary Act which relates to lodging-houses. Further, we have caused to be prepared a draft of regulations upon the subject, suitable for adoption by Nuisance Authorities.

We have to thank the Officers of Health for the courteous and careful manner in which they have responded to our appeal. Amongst those to whom we are indebted, and to whom all interested in Sanitary Reform are under much obligation, is Dr. Trench, Medical Officer of Health for the borough of Liverpool. From him we received a letter upon the subject, which would not obtain justice in an extract. Our readers will thank us for printing it in full:—

"Public Offices, 2, Cornwallis-street,
"Medical Officer of Health's Department,
"Liverpool, December 10, 1866.

"Dear Sir,—The 35th clause of the Sanitary Act is not yet put practically in force in the borough of Liverpool. The delay has been occasioned by some misunderstanding between the Council and the Secretary of State, the nature of which you will see in the enclosed pamphlet on Mr. T. Taylor's letter, and in my note to our town clerk. Since we received the Secretary's approval of our bye-laws, the machinery has also been put in order for an early commencement. I enclose copies of our forms. The notices to landlords have been sent out (on Friday, the 7th), and the tickets and rules will during this week be delivered and put up in ninety-seven houses. These houses are some of those which have been on other occasions found overcrowded, and against the tenants of which proceedings have been taken before the Justices for that offence. With regard to your third question, I can only say that I see no reason why penalties should not be recovered under this Act (1866), as under the provisions of the Nuisance Removal Act, 1855.

"It is, of course, impossible, and certainly not always desirable, to get from the poor wretches the amount of a money penalty. I have usually recommended it to be used as a caution, a threat, or a guarantee against a continuance of the offence; but if the tenant, rendered bold by the very absence of all effects or chattels, persists in overcrowding, we issue a warrant for the penalty and put the delinquent in prison. These are hard lines, but I am glad to say that, during the last two months, we have only had cause to put ten persons into gaol for this offence. In most cases the tenants abate the overcrowding; in others, they leave the house, and get another beyond the immediate surveillance of the inspector. I send you copies of the notices which we have been accustomed to issue under the 'Nuisance Removal Act, 1855.'

"You will, of course, understand that I am now referring to houses which are not registered lodging-houses—in fact, to houses which will be in future registered under the Act of 1866.

"The temporary misunderstanding between the Council of Liverpool and the Secretary of State touched a point of great importance, and one upon which it is probable that the bye-laws of various towns will show that there is among the governing bodies of the different municipalities a great difference of opinion.

"I am certain, in my own mind, that, as far as Liverpool is concerned, the Council were right. I hope that before long some member of Parliament will move an inquiry into the nature, justness, and efficiency of the various bye-laws sanctioned by the Secretary of State under this 35th section, and also into the extent of the power given to the Secretary of State by the 49th section, and into the nature of the cases in which that power has been exercised.

"I remain, dear Sir,
"Your obedient servant,
"W. Trench."

Dr. Trench, who is most indefatigable, and withal discreet, in seconding the endeavours of the borough authorities for the improvement of their town, has embodied in his reports to them some exceedingly valuable remarks in regard to the portion of sanitary law now under consideration. It appears that proposed regulations as to lodging-houses in Liverpool were submitted for confirmation by the Home Secretary, and that the Secretary of the Local Government Act Office suggested a modification in regard to cubical space. Dr. Trench, in his report upon that suggestion, remarks that this matter of space in lodging-houses "is not to be determined as a question of mere abstract hygiene, nor is it to be propounded as a sanitary proposition, but it is to be practically regulated by data dependent on a knowledge and experience of what is possible, and therefore just, under all the circumstances of each particular district or borough. Thus, it has been ruled by some in London that 450 cubical feet of space are necessary for each individual adult and infant, and that rooms without this accommodation are injuriously overcrowded. As an abstract proposition they are probably right. If, however, the Secretary of State confirms a bye-law making this space necessary in London, it will be well that the houses there are so constructed as to admit of it without grievous tyranny to tenant and owner; for the penalties are great, and a bye-law which is not enforced, but is merely enunciated as a theory, is worse than useless."

This is unquestionably true, and an error of excessive severity in framing regulations will infallibly defeat its object. The magistrates will refuse to enforce the penalties; and not only will the obnoxious clause become a dead letter, but the remainder of the code will be regarded with contempt. We have the testimony of Dr. Gibbon to the same effect. He says that, in his opinion, "all the regulations he has seen are too strict—unnecessarily so;" and he instances one clause—viz. ,that the landlord should either reside in the parish or district, or appoint a resident agent. Unquestionably much misery is caused by the absence of the landlord and his consequent ignorance of the actual condition of his tenements; but the reverse cannot be secured by penal regulations, it can only be brought about by the philanthropic co-operation of owners and agents of property.

The question of overcrowding in lodgings appears to have been much more energetically agitated in Liverpool, even before the passing of the Sanitary Act, than it has in other parts of the kingdom (save London) since. Proceedings have been taken, between March and September in this year, against no fewer than 517 owners and tenants. These proceedings were taken by order of the Health Committee, and we would strongly recommend all concerned in sanitary improvement to obtain, if possible, a perusal of the printed papers and reports upon the subject. They will show with what energy, tempered with discretion, Dr. Trench throws himself into his work as Health Officer of the borough.

The following is an abstract of the regulations adopted by the Health Committee:—They provide, firstly, that the Medical Officer of Health shall, at his discretion, cause any house that is let in lodgings to come under their operation, and that he shall register such house with the cubical measure of its rooms. Next he is to provide the chief tenant with a printed ticket, on which is stated very legibly the number allowed to sleep in each room and to occupy the house, and the tenant is not to permit any greater number to sleep in the room or occupy the house. Provided, nevertheless, that in houses where one room is specially appropriated as a day-room, and not used as a sleeping apartment, the space required for each adult inmate of all the other rooms, being sleeping apartments, shall not exceed 300 cubic feet, and, in houses where no room is specially appropriated as a day room, shall not exceed 350 cubic feet. Together with the ticket specifying the number of inmates allowed in his house, the tenant is to be provided with a printed sheet containing the following directions:—Firstly, that the floors of each room are to be well swept once before 12 o'clock each day. Secondly, that the windows of each bedroom are to be opened to their full width during one whole hour before 12 o'clock noon, and during one other whole hour between 12 o'clock at noon and 4 o'clock p.m. (weather permitting), unless prevented by the illness of any inmate of such room. Thirdly, that the floors of every inhabited room of the house are to be washed at least once a week. On the same sheet it is ordered that the owner or agent shall cause the walls and ceilings of every room to be well and sufficiently cleansed and limewashed at least twice in every year, and that even if this regulation is complied with, and yet the Medical Officer of Health considers the house to be in a filthy condition, that then the chief tenant shall, on a notice to that effect from the Medical Officer of Health being served on him, cause the walls and ceilings, and the common staircases and passages, to be well cleansed and limewashed within forty-eight hours from its service. Beneath is printed a notice of the penalty to which any person disobeying will be liable—viz., one not exceeding 40s., with an additional one not exceeding 20s. for every day during which a default in obeying the orders may continue. Every person above 15 years of age is, for the calculation of space required, considered as an adult; also two persons between the ages of 6 and 15 are regarded as equivalent to one adult.

As a whole, the Liverpool regulations are well calculated to provide effectually for the evil they are intended to meet. The machinery, by notices, etc., for making them known to owners and tenants, appears most complete. There is, however, both in regard to Liverpool and London, room for doubt whether the evils of overcrowding do not proceed in many cases from a cause which can never be removed so long as the existing tenements stand. We must then turn our attention to the Buildings Acts, and see whether something cannot be done to regulate the minimum size of dwelling-rooms in new erections. At present houses are built, and, unless something is done, will continue to be built, having many rooms not over 252 feet. These, according to the regulations in Liverpool and according to our draft, must either be shut up entirely or tenanted only by children, as they do not afford space for a single adult.

Next to Liverpool, the City of London (as distinguished from the metropolis generally) appears to have been most active in carrying out this portion of the Act. We are indebted to Dr. Letheby for valuable information. The Secretary of State has declared the Sanitary Act in force, and the regulations for lodging-houses have been drawn up, but have not yet been approved. Alterations were made in them at the suggestion of the Home Office. The proposed regulations do not materially differ from those of Liverpool. The minimum space required is 300 cubic feet in sleeping-rooms, 400 in sleeping and living rooms; not more than one married couple and their children under 15 to occupy the same sleeping-room; no room let out in lodgings to more than one family to be occupied by persons of different sexes, unless they are children under ten years old. The course of action appears to be as follows:—As soon as the Officer of Health finds that any house occupied by more than one family is indecently or unwholesomely overcrowded, or is in such a bad sanitary condition as to require especial attention, he will certify to that effect to the Commissioners of Sewers (the local authority), and advise them to insist on the registration of the house. As soon as this is done, it will be placed under the regulations and visited very frequently by the inspectors. Any violation of the regulations would be at once reported to the Commissioners, and, probably, an order issued for the amendment of the default. This not being done within the specified time, legal proceedings would be set on foot, not only for the execution of the work required, but also for the recovery of the penalties prescribed by the regulations. At present, under the powers already possessed by the Commissioners of

Sewers, the mechanism in use appears to be of a precautionary character, the registration of a house not being required unless it be found that the owner fail to keep it in a proper sanitary condition.

The authorities of the Hackney district have not only got the Sanitary Act declared as in force, but their regulations drawn up and approved by the Secretary of State; space required the same as in the City of London. This shows promptitude which we cannot too highly press upon the notice of the authorities of other places.

In the Westminster district and in Chelsea regulations have been drawn up, and the confirmation of the Secretary of State obtained. We have been promised a copy of the regulations, but they have not yet reached us.

In Aberdare, Bethnal-green, St. George's (Hanover-square), in the Fulham, Holborn, Lewisham, and Limehouse districts, in the parish of St. Luke (Middlesex), in Merthyr Tydfil, in Southampton, in Southwark, in St. Marylebone, and in the Wandsworth, Plumstead, and Whitechapel districts, although regulations have not yet been drawn up and confirmed, they have either been ordered, or the subject is in agitation by the Officers of Health. In many of these places the authorities, instead of setting to work to carry out their own views, appear to wait, in order to know what others have done. Their Officers of Health almost unanimously express their anxiety for a code of regulations, and we hope that, armed with this record of what has been done in other places, they will be able to move their respective local authorities to energetic action.

In Bristol, in the Clerkenwell and Eltham districts, in Hampstead, in the parishes of St. Martin-in-the-Fields, St. Mary (Newington), St. Pancras, and in the St. Saviour's district, no steps have been as yet taken. In one of these parishes the Officer of Health states that he has "preferred waiting for the experience of other districts," which we hope our columns will soon convey to him.

As regards the penalties imposed for infringement of the regulations, we are advised that they will properly be recovered in manner directed by the statute 11 and 12 Vict., c. xliii. That Act, which consolidates the practice with respect to summary convictions before justices, provides that, when information of offence has been laid, a summons may be issued; that the process is not to be avoided by want of form; and that such summons, if disobeyed, may be enforced by warrant. It provides for the compulsory attendance of witnesses, and for their imprisonment in case of refusal to be examined. In the event of conviction penalties may be levied by distress, or the defendant may be imprisoned for any time under three months if his property be insufficient to meet the claim. Costs may be awarded to either party, recoverable by distress, and, in default, may be followed by imprisonment, with or without hard labour, for any term not exceeding one month. A metropolitan police magistrate, or alderman of London, may act alone in respect of the powers conferred by the 11 and 12 Vict., c. xliii.

DRAFT

REGULATIONS IN REGARD TO HOUSES, OR PARTS OF HOUSES, WHICH ARE LET IN LODGINGS OR OCCUPIED BY MEMBERS OF MORE THAN ONE FAMILY.

Parish [or District] of ———
To Wit.

Whereas, by an Act of Parliament made and passed in the 29th and 30th years of the reign of her present Majesty Queen Victoria, intituled "An Act to amend the Law relating to the Public Health," it is enacted that—

"On application to one of her Majesty's principal Secretaries of State by the nuisance authority of the City of London, or any district or parish included within the Act for the better local government of the metropolis, or of any municipal borough, or of any place under the Local Government Act, 1858, or any Local Improvement Act, or of any city or town containing, according to the census for the time being in force, a population of not less than 5000 inhabitants, the Secretary of State may, as he may think fit, by notice to be published in the *London Gazette*, declare the following enactment to be in force in the district of such nuisance authority, and from and after the publication of such notice the nuisance authority shall be empowered to make regulations for the following matters; that is to say,

"1. For fixing the number of persons who may occupy a house or part of a house which is let in lodgings or occupied by members of more than one family.

"2. For the registration of houses thus let or occupied in lodgings.

"3. For the inspection of such houses, and the keeping the same in a cleanly and wholesome state.

"4. For enforcing therein the provision of privy accommodation and other appliances and means of cleanliness in proportion to the number of lodgings and occupiers, and the cleansing and ventilation of the common passages and staircases.

"5. For the cleansing and lime-whiting at stated times of such premises.

"The Nuisance Authority may provide for the enforcement of the above regulations by penalties not exceeding 40s. for any one offence, with an additional penalty not exceeding 20s. for every day during which a default in obeying such regulations may continue; but such regulations shall not be of any validity unless and until they shall have been confirmed by the Secretary of State."

And whereas, the Right Hon. ———, one of her Majesty's principal Secretaries of State for the Home Department, did, by notice published in the *London Gazette* on the , declare the said enactment to be in force in the Parish [or District] of ———: Now we, the Nuisance Authority acting in and for the said Parish [or District], do, in pursuance of the power conferred upon us by the 35th Section of the Statute above named, make the following Regulations—that is to say,—

REGULATIONS.

I.—*Preliminary Notice.*

Before putting these regulations in force with respect to any house or part of a house, the Nuisance Authority shall give fifteen days' notice in writing to the owner thereof, and shall serve him with a copy of the said regulations, and shall permit him to attend their next meeting to state his objections thereto.

II.—*Owner.*

The person paying, or liable to pay, or entered in the poor-rate book as liable to pay rates for any house, shall be deemed to be owner thereof.

III.—*Registration.*

Every house in respect of which these regulations are put in force, shall be registered in a book to be kept by the Nuisance Authority.

IV.—*Number of Inmates.*

The number of persons who may occupy any room, used both for living and sleeping in a house so registered, shall be such that each grown person shall have the cubic space of at least 350 feet.

The number of persons who may occupy any room used for sleeping only shall be such that each grown person shall have the cubic space of at least 300 feet.

Two children under 10 shall count as one grown person.

Not more than two grown persons of different sexes shall occupy the same sleeping room.

V.—*Owner to Keep a Ticket.*

Every owner of any house so registered shall keep a ticket, to be supplied by the Nuisance Authority, and signed by their clerk, stating the number of persons which each room let in lodgings may accommodate, according to the foregoing regulation. Such ticket shall be signed by the owner with his name and address, and shall be produced when demanded by any officer of the Nuisance Authority.

VI.—*Inspection.*

The owner of every such house shall allow every part thereof to be inspected at any time by any officer of the Nuisance Authority duly authorised for that purpose.

VII.—*Cleanliness.*

The owner of every such house shall cause the walls and ceiling of every room, and the staircase, passages, yards, basements, areas, and water-closets, and dustbins, to be lime-whited or otherwise well and sufficiently cleansed to the satisfaction of the officer appointed to inspect such house, once, at least, every year in the month of March or April; and shall cause the floors of all rooms, staircases, passages, yards, and closets to be at all times kept clean to the satisfaction of the officer appointed by the Nuisance Authority.

The owner shall also remove any animal which the Nuisance Authority may require him to remove from the said house.

VIII.—*Ventilation.*

The owner shall cause every room to be ventilated by a sufficient window and fireplace, or in such other mode as may be directed or approved by the Nuisance Authority.

IX.—*Infectious Disease.*

Whenever any inmate of any room in any house so registered shall be attacked with fever, scarlet fever, small pox, cholera, or other infectious disease, the owner shall forthwith give notice thereof to the Nuisance Authority.

X.—*Water Supply.*

Every house so registered shall be provided with a covered cistern, capable of holding twenty-four gallons for each room occupied; such supply to be unconnected with any water-closet.

XI.—*Water-closets.*

The owner shall provide water-closet accommodation at the rate of at least one water-closet for every twenty persons in the house. Such closet to be supplied with water, to the satisfaction of the Nuisance Authority, from a separate butt or cistern.

The owner shall cause every water-closet to be washed out and cleansed every day, and, if need be, disinfected, to the satisfaction of the Nuisance Authority, and shall cause the seat, floor, and walls thereof to be at all times kept clean.

The water-closets and all sinks or inlets into drains shall be at all times kept well trapped.

XII.—*Dustbins.*

Every registered lodging-house shall be provided with a covered bin-box, or tub to contain dust, ashes, and other refuse; and the owner shall cause the same to be emptied at such times as shall be fixed by the Nuisance Authority.

XIII.—*Drains.*

Every registered lodging-house shall be drained to the satisfaction of the Nuisance Authority; and every yard and area shall be well paved in such a way that the water may run off quickly.

No roof-gutter or rain-water pipe shall be used for carrying off slops or dirty water.

Every owner shall cause the windows to be kept in good repair, and shall cause the roof to be kept weathertight.

XIV.—*Penalties.*

The owner of every registered lodging-house shall be responsible for carrying out these regulations, and such orders as the Nuisance Authority may issue in conformity therewith. To this end the owner, or his agent, shall visit every room in such house at least once in every week, and shall see to the cleanliness thereof. He shall also cause a copy of these regulations to be affixed to the wall in some conspicuous place within the house, and shall take care that the same is kept at all times visible and legible.

Any neglect or infringement of any one of the above regulations shall render the owner liable to a penalty not exceeding 40s. for any one offence, with an additional penalty not exceeding 20s. for every day during which a default in obeying such regulations may continue.

The above penalties may be imposed by the Nuisance Authority; and if on demand the person on whom they are imposed refuses or neglects to pay the same, the Nuisance Authority will forthwith proceed to recover the same by such proceedings as the law directs.

XV.—*Application of Regulations.*

These regulations apply to those houses, or parts of houses, within the Parish [or District] of ———, let in lodgings, or occupied by members of more than one family, in regard to which the Nuisance Authority may declare them in force; excepting only common lodging-houses within the provisions of the Common Lodging-Houses Act, 1851, or any Act amending the same.

(Signed) ———, Clerk to the Nuisance Authority.
Dated this —— day of ———, 1866.
Confirmed ———.

The next meeting of the Metropolitan Association of Medical Officers of Health will be held on Saturday, December 15, at half-past seven o'clock in the evening, at Scottish Corporation Hall, Crane-court, Fleet-street. Dr. Letheby will read a paper on diseased meat, and will show fresh specimens of the principal varieties of such meat from the London markets, as well as specimens of meat and human tissue infested with parasites, as trichina, echinococcus, cysticercus, etc. He will likewise take the opportunity of showing the spectrum appearances of blood. Mr. Liddle will introduce the subject of a bill, prepared by the Metropolitan Board of Works, to regulate the construction and use of buildings and the formation of streets, sewers, and drains in the metropolis.

THE CASE OF MR. STATHAM.

A public meeting of the Medical and Dental Professions was held on Tuesday afternoon, at the Literary and Scientific Institute, Edwards-street, Portman-square, to receive the report of a sub-committee appointed at a preliminary meeting held on November 20, to consider what steps should be taken in the case of Mr. Statham, the defendant in the late action of Absolon *v.* Statham The chair was taken by Sir William Fergusson, Bart., who, in introducing the business, said that one object of the meeting was to express their sympathy with a Professional brother, in consequence of legal proceedings of a most unfair character which had been taken against him. It had been suggested to him that a fund should be raised for the purpose of defending such actions as that brought against Mr. Statham; but his own opinion was that, instead of repressing such attacks, the existence of such a fund might tend to encourage them. The present case was one of peculiar hardship; for they must all feel that in this special instance there was even an excess of kindness on the part of Mr. Statham towards his patient. He (Sir William) had even stronger feelings with regard to the case than others in the room; for, without his having the least idea of what was contemplated, his Professional opinion was taken regarding the health of the patient before the case came into court. He gave such a decided opinion, that not even the smallest hint was given to him that the case was ever likely to come before a legal tribunal; and his astonishment was very great when he heard a few days afterwards that the patient had brought an action against Mr. Statham. He strongly protested against juries attaching any value to the opinions of men whose experience of chloroform was confined to eight or ten cases, in opposition to the opinions of men who had used it in hundreds or perhaps thousands of instances. It was probably the opinions given by men of limited experience that led the jury to waver in their consideration of the case, and prevented them from giving that verdict which the meeting all felt ought to have been pronounced. The following report of the sub-committee was then read and adopted:—

"The Committee appointed at the first general meeting held on November 20, 1866, had submitted to them for consideration the following questions:—

"1. Whether it be advisable to raise a fund to defray the legal expenses of Mr. Statham, or otherwise to make him an honourable recompense.

"2. Whether it be well to move for any new action in the case, and, if necessary, take opinion of counsel.

"3. Whether to draw up a statement inviting the atention of the public to the present unsatisfactory and dangerous relationship between Professional men and their patients, based on the recent vexatious trials for malpraxis.

"4. Whether it would be advisable to take steps for the organisation of a Defence Fund.

"On the first of these points the Committee reports that it entered into communication with Mr. Statham himself, from whom, in return, the Committee received through their Honorary Secretary, Mr. Fox, the subjoined reply:—

"'60, Wimpole-street, Nov. 22, 1866.

"'My dear Sir,—I feel so strongly that I have no right to ask Professional friends to help me for an error of judgment, that I must beg that any idea of pecuniary aid is withdrawn. Grateful for kind sympathy—Yours most truly,

"'J. L. Statham.'

"The Committee, therefore, feel that they are precluded from recommending the adoption of this course.

"It was therefore resolved—

"'That it be recommended to the General Committee that a resolution expressive of sympathy with Mr. Statham, and of Professional approbation of his treatment of the case of the plaintiff, Absolon, be engrossed on vellum, signed by the Chairman, Chairman of the Sub-Committee, Hon. Treasurer, and Hon. Secretary.

"On the second point the Committee unanimously opine that no action can be taken; the Committee has therefore come to the following resolution:—

"'That the Committee report that, having informed themselves on the matter of the second point submitted for their consideration, they find that in the present state of the case no legal action is open to the defendant.'

"With regard to the third point the Committee have to thank Dr. Richardson for a short report on Trials for Malpraxis, which he, in conjunction with Mr. Erasmus Wilson, drew up at the request of the Committee; but on mature consideration they were of opinion that it would not be desirable for the general meeting to issue any address to the public on the subject of malpraxis.

"On the last point the Committee submits as its opinion that the organisation of a defence fund would not at this time be advisable."

It was then unanimously resolved—

"That this meeting, having taken into full consideration the evidence adduced at the trial of Absolon *v.* Statham, unanimously agrees that the Professional treatment adopted by Mr. Statham in the case of the plaintiff Absolon was in every particular sound, skilful, humane, and beyond reproach; that the meeting warmly sympathises with Mr. Statham for the anxiety and expense to which he has been subjected by an unjust and groundless prosecution, and assures him of its entire and unabated confidence in his practical skill, Professional integrity, and honour. The meeting would add that, but for Mr. Statham's own objection to such a course, it would gladly have defrayed the legal expenses to which he has been subjected."

It was further resolved that a copy of this resolution be engrossed on vellum, and presented to Mr. Statham. A vote of thanks to the Chairman, which was warmly responded to, was then proposed by Dr. Anstie, and seconded by Mr. Erasmus Wilson; and Dr. Richardson having alluded in high terms to the zeal and energy displayed by Mr. Charles James Fox, the honorary secretary, the proceedings terminated.

NEW BOOKS, WITH SHORT CRITIQUES.

The Brain and Cranial Nerves: showing their Origin, Arrangement, Principal Divisions, and Distributions. By Thomas S. Bulmer, Undergraduate in Medicine. Toronto University. Chart.

*** This chart has been carefully got up from some of the best works on the subject. It is highly creditable to an undergraduate, but in face of diagrams of the nerves by such a man as Flower we suspect that it will not make much way in this country.

Benedicite; or, the Song of the Three Children. By G. Chaplin Child, M D. London: J. Murray. 2 vols, pp. 255 and 283.

*** An account of the most important phenomena of nature looked at from a devotional point of view. Beautifully got up—in fact, two of the nicest-looking volumes we have seen for a long time.

Inorganic Chemistry. By the late G. Wilson, M D. Revised and enlarged by Stevenson Macadam, Ph D., and Lecturer on Chemistry, Surgeons' Hall, Edinburgh. With new notation added. London and Edinburgh: W. and R. Chambers Pp. 385.

*** A new and much improved edition of this well-known text-book, with better type and better paper; founded on the new notation, but containing the basis of the old.

A Treatise on the Origin, Nature, Prevention, and Treatment of Asiatic Cholera. By John C. Peters, M.D. New York: Van Nostrand. London: Trübner. Pp 162.

*** Let us hope that this little work has arrived too late in this country for the cholera epidemic, and yet it is almost a pity; for small and unpretentious though it be, without containing any startling addition to our knowledge of the subject, it is, for its size, one of the best works on cholera that have passed through our hands. The origin, distribution, nature, and treatment of cholera are treated shortly and succinctly, yet without the omission of anything of importance.

Clinical Histories, with Comments. By Henry Day, M D, Physician to the Stafford County Hospital. London: John Churchill and Sons. Pp. 254.

*** A useful practical book, containing cases of, and reports on, cerebro-spinal meningitis, the treatment of acute rheumatism by blisters, rheumatic fever without pain, pelvic hæmatocele, causation of epilepsy, leucocythæmia, cardiac apnœa, etc.

MEDICAL NEWS.

◆

University Intelligence.—University of London.—The following are lists of candidates who passed the respective examinations indicated:—

1866.—B.S. Examination.

Pass Examination.

Thomas Bond, King's College; Francis John Buckell, University College; Edward Casey, King's College; Frederick Barham Nunneley, University College.

Examination for Honours.

First Class.—Frederick Barham Nunneley (scholarship and gold medal), University College: Thomas Bond (gold medal), King's College; Edward Casey, King's College.

1866.—M.S. Examination.

Alexander Bruce, B.Sc., University College.

1866.—M.D. Examination.

Henry Charlton Bastian, M.A., University College; Edward Lloyd Harries Fox, University College; Thomas Henry Green, University College; James Jackson, London Hospital; William George Vawdrey Lush, St. Bartholomew's Hospital; Richard May Miller, B.A., University College; Richard Douglas Powell,(a) University College; Arthur Ernest Sansom, King's College; Charles Smith (gold medal), Guy's Hospital; William Vicary Snow,(a) University College; Frederick Stockwell, St. George's and University College.

University Intelligence.—University of Cambridge:—

Natural Sciences Tripos.

Earle, Jesus Coll.; Walker, Sidney Coll. (equal); King, Clare Coll.

Second Class.—Fenwick, Trin. Coll.; Ralfe, Caius Coll.; Smart, Caius Coll. (equal); Wollaston, Clare Coll.

Third Class.—Marshall, Trin. Coll.; Semple, Caius Coll.

G. M Humphrey, M D, M. J. Berkeley, M.A., W. Stokes, M.A., O. Fisher, M.A, Examiners.

Royal College of Surgeons.—The following Members of the College, having undergone the necessary Examinations for the Fellowship on the 20th, 21st, and 22nd November, were reported to have acquitted themselves to the satisfaction of the Court of Examiners, and at a meeting of the Council on Thursday, the 13th inst., were admitted Fellows of the College, viz.:—

Messrs. John Kempthorne, L.S.A, Callington, Cornwall, diploma of membership dated July 20, 1846; John Wyatt, Surgeon-Major, Coldstream Guards, May 26, 1848; Henry John Hughes Lawrence, 1st Battalion Grenadier Guards, April 16, 1852; Martin Magill, M.D., St. Andrew's Royal Hospital, Haulbowline, June 6, 1856; Joseph Collings Grigg, L.S.A., Royal Hospital, Greenwich, April 12, 1858; Reginald Harrison, L.S.A., Maryland-street, Liverpool, April 15, 1859; Thomas Pickering Pick, L.S.A., Bolton-road, Mayfair, July 29, 1862; and Thomas Bond, North Petherton, near Taunton, April 26, 1864.

It is stated that three gentlemen out of the twelve who were admitted to both examinations failed to acquit themselves to the satisfaction of the Court, and were consequently referred back to their studies for the full periods. The preliminary Examinations in Arts, etc., for the Fellowship and Membership of the College will take place next week, and already 150 candidates have entered their names for the ordeal.

Licentiates in Midwifery.—The following members of the College of Surgeons, having undergone the necessary examinations, were admitted Licentiates in Midwifery at a meeting of the Board on the 12th inst., viz.:—

Messrs. Richard Avery Rix, L.S.A (St. Bartholomew's), Beccles, Suffolk, diploma of membership dated April 26, 1865; Frederick Walter Lowndes, L.S.A. (Edin.), Liverpool, July 25, [illegible]; Edward Lodewyk Crowther, L R C.P. Lond (Guy's), Hobart Town, Tasmania, April 24, 1866; Eli Crew, L.S.A. (King's College), Tetbury, Gloucestershire, April 24, 1866; James Augustus Hayden, L.S.A (Charing Cross), High Wycombe, April 27, 1866; Thomas Edward Stainthorpe (Middlesex Hospital), Hexham, Northumberland, November 15, 1866; William Fox Branch Pollard (King's College), Demerara, November 16, 1866; Edward Griffiths Clarke (St. Bartholomew's), Mold, Flintshire, May 1, 1861; Edmund Archer, F.R.C.S Eng (St Bartholomew's), Cape of Good Hope, December 29, 1846; and Clarence Visick (St. George's), Fleet-street, May 10, 1855.

It is stated that six candidates failed to acquit themselves to the satisfaction of the Board. The next examination for the Licence will not take place until February.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, Dec. 6, 1866:—

Charles Lyon Ridout (St. George's Hospital), Egham, Surrey; James Goodridge Andersen (St. Mary's Hospital), Theddlethorpe, near Alford, Lincolnshire; Robert Shingleton Smith (King's College Hospital), Charlton Horethorne, Sherborne, Dorset; Joseph Westmorland (Leeds School of Medicine), Cheadle, Cheshire.

The following gentlemen also on the same day passed their First Examination:—

Thomas Flower, Middlesex Hospital; George Everitt Norton, Middlesex Hospital; Alfred Robt. Steel Perkins, Guy's Hospital; Chas. Wilson Milne, St. Thomas's Hospital; Alfred Pern, St. Thomas's Hospital; Nelson Congreve Dobson, St. Thomas's Hospital; Frederick Pollard, St. Thomas's Hospital; Fredk. Morrish Pierce, Manchester Royal Infirmary.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Addenbrooke, Mr. E. H., has been appointed House-Surgeon to the Birmingham and Midland Free Hospital for Sick Children.

Aitken, L., M.B., C.M. Edin., has been appointed Resident Clinical Assistant to the Hospital for Consumption and Diseases of the Chest, Brompton.

Annandale, T., L.R.C.S. Edin., has been appointed a Consulting Surgeon to the Infirmary, Newcastle-on-Tyne.

Heath, Christopher, F.R.C.S.E, has been appointed Assistant-Surgeon to University College Hospital, and Teacher of Operative Surgery at University College.

Parson, E., M.D. Lond., M B., has been appointed Physician-Accoucheur to the Charing-cross Hospital.

Phillips, Edward England, L.R.C.P Ed, M.R.C.S. Eng., L.S.A., has been appointed Resident Medical Officer to the Bristol Dispensary, *vice* Winter, M.R.C.S.E., L.S.A, resigned.

Trubshaw, A., M R.C.S., has been appointed a Demonstrator of Anatomy at the Liverpool Royal Infirmary School of Medicine.

(a) Obtained number of marks qualifying for gold medal.

BIRTHS.

Ferguson.—On December 9, at 51, Ordnance road, Regent's-park, the wife of Dr. B. Ferguson, R.N., of a daughter.

Flanagan.—On December 3, at Gosport, the wife of J. Flanagan, Esq., Surgeon, R.N., of a son, prematurely.

Goldie.—On November 25, at Kirkstall House, Leeds, the wife of G. Goldie, M.R.C.S.E., of a son.

Harding.—On November 30, at Whittlesey, Cambs., the wife of C. F. Harding, M.D., of a daughter.

Pitman.—On December 4, at 94, Gloucester-place, Portman-square, the wife of H. A. Pitman, M.D., of a daughter.

Price.—On December 11, at Margate, the wife of W. P. Price, M.D., of a daughter.

Morris.—On December 8, at Worthing, the wife of Dr. Morris, of Hayes-common, of a daughter.

Tuke.—On December 7, at the Manor House, Chiswick, the wife of H. Tuke, Esq., M.D., of a daughter.

MARRIAGES.

Tylecote—Lee.—On December 6, at Thame, J. H. Tylecote, M.D., Sandon, Staffordshire, to Emily Sarah, third daughter of R. Lee, Esq., M.R.C.S.E., Thame.

Winn—Chilcott.—December 6, at St. John's Church, Truro, J. M. Winn, M.D., Hammersmith, to Emelyne, third daughter of the late J. W. Chilcott, Esq., Truro.

Zinzan—Griffith.—On December 6, at East Knoyle, Wilts, R. V. Zinzan, Surgeon, Tisbury, Wilts, to Isabella Margaret H. T. Griffith, youngest daughter of the late John Francis Gwyn Griffith, Rector of Llansannor, Glamorganshire.

DEATHS.

Cape, H., F.R.C.S.E., at Soogowlie, India, on September 27.

Haylehurst, **Thomas**, at Claverley, Shropshire, on December 10, aged 66.

Hearn, C.B. (Surgeon-Major 1st Battalion 1st Royal Regiment), at Suez, on board the English steamer *Mula*, on November 21.

Higgins.—Dr. Charles Higgins, Chevalier of the Legion of Honour, and Physician to the Irish College, has just died at Paris, aged 61.

Jeaffreson, H., M.D. Cantab., F.R C.P. Lond., at 8, Finsbury-square, of typhus fever, on December 7, in his 57th year.

Pinel.—Jean Pierre Casimir Pinel, nephew of Philip Pinel, and himself a distinguished alienist Physician, died recently at his establishment at Neuilly, aged 65.

Wright, J. A., M.D., of Barrow Hall, Warrington, on December 4, aged 61.

VACANCIES.

Birmingham General Hospital.—Dispenser.

Birmingham Lying-in Hospital.—Resident Surgeons.

Sunderland and Bishopwearmouth Infirmary.—House Surgeon.

Western Ophthalmic Hospital, Marylebone-road.—Two Assistant-Surgeons.

Westminster Hospital.—Assistant Surgeon.

POOR-LAW MEDICAL SERVICE.

⁂ The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Farnham Union.—The Frimley District is vacant; area 6405; population 2678; salary £25 per annum.

Halifax Union.—Mr. J. E. Chalmers has resigned the Hipperholme District; area 2194; population 2778; salary £12 per annum.

APPOINTMENTS.

Burton-upon-Trent Union.—William Andrews, M.D. Edin., L R.C.S. Edin., L.S.A., to the Lullington District.

Eton Union.—Albert J. Southey, M.R.C.S.E., L.S.A., to the Colnbrook District.

Newbury Union.—John Swindale, M.R.C.S.E., L.S.A., to the Binfield District.

Sedbergh Union.—Benjamin Wilson, L.S.A., to the Dent District.

Sevenoaks Union.—Osborne D. Marriott, M.B. Glas., M.C. Glas., L.S.A., to the Seventh District.

Wigan Union.—Robert Winstanley, M.R.C.S.E., L.M., L.S.A., to the Second District and the Workhouse.

Mr. Cæsar Hawkins, F.R.S.—At a meeting of the Council of the Royal College of Surgeons, on the 13th inst., the above gentleman resigned the chair he has so long occupied as an examiner. So long ago as 1846 Mr. Hawkins was elected a Councillor, and three years after a Member of the Court of Examiners and Hunterian Orator. In 1852 he was elected President of the College, and again in 1861. Mr. Hawkins retains, to the great advantage of the College, his seat as its representative at the General Council of Medical Education and Registration.

Queen's University in Ireland.—In consequence of the recent decision of the Master of the Rolls, it has been officially announced, by order of the Senate of the above University, that "the holding of the Matriculation Examination, which was advertised for January 7 next, and the appointment of Examiners to conduct Matriculation Examinations, under the supplemental charter, have been postponed until further notice."

The Paris Faculty of Medicine.—This body has decided to recommend for filling the vacant chairs the following gentlemen:—*Therapeutics:* 1. M. Sée; 2. M. Hardy; 3. M. Gubler. *General Pathology:* 1. M. Lasègue; 2. M. Chauffard. *Pathological Anatomy:* 1. M. Vulpian; 2. M. Laboulbène; 3. M. Empis.

Ovariotomy in Paris.—Two operations have been performed recently; one by MM. Gosselin and Labbé in the vicinity of Paris, and the other by M. Maisonneuve at the Hôtel-Dieu. Thus far, both cases have done well, the one having been operated upon on the 27th, and the other the 30th November. In M. Maisonneuve's case the lower half of the wound was left open, to facilitate the egress of discharges.

Medical Charities.—Mrs. Frances Ann Williams, of Wandsworth, lately deceased, has bequeathed £5000 to St. George's Hospital, to be expended towards the building of a ward to the Hospital for general purposes, and £500 to each of the following institutions—viz., the Hospital for Sick Children, Great Ormond-street; the Hospital for Incurables, Putney-heath; the Cancer Hospital, and the Medical Benevolent College, Epsom. This benevolent lady has bequeathed similar large sums to several other charitable institutions, not strictly Medical.

The Vestry of St. Martin's-in-the-Fields have given Mr. Beale, their Medical Officer of Health, a cheque for £105, and passed the following resolution:—Resolved unanimously,—"That this Vestry, marking their sense of the untiring efforts made by Mr Beale to meet the danger caused throughout the parish by the existence of cholera and diarrhœa, resolve that the sum of 100 guineas be given to him for his services during that period."

Want of Accommodation for Lunatics.—The whole of the London lunatic asylums in and near the metropolis are full; consequently three lunatics (two of whom are dangerous) had to be removed during the week from St. Olave's Workhouse to Fisherton-house, Salisbury, the nearest asylum in which accommodation could be obtained.—*South London Press.*

Sea Scurvy.—We are glad to see from a communication to the *Times* by Dr. W. Dommett Stone that that gentleman has obtained from the Board of Trade an assurance that the amendment of the Mercantile Marine Act in the matter of the prevention of scurvy among our mercantile marine is engaging the attention of the Board.

Composition and Quality of the Metropolitan Waters in November, 1866.—The following are the returns of the Metropolitan Association of Medical Officers of Health:

	Total Solid Matter per Gallon.	Loss by Ignition.(a)	Oxidisable Organic Matter.(b)	Hardness.	
				Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	21·33	1·00	0·76	14·5	6·5
West Middlesex	21 31	1·00	0·84	14·5	6·0
Southwark and Vauxhall	21·33	2·08	1·68	15·0	6·0
Chelsea	21·57	1·50	1·32	14·5	6·5
Lambeth	21·67	1·86	1·43	14·5	6·0
Other Companies.					
Kent	27·00	0·40	0·28	18·0	9·5
New River	19 98	0·69	0 52	15·0	5·0
East London	22·69	0·99	0·72	15·5	7·5

(a) The loss by ignition represents a variety of volatile matters as well as organic matter, as ammoniacal salts, moisture, and the volatile constituents of nitrates and nitrites.

(b) The oxidisable organic matter is determined by a standard solution of permanganate of potash, the available oxygen of which is to the organic matter as 1 is to 8; and the results are controlled by the examination of the colour of the water when seen through a glass tube two feet in length and two inches in diameter.

As is usual at this season of the year, the amount of organic matter in the water is larger than at other times. It is entirely of a vegetable nature.

New Preparation of Pickles.—We have examined the apparatus invented by Mr. Manfield, and employed by J. Burgess and Son, for the preparation of pickles. The improvement consists more especially in the introduction of atmospheric pressure for driving vinegar into the pores of the vegetable after the native liquid has been expelled by an air-pump. In the introduction of this, as well as in every other part of the process, copper is strictly avoided, platinum invariably taking its place. By this process the vegetables are in exactly the same state as that in which they originally grew, *plus* the vinegar.

SOCIETY has been much moved by two deaths during childbirth which have occurred during the last few days: one of a young lady, who died suddenly of apoplexy during her first labour; the other of a lady of rank, who sank from exhaustion after her fourteenth. Occurrences such as these in high life, spite of skill and care and devotion, show most emphatically the necessity of having every step of this "natural process" watched by a careful Medical eye amongst the poorest classes.

GLASGOW MEDICAL ASSOCIATION. — This Society has published the following list of the aims and objects it has in view:—1. Combination for mutual aid and support, and the cultivation of friendly intercourse among the members of the Medical Profession. 2. The elevation of the status of the Profession, and the raising of the fees. 3. The formation of black lists, for protection against dishonest patients. 4. The cultivation of payment by fees, especially in obstetric cases—in contradistinction to payment by accounts. 5. The formation of a court of appeal in Medical differences. 6. The establishment of a code of Medical ethics. 7. The prosecution and advancement of all subjects, political and social, relating to the Medical Profession. 8. The union of the whole Medical Profession in the west of Scotland. We hope that the Association may be successful in carrying into effect what it proposes, and that the Profession in other towns may be induced to follow the example of combining for mutual support thus set to them. Dr. H. Miller and Dr. D. Maclean are the Secretaries to the Glasgow Association.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Liverpool.—We would rather not answer the question.

Histologist, Southampton.—Professor Quekett died at Pangbourne, where his remains were interred.

A Medical Tutor.—The number of registered metropolitan students is 1052. There are, perhaps, at the eleven recognised schools at least fifty who have not registered.

Gilbert Blane, M.D.—The Council of the College of Surgeons are custodians of the fund (about £300) for all expenses connected with the Blane medal. Write to Mr Fossett, Admiralty, Somerset House.

A Retired Practitioner.—Consult Friend's "History of Physic." Dr. Johnson, the lexicographer, was one of the last persons who received the Royal touch for the "king's evil." King Charles touched 92,000. Consult also Pettigrew's "Medical Superstitions."

Just Examined.—The list of successful candidates will be submitted to the Council on Thursday next, and on the following morning we are informed that the diplomas will be ready, when the list will be duly published.

Dr. Williams.—There will be an examination in arts, etc., for the membership of the College of Surgeons on Tuesday, December 18, and following days, which if your son passes he could enter on his Hospital studies at once, and thus save half a session.

L.S.A., Plymouth.—Mr. George Cooper, F.R.C.S., is the representative of the Society at the Medical Council; he is also the Master of the Society of Apothecaries.

R. O.—Professor Huxley will commence another course of his lectures at the College of Surgeons in February next, and Professor Hilton will deliver the Hunterian Oration.

The Shade of Hunter.—It is generally believed that Home's lectures on comparative anatomy were taken from Hunter's MSS. Sir Everard once averred to Dr. Wollaston, at the Royal Society, that the brain was like a German sausage, viz., homogeneous; whereupon the late Mr. Clift whispered, "Home-a-genius." Poor Clift never forgot or forgave him for the destruction of Hunter's papers. Mr. Hilton will deliver the Hunterian Oration.

A Naval Surgeon.—Mr. Robert McCormick, F.R.C.S., at last a Deputy Inspector-General, was the commander of an open-boat expedition up Wellington Channel in search of Sir John Franklin, and was Surgeon and naturalist in Parry's and the two Ross' expeditions. He survives, and long may he do so, to perfect his work on arctic experiences. You will find a record of his services in the *Medical Gazette.*

Lex.—You will obtain the particulars relating to the Swiney prize on application to the Secretary of the Society of Arts, Adelphi, Strand, London. The circumstances to which you allude respecting this prize and the lectures will be found in Vol. XIX. of the *Medical Times and Gazette,* pp. 476 and 516.

SOUP KITCHENS *v.* HOSPITALS.

Good food is not so much a matter of cost as of economy. All classes are most ill informed and improvident on this interesting and important subject. The poor, when they have the means of laying in provision of any sort, usually buy it at the dearest rate, and the rich are most wasteful and extravagant in the matter. A knowledge of cookery and domestic economy is most needful to all, but especially to ladies of households; for not only would their own families be more likely to be well-fed—which is impossible even with the best materials badly cooked—but they might become teachers of their poorer neighbours in the art of cooking and management. Moreover, the poor man's fare might be made much more nutritious by means of contributions of the fragments which are too often dishonestly disposed of or wantonly cast away. M. A. B.

WHAT ARE "EXPENSIVE MEDICINES?"

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Can you, or any of your numerous readers that are Poor-law Medical Officers, kindly inform me what drugs are generally understood to be included in the term "other expensive medicines" in the letter addressed by the Poor-law Board to Boards of Guardians, dated April 12, 1865? I am about to make an application to a Board of Guardians on the subject, but have not been able to find out what medicines are included in the term. It is much to be regretted that the Poor-law Board did not issue a more definite recommendation on the subject.

I am, &c. A WORKHOUSE MEDICAL OFFICER.

December 8.

*** It does appear matter of regret that this question has not been more definitely settled. The practice in regard to it varies immensely in different parts of the country, according to the influence possessed by the Medical Officers with their Boards of Guardians. The most extensive list of which we know, short of supplying all medicines, comprised the following, found at the cost of the Union:—Cod-liver oil, sulphate of quinine, rectified æther, iodide of potassium, chloroform, gallic acid, opium in powder, tincture of opium, tincture of muriate of iron, sulphate of morphia, spirits of wine.

CORONERS' INQUESTS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—A woman, aged 51, in her usual health previously, but stated to be subject occasionally to "shortness of breath," enters the room in which her two sons, young men, are at breakfast, and without uttering a syllable, but putting her hand to her throat, staggers, and would have fallen to the ground, but was prevented from so doing by one of her sons. Dr. S. is sent for, attends, and finds her seated on the floor, with her back propped up by an attendant, in a state of complete insensibility, with pallid face, heat of scalp below the ordinary temperature, extremities cold, eyelids and mouth quite open, pupils contracted, breathing hurried, but not stertorous, pulse feeble, very compressible, and below rather than above the average frequency; all power of speech and deglutition gone. He remains with her a quarter of an hour, directing her to be put to bed, and outward applications, sinapisms, etc., to be applied. He is sent for again in about half an hour, and finds her much in the same state, with the addition of occasional convulsive twitches of the upper and lower extremities, right and left. He remains with her half an hour, seeing that his instructions are fully carried out, and asking questions as to her habits of life, etc. He tells the persons about her she is dying, and she does die in about five hours altogether from the time of the seizure. Expressing no suspicion whatever, but not being at all satisfied as to the cause of death, and also considering that it may be classed amongst "sudden deaths," he refers her friends to the Coroner's officer, who calls upon him, and to whom he signifies his inability to certify as to the cause of death. Quære:—1. Did the Medical attendant act rightly in this matter? 2. Was it a legitimate case for an inquest? 3. Was a post-mortem examination necessary or desirable? 4. Could such a death be called sudden? By answering the above queries in your next number, you would very much oblige AN OLD SUBSCRIBER.

*** 1. Yes, on the supposition that he found diagnosis impossible. 2. No, if there was no supposition of foul play. 3. Desirable. 4. Yes. The Registrar-General's returns contain a category of deaths, the causes of which are unknown. Inquests are for the protection of society, not for remedying the defects of Medical science. But it is common in such cases to allow the Coroner to decide on the propriety of holding one.

POPULAR QUACKS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

DEAR SIR,—I trust you will excuse the liberty of addressing you; but seeing the number and great increase of Herb Quacks, I have been induced to inquire of you, whose duty is it to put this Nuisance down? They style themselves Doctors, and Lecture in Most of the Leading thoroughfares in London, Dispensing a thick Poisonous Compound, something in Appearance like Beer finings, calling it Sarsaparilla *1d. per Glass.* Their Loud Boisterous slang offends all *decent folks,* as they go and return from their various places of Worship, on Sunday mornings. I thought the New Medical Act would reach all these scamps when calling themselves Doctors, or that the Pharmaceutical Society had the power to put them down. The cheap People's press, although professing to be enemies to all descriptions of quackery, takes No heed of these fellows, although the working Classes are the constant support of these Herb and Sarsaparilla Professors.

I will give you the History of one; by Trade a *Jobbing Snob,* this fellow used to retail Pine Apple Rock, and Genuine Candy, from *a Barrow,* in the New Cut. From this respectable locality he has taken a pigeon hole, the Corner of —— Buildings, Waterloo Road, calling himself Dr. ——; this is painted up as large *as life,* nearly covering the Front of his establishment. Here he obstructs her Majesty's subjects with his Materialism, Candy, Herbs, and Beer Finings, offending all decent people with his filthy Bills and more disgusting Anatomical Plates and subjects, which are plastered all over his Windows. Surely there is a remedy for all this, or are Acts of Parliament useless?—I am your very humble Obedient Servant,

Waterloo Bridge Road, Nov. 27, 1866. J. THUSTON.

TESTIMONIAL TO THE "PALL-MALL GAZETTE."

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The proprietors of the *Pall-mall Gazette* have done battle in our cause in a manner and with a degree of liberality and good faith well calculated to call forth an acknowledgment of the service rendered to our Profession.

If you think proper to insert this in your widely circulated journal, I can only add that I, for one, would gladly subscribe a couple of guineas towards a testimonial which should serve to express our sense of their public spirit.

I am, &c.
W. H. Richardson, M.R.C.S., L.S.A.

13, New Bridge-street, E.C., Dec. 12.

Medical Benevolent Fund.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—You were kind enough a short time back to draw the attention of the Profession to an appeal which was largely circulated in behalf of the Medical Benevolent Fund in lieu of a dinner. The cause of the charity would doubtless be aided by the publication in your journal of the donations and subscriptions received in consequence of the appeal. I accordingly beg to forward to you the enclosed list.

I am, &c. Edward H. Sieveking, M.D.,
Treasurer Medical Benevolent Fund

17, Manchester-square, December 8.

	Donations.			Subscriptions.		
	£	s.	d.	£	s.	d.
John Colebrook, Esq., late Indian Medical Service	10	10	0			
Chas. Pooley, Esq., Weston-super-Mare, by Jas. Paget, Esq., F.R.S.	2	2	0	0	10	0
Dr. Sankey, Sandywell-park, near Cheltenham	5	5	0			
Dr. Barnes, Carlisle				1	1	0
Dr. Lund, Richmond	1	1	0			
Dr. Holland, Matlock				3	3	0
Dr. Dartnell, Henley-in-Arden	2	0	0			
Dr. Roberton, Manchester	5	0	0			
Dr. Lingen, Hereford	1	1	0			
Dr. Bull, Hereford	1	1	0			
Thos. Pope, Esq., Cleobury Mortimer				0	5	0
Dr. Bowles, Folkestone				1	1	0
Dr. Lawford, Leighton Buzzard				1	1	0
Dr. Fawcett, Cambridge	5	0	0			
J. Covey, Esq., Alresford (additional)				1	1	0
Dr. Birch, Gore Lodge, Kensington-gore				2	2	0
John Ellerton, Esq., Aberford	1	1	0			
Rogers Harrison, Esq., Lansdowne-road				1	1	0
R. Bryden, Esq., Uffcalme, Devon	0	6	0			
Dr. Walker, Peterborough				0	10	6
Mrs. Sieveking, Manchester-square	5	5	0			
Dr. John Lowe, Lynn	1	1	0			
G. W. Pretty, Esq., Fressingfield				0	5	0
Dr. Wilks, St. Thomas's-street	2	2	0			
C. P. Bates, Esq., Ramsey				0	10	0
Dr. Bader, Finsbury-circus				2	2	0
Weeden Cooke, Esq., Upper Berkeley-street				0	10	6

COMMUNICATIONS have been received from—

Mr. E. Hearne; Mr. W. H. Lydall; Mr. P. Kingsford; Mr. W. Carter; Dr. Trench; An Old Subscriber; Dr. Letheby; Dr. Barclay; Mr. T. O. Mayor; Dr. Hillier; Mrs. Baines; Dr. Wilkinson; Mr. W. F. Jebb; Dr. Tripe; Mr. T. J. Dyke; Dr. Davies; Dr. Whiteman; Dr. Vinen; Mr. Burge; L.; Dr. Aldis; Dr. Gibbon; Mr. Bianchi; Dr. Bateson; Dr. Iliff; Dr. Sarvis; Mr. L. J. Beale; Dr. Maclean; Mr. T. Orton; Dr. Whitmore; Dr. Wallace; Dr. Humphry; Mr. Lord; Dr. Osborn; Dr. Sieveking; Metropolitan Association of Medical Officers of Health; Dr. Pirrie; Mr. Groves; Mr. W. H. Richardson; Mr. R. Ley; Dr. Samelson; Mr. E. Bellamy; Dr. Broadbent; Mr. J. H. James; Mr. J. Chatto; Mr. T. M. Stone; Dr. Finch.

BOOKS RECEIVED—

Grimshaw's Treatment of Typhus Fever by Tea—Everthing about Them—Thorburn's Treatment of Tedious Labour—Cockle on the Algide State of Cholera—Report of the Water Supply Committee for the Poplar District—Special Report on the Cholera Epidemic of 1866—British Journal of Dental Science, No. 125—Copland on Consumption, new edition—Bonjean's Pharmaceutic Preparations—Hutchins' Sanitary Act, second edition—New York Medical Journal, No. 20—Madden on Rinderpest.

NEWSPAPERS RECEIVED—

L'Union Médicale—Gazette Hebdomadaire—Gazette Médicale de Paris—Gazette des Hôpitaux Sunday Gazette—Merthyr Telegraph—Birmingham Daily Post—Birmingham Daily Gazette—Walsall News—The Medical Press and Circular.

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 8, 1866.

BIRTHS.

Births of Boys, 983; Girls, 987; Total, 1970.
Average of 10 corresponding weeks, 1856-65, 1819·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	795	789	1584
Average of the ten years 1856-65	694·9	691·9	1386·8
Average corrected to increased population ..	..	..	1525
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	2	4	9	..	4	5	..	..
North ..	618,210	9	4	9	5	16	15	4	..
Central	378,058	2	7	12	1	4	4	2	..
East ..	571,158	4	14	9	2	13	11	3	1
South ..	773,175	13	10	15	8	11	14	1	..
Total ..	2,803,989	30	39	54	16	48	49	10	

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·682 in.
Mean temperature	46·9
Highest point of thermometer	56·3
Lowest point of thermometer	30·9
Mean dew-point temperature	43·4
General direction of wind	S.W.
Whole amount of rain in the week	0·99

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, December 8, 1866, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending Dec. 8.	Deaths.		Temperature of Air (Fahr.)			Rain Fall.	
				Corrected Average Weekly Number.*	Registered during the week ending Dec. 8.	Highest during the Week.	Lowest during the Week.	Weekly Mean of the Mean Daily Values.	In Inches.	In Tons per Acre.
London (Metropolis)	3067536	39 3	1970	1400	1584	56 3	30 9	46·9	0·99	100
Bristol (City)	163680	34 9	94	73	‡82	57·8	28 1	46 6	2·78	281
Birmingham (Boro')	335798	42·9	223	163	159	58·1	31·2	44·3	0 78	79
Liverpool (Borough)	484337	94·8	317	281	284	56·4	35·6	46·1	0·82	83
Manchester (City)	358855	80·0	222	203	‡201	57·0	29·0	41·3	1·20	121
Salford (Borough)	112904	21 8	69	57	59	56 9	30 1	43·0	1·20	121
Sheffield (Borough)	218257	9·6	183	115	123	56·4	31·0	42 6	0 77	78
Leeds (Borough)	228187	10·6	210	116	158	59·0	24 0	42 5	0·77	78
Hull (Borough)	105233	29·5	77	49	60	..	..	..	..	..
Nwcastl-on-Tyne, do.	122277	22 9	75	65	82	54·0	29 0	41 4	0 83	84
Edinburgh (City)	175128	39·6	113	84	97	54 7	29·0	40·2	0 90	91
Glasgow (City)	432265	85·4	301	252	266	51 9	29·1	41·7	1·59	160
Dublin (City and some suburbs)	318437	32·7	164	†156	175	57·1	30·0	44·8	0·78	79
Total of 13 large Towns	6122894	34·4	4018	3014	3330	59·0	24·0	43·5	1·12	113
					Week ending Nov. 24.	Week ending Nov. 24.				
Vienna (City)	(1863) 560000	..	..	..	289	..	..	§ 34 0	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·682 in. The barometrical reading increased from 29·37 in. on Friday to 30·34 in. by the end of the week.

The general direction of the wind was S.W..

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* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 39·2°.

APPOINTMENTS FOR THE WEEK.

December 15. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p.m.

Metropolitan Association of Medical Officers of Health, 7½ p.m. Mr. Liddle will introduce the subject of a Bill, prepared by the Metropolitan Board of Works, to regulate the construction and use of buildings and the formation of streets, sewers, and drains in the metropolis.

17. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

18. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

Anthropological Society of London, 8 p.m. Meeting.

Pathological Society, 8 p.m. Meeting.

19. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

20. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; West London Hospital, 2 p.m.

Harveian Society of London, 8 p.m. Dr. Drysdale, "On the Natural History of Syphilis."

21. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.

ORIGINAL LECTURES.

LECTURES ON CATARACT,

AND THE

MODERN OPERATIONS FOR ITS TREATMENT.

DELIVERED AT
King's College, London,
DURING THE SUMMER SESSION, 1866,

By J. SOELBERG WELLS,
Professor of Ophthalmology in King's College, and Ophthalmic Surgeon to King's College Hospital.

LECTURE IV.

(Continued from page 606.)

The Regular Compress.—This bandage is to be about $1\frac{3}{4}$ yard long and $1\frac{1}{2}$ inch wide. Its outer two-thirds should consist of fine and very elastic flannel; its central third of knitted cotton. The eye having been padded with charpie or cotton wool, as above directed, the bandage is to be thus adjusted:—One end is to be applied to the forehead just above the affected eye, and is then to be passed to the opposite side of the forehead and above the ear to the back of the head; the knitted portion is then carried on below the ear and brought upwards over the compress, the bandage being then again passed across the forehead and its end firmly pinned. The opposite eye may be closed with a strip of plaster, or, should it also require a compress, a separate bandage is to be applied. The *pressure bandage* is made of fine, very elastic flannel, and should be about $3\frac{1}{2}$ yards long and $1\frac{1}{4}$ inch wide. The chief difference in its application consists in there being three ascending turns of the bandage over the eye, instead of only one.

So much care and attention is required in the application of these bandages, and in the regulation of the amount of pressure, that you will but seldom be able to entrust this to a nurse. If you cannot change the compress yourselves, or leave this duty to a practised and trustworthy assistant, it is far better to abstain altogether from its use. It should be changed night and morning, and, if the eye feels uncomfortable, even more frequently. The quantity and character of the discharge upon the linen and charpie should be examined, as it affords us a clue to the condition of the eye. The edges of the lids should be softly sponged with lukewarm water, so as to remove any hardened discharge from the lashes, which may also be smeared with a little cold cream or simple cerate. This will prevent their sticking together, and thus interfering with the ready escape of tears or discharge. Great care must, however, be taken not to rub or press upon the upper eyelid, otherwise the coaptation of the flap may be disturbed and union prevented. Much comfort and relief is afforded by the sponging and cleansing of the eyelids, and the change of the compress. The eye should not, however, be opened or examined unless we specially desire to ascertain its condition. Union of the flap generally takes place within the first forty-eight hours, or even sooner. Then it is advisable to apply a drop of atropine once or twice daily to the inside of the lower lid, without opening the eye wide. This soothes the eye and dilates the pupil, so that there is less chance of a secondary cataract, as the torn edges of the capsule have no point to adhere against, and will therefore retract and shrivel up. Moreover, should iritis occur, it will be of great advantage to have the pupil already widely dilated. It is an interesting fact that if atropine was applied before the operation, its effect upon the pupil partially returns when the section is united, and the aqueous humour re-accumulated. Should the atropine cause any irritation, a solution of belladonna should be substituted. A few hours after the operation, the patient generally experiences a slight sensation of pressure and smarting in the eye, which lasts for a few minutes, but reappears at intervals of an hour or two. It is due to an accumulation of tears and aqueous humour. If the pain increases towards night and becomes continuous, and the eye is hot, and the patient restless and uncomfortable, morphia should be administered either internally or endermically. I generally employ the subcutaneous injection, varying in strength from $\frac{1}{6}$th to $\frac{1}{3}$rd of a grain. It may be repeated if necessary. If the eye is very hot and painful, much relief is often experienced from cold water compresses. But their use requires much care and discretion, for if they are applied for too long a time, they may depress the circulation of the part too much, and thus increase the danger of suppuration of the cornea. I have also sometimes found great relief from the application of two or three leeches on the temple, especially in plethoric individuals. I must, however, state that Von Graefe, after having for many years employed leeches, has now entirely abandoned their use during the first three days after the operation. He thinks that they prove injurious, insomuch as they produce in the first instance an increased congestion of the infiltrated structures, and thus favour suppuration of the edges of the wound. (a) In such cases he much prefers, if the patient be plethoric and robust, a small venesection of from 4 to 8 ounces; also if there is much pain accompanied by considerable lachrymation and swelling of the lids during the first thirty-six hours after the operation, for during this period suppurative inflammation generally commences. But it is not to be employed if suppuration has already set in.

If the case goes on well without the appearance of any unfavourable symptoms, such as severe pain in and around the eye, swelling of the lids, muco-purulent discharge, or copious lachrymation, the eye should not be opened during the first five or six days. Nothing is so bad as being too curious as to the result, and opening the eye too early to assure ourselves that everything is going on well, for this may easily set up iritis. It is very different if unfavourable symptoms arise, for then it is best to open the lids and carefully examine the condition of the eye, so that we may know what really is the matter, and what treatment should be adopted. The upper lid should be gently lifted, and the state of the cornea and iris examined. This is best done by the light of a candle, which should be shaded by the hand of the nurse or assistant until the moment that the Surgeon is ready to examine the eye. In this way, the latter is exposed only for a few seconds to the light, and the glare and intensity of the illumination is far less than if daylight is admitted into the room.

But the case may not run so favourable a course. The thinly cicatrised wound may yield, and a portion of the iris protrude through it. This frequently happens a few days after the operation. The patient experiences a feeling of grit or sand in the eye, as if a foreign body were lodged under the eyelid. The lids become swollen, the eye painful, and there is a copious, clear, watery discharge, which, after a time, assumes more of a muco-purulent character. These symptoms may arise suddenly, perhaps, after a fit of coughing or sneezing, which has caused the section to yield. If the prolapse is large, and causes a wide gaping of the wound, the pain and irritation are often very great. The eye should be opened and the real condition ascertained. If protrusion of the iris has occurred, the lids must be gently closed again, and a firm compress applied, which will not only favour the consolidation of the wound by the formation of a layer of lymph over the prolapse, but will prevent its increasing in size, and by the continuance of gentle pressure will even cause it to shrink. Afterwards, when the wound is quite consolidated, and a firm layer of exudation covers the prolapse, the latter may be pricked with a fine needle, as has been recommended by Mr. Bowman, so as to let the aqueous humour, which is distending it, flow off. The prolapse then shrinks and dwindles down. This pricking may be repeated several times. If the prolapse is large and widely distends the section, it may be necessary to remove it, either with scissors or with the extraction knife, a compress being afterwards applied. Some Surgeons touch the prolapse with a stick of nitrate of silver, but this often produces great irritation. The prolapse may have so drawn up the pupil that it is quite covered by the upper lid, or even involved in the section, which will afterwards necessitate the formation of an artificial pupil, which will often also cause the prolapse to shrink. Prolapse of the iris, occurring after extraction, is not only a source of long-continued trouble to the patient, but it may even prove most dangerous, by setting up protracted inflammatory complications—*e. g.*, irido-choroiditis—which may eventually destroy the eye.

But still more dangerous is the occurrence of suppuration of the cornea, which is to be chiefly feared during the first two days. It may be diffuse or circumscribed. The former, according to Von Graefe, occurs generally in from twelve to twenty-four hours after the operation, the latter in from sixteen to thirty-six hours. The lids become swollen and red, the eye painful, and there is a more or less copious muco-purulent discharge. On opening the eye, we may find a considerable degree of chemosis surrounding the cornea. If the suppuration is partial, the edges of the wound will show a yellow purulent infiltration, which extends deeply into the substance of the cornea, the whole of the flap perhaps also becoming opaque. The remainder of the cornea, however, retains its transparency sufficiently to permit our seeing the iris at this point. But if the suppuration is diffuse, the infiltration is not confined to the line of incision, but extends round the cornea, the whole expanse of which assumes an opaque yellow tinge. We must consider diffuse suppuration as hopeless, for the inflammation generally extends to the iris and ciliary body, and in the worst cases general inflammation of the eye (panophthalmitis) ensues. If this occurs, the inflammatory symptoms become greatly intensified, the pain is often excruciating, the lids greatly swollen, the discharge thick, purulent, and profuse. We can then only endeavour to alleviate the sufferings of the patient by the application of warm poultices or fomentations, for all hopes of saving the eye are gone. But the partial suppuration of the cornea must also be regarded with great anxiety, for it may not only pass over into the diffuse form, but it may give rise to suppurative iritis, or iridocyclitis, which may end in atrophy of the globe. It has been long a keenly-debated question whether the suppuration commences in the iris and passes thence to the cornea, or whether it originates in the latter and extends secondarily to the iris and ciliary body. Von Graefe maintains the latter view. According to him, the iritis which occurs at this early stage is propagated or secondary, whereas that which comes on at a later period is primary or simple iritis. In partial suppuration of the cornea we must endeavour if possible to prevent its extension, and this can only be done by supporting the patient by nutritious diet, bark and ammonia, and stimulants, and by the application of a pressure bandage. No other local remedies will prove of any avail. Von Graefe first pointed out the advantage of the pressure bandage in such cases, and I have myself frequently seen it, in his practice, of the greatest benefit in limiting the suppuration of the cornea, and can therefore strongly recommend it to you. In very feeble decrepid individuals it may be alternated with warm camomile or poppy fomentations, which should be applied for an hour at intervals of two to three hours. I know that many Surgeons will view the application of a pressure bandage to an eye affected with suppuration of the cornea with astonishment and incredulity, but I can assure you that it often proves very beneficial, and tends more than any other remedy to diminish the swelling of the lids and the discharge, and to limit the suppuration of the cornea. So much care and nicety is required in applying the pressure bandage, that the Surgeon should always do this himself, unless he has an exceptionally trustworthy and dexterous nurse. Von Graefe has also called attention to the very important fact, that in very old and feeble individuals suppuration of the cornea may occur without their having experienced the slightest pain or uneasiness in the eye. The Surgeon, perhaps, congratulates himself upon the apparently excellent progress of the case, and then, on opening the eye, finds the cornea suppurated.

(a) I recommend to your especial attention an admirable clinical lecture upon cataract by Von Graefe, which appeared in *Zehender's Klinische Monatsblätter für Augenheilkunde*, April, 1863, and a translation of which will be found in the *Ophthalmic Review* (No. 3).

The primary or simple iritis which may occur after the extraction does not generally come on before the fourth or fifth day after the operation. It may be due to the bruising or contusion of the iris by the instruments or the passage of the lens through the pupil, or it may be set up by the irritation produced by portions of lens substance which have remained behind. The patient experiences pain in and around the eye; the lids become swollen, and there is more or less photophobia and lachrymation. On opening the eye, we may find a considerable amount of chemosis surrounding the cornea, which is clear, but the aqueous humour is somewhat clouded, the iris discoloured, and the pupil contracted. If the patient is sufficiently strong, much benefit is derived from the application of leeches to the temples. A strong solution of atropine (four grains to the ounce of water) should be frequently applied, so that the pupil may be widely dilated. Belladonna ointment should be rubbed over the forehead three or four times daily. I generally use Arlt's compound belladonna ointment (hydrarg. ammon. chlorid. gr. v., ext. bellad. gr. x., adip. ℥j.) This is to be rubbed over the corresponding half of the forehead, and covered by a piece of tissue paper, so as to prevent the air getting to it. It should not be washed off till it is time for the next application. In the course of from thirty-six to forty-eight hours it will produce a slight eruption, when it is to be discontinued. If the lids are very œdematous and swollen, they should be painted with tincture of iodine, which rapidly reduces the swelling. Care must be taken that none enters the eye. If there is much effusion of lymph at the edge of the pupil, on the surface of the iris, or into the anterior chamber, or if there is a purulent infiltration of the iris, the patient should be at once brought under the influence of mercury, if he is not too feeble and decrepid. The best method is, I think, the mercurial inunction, which should be used three times daily, until the gums begin to be affected.

ORIGINAL COMMUNICATIONS.

A CASE OF

HYDATIDS OF THE UTERUS SIMULATING PREGNANCY AND NATURAL LABOUR.

By R. LEY, M.R.C.S., &c.

The following very interesting case of hydatids of the uterus, which came under my care a short time since, you may think, perhaps, worthy of publication:—

A lady, aged 21, who had been married about a year, sent me notice that she wished me to attend her in her first confinement, which, she expected, would take place in about two months; but, as she did not feel well at the time, she expressed a wish that I should visit her. I did so, and found her suffering from hæmorrhage from the womb to a trifling extent, for which I ordered an astringent mixture of dilute sulphuric acid, with infusion of roses, and, as there were occasional pains in the back, a dose of morphia at night. In a couple of days she was herself again—the hæmorrhage had ceased, and she was quite comfortable.

I was informed that she had seen nothing of the menstrual discharge for seven months, that she felt the child distinctly; and her size appeared to be that of a person seven months gone in pregnancy. The patient appearing quite well, I ceased visiting her, and took no further notice of the case, until about a month afterwards, when I was again sent for, and found all the former symptoms, which were soon relieved by the same remedies.

I then made a more minute examination. The bosoms were enlarged considerably, the areolæ around the nipples were well marked, and the size of the abdomen was natural for a woman eight months advanced. I could detect no fœtal heart, but I have before been disappointed in doing so; consequently I thought little of that circumstance. She informed me that she was positive she felt the child every night on going to bed, and frequently during the daytime; that she had suffered very much from morning sickness during the first four months, and that the menstrual discharge had been always regular before the last eight months.

From this time I heard nothing more of her until the expiration of about another month, when I was sent for in a great hurry, the messenger saying that his mistress was in labour, and very ill. On arriving, I found my patient very prostrate from excessive loss of blood, the pains severe, coming on at regular intervals of about every three or four minutes, and with every pain a gush of blood. I immediately examined her, and felt what I at first thought to be a placental presentation. The os uteri was fully dilated, and a pulpy mass was presenting; the hæmorrhage was very great; the pulse at the wrist scarcely perceptible, and I thought it a matter of life or death in a very short time. I immediately passed my hand into the uterus with the intention of turning, if a head presented, and delivering as quickly as possible. To my discomfiture and surprise, I found there was no child, but an immense mass in the uterus, a part of which had now got into the vagina, around which I could pass my hand. The uterus contracted as freely and powerfully as if in natural labour, and with some little difficulty I removed it in one huge whole. It nearly filled a large washhand basin, but unfortunately I neglected to have it weighed, so that I cannot tell its exact size. It was an immense mass of hydatids—thousands of watery vesicles, hanging together like grapes on a bunch, with a substance between somewhat resembling the body of a placenta. There were a few shreds of membrane attached to it. After its removal the pains and hæmorrhage ceased, the uterus contracted freely, and the discharge continued just as after a natural labour. The secretion of milk came on copiously on the third day, and I never saw the slightest difference in the symptoms from those of a woman who had been confined after the full period of gestation.

After witnessing this case, I should be very careful in pronouncing an opinion that any woman had given birth to a child, forming that opinion from the usual symptoms that present themselves subsequently to confinement, as, after an extensive Midwifery practice of thirty years, I have witnessed symptoms in this patient which, had I been previously called in to a similar case after the expulsion of the hydatids, not knowing that such had taken place, and having to judge alone by what I then saw, I must confess would have led me to the conclusion that the woman had been delivered of a child.

In a Medico-legal point of view this is a case of great importance, as Medical men are so frequently called upon to give evidence in cases of supposed concealment of birth, and have to rely so much on the secretion of milk, the common lochial discharge, the state of the bosoms, and the contraction of the uterus, in forming their opinion; and, judging from this case, I presume that no Practitioner would be justified in giving a decided opinion from any or all of the symptoms described above without some other collateral evidence. I believe such cases to be very rare, and that if any of my Medical brethren have seen similar ones they will confer a great benefit to the Profession by publishing them, no matter whether they have been deceived in their diagnosis or not.

South Molton.

OBSERVATIONS ON

THE TOPOGRAPHY, CLIMATE, AND PREVALENT DISEASES OF THE GOLD COAST, WEST AFRICA.

By THOMAS B. MORIARTY, A.B., M.D., F.A.S.,
Staff Assistant-Surgeon.

The Gold Coast (protectorate) includes all that part of Western Africa which lies between Cape Three Points and the river Volta. The physical aspect of the country presents to the newly arrived traveller a very dreary appearance, with its white sand along the seaboard and densely wooded forests, with low, thickly-set bush or jungle-wood as far as the eye can reach. The only exception to this kind of scenery is seen at Accra, where the land is flat and overgrown with rank grass. Here, as in almost every part of the coast, there is no great effort made by the inhabitants to plant or cultivate the ground, or to apply their energies to any of those labours which could induce us to believe "that the African Negro enjoys or delights in the blessings of civilised rule."

Cape Coast is at present the seat of government, but I consider Accra not only more habitable—a matter which should be highly estimated by the white man in a proverbially unhealthy climate — but in every way better suited for the residence of a Governor. The population of Cape Coast is averaged at 13,000. The principal places are the Castle (on whose walls can be seen epitaphs to many an English and Portuguese resident), Forts William, Victoria, McCarthy, and O'Connor's Hill. The streets (if they merit such a name) are all badly formed. The houses are low, and thatched with grass or palm branches, and built of a reddish kind of clay known as "swish," which is occasionally used in the manufacture of brick. The huts or houses generally have neither windows nor chimneys; they are built in groups so as to form a square, in the centre of which is an open area for the purpose of cooking. All the houses in the rainy season are dirty-looking, and emit a nauseous odour, it being then the custom to cook canky and fish, the staple food of the people, in some one of the rooms. The mortality cannot be accurately estimated, as there is no registry of the deaths, which would under any circumstances be difficult to ascertain, as the dead are for the most part buried in their houses. Cape Coast is notoriously unhealthy, and its unhealthiness may in a great measure be attributed to a total disregard for sanitary regulations. This unhealthiness must go on with steady progress as long as Government will not interfere and accustom the people to habits of cleanliness. The water-supply throughout the Gold Coast is very bad and never of good quality, being what is called "brackish," with a very disagreeable flavour or tasting strongly of woody impregnations; even when filtered it is full of animalcula.

The diet of the people is for the most part of a vegetable nature, and innutritious—more particularly so amongst the foresters or bush-men—consisting of yams (an excellent substitute for potatoes), plantains, bananas, cassada, etc., etc. Green vegetables can rarely be obtained away from Accra. Meat rarely enters into the composition of a native dinner; when it does it consists of the worst description of pork, venison, or monkeys. Beef and mutton cannot be procured, as the natives only keep a few animals for their "fetish," festivals in whose honour are frequent, and solemnised by drunkenness, debauchery, and profligacy. The men are very idle; they prefer to while away their time smoking in the sun rather than be engaged in any of the busy labours of life, which might be so profitably employed in a country so abounding in wealth as the Gold Coast. When they get money it only serves to enable them to indulge more in their beastliness. Domestic slavery still exists in the shape of "pawns" as a substitute for debt, or by agreement. The women are, in every sense of the word, the slaves of the men.

The natives suffer from tropical diseases quite as much as Europeans, more particularly from those of a zymotic type. They are generally spotted with scaly disease, possibly the result of lepra. When small-pox breaks out, it depopulates the towns and krooms. The mortality is very great; almost everybody attacked dies of this disease, adults as well as those of early life. In this, as in every other form of disease, the mortality is greatest amongst the aged and those with broken-down constitutions.

The principal forms of disease may be said to be those of the skin, including scabies, lepra, dracunculus, elephantiasis, and ophthalmia; diseases of the respiratory and urinary systems are not uncommon, the former arising from cold, bad food, and hereditary causes, the other from a contagion which is apparently the result of civilised intercourse, and seems rife throughout our West African possessions.

Phthisis is prevalent and not easily diagnosed; rarely, indeed, can one find the signs of an existing vomica, or hear the critical râle and broken respiration. A serious disease of this kind must be diagnosed by symptoms, with its wasting, debility, emaciation, hard husky cough, and hectic sweats. The difficulty of making a correct diagnosis may be in a great measure due to the high range of temperature; for the same reason, the exciting causes of this disease develope themselves more slowly on the respiratory organs than they do at home. I am of opinion that I have seen more cases of abdominal phthisis than I have of pulmonary, marasmus or a wasting diarrhœa being the first symptoms, and the pectoral, which were sometimes absent altogether, showed themselves either as secondary or towards the close; there may be no dulness, and there may be no time for emaciation to take place—this, though tuberculosis is rarely confined to one lung, and is for the most part adherent to the costal pleura. Laryngitis may occasionally precede incipient phthisis. It can always be distinguished from laryngitis simplex by not being shortened in its duration by counter-irritation or detergent gargles, or by the more effectual method of swabbing the throat with a strong solution of nitrate of silver. The administration of mercury in this case is decidedly injurious, particularly if ptyalism is produced.

I think, if we err at all in treating this disease, that our only mistake is, that, as soon as we diagnose its existence, we are too ready to conclude that the most we can do is to try and palliate the tendency to a slow death, while we seem to overlook or forget that agent, *vis medicatrix naturæ*, the efficacy of which we so much employ in the management of Surgical cases particularly.

I am aware that digitalis was administered some 60 years ago as a cure for hæmoptysis, as well as for phthisis, but I am not aware that its use is now continued throughout the duration of this illness. I found it for some time past a most useful drug—not only useful as a sedative, but also serving to diminish the night sweats attending hectic fever much better than sulphuric acid. I have no hesitation either in recommending the steady and continued application of blisters to a greater degree than is usually done. In inflammation of the chest we apply blisters until we become aware that there is a tendency to a resolution; why, then, should we not adopt a similar plan in the treatment of this, the greater malady, which is said to be amenable to the continued use of cod-liver oil and iron?

Diarrhœa most frequently attacks the intestinal tract. Dysentery, particularly the stinking follicular or gland dysentery, or that kind wherein the stools are fetid, and the smell from the body most disagreeable, is the most dangerous form of disease, and is most calculated to excite an unfavourable prognosis ; from all I know of its nature it is incurable.

Small-pox, in consequence of there being no early vaccination, may be said to be the scourge of the natives of the Gold Coast. My colleague, Dr. Gunn, informed me in December, 1864, that as many as 600 a week were then dying at Accra of this loathsome disease. I have rarely seen vaccination " take " with an African or West Indian adult. I have had no opportunity of ascertaining if an ineffectual attempt at vaccination affords any immunity against, or mitigates in any way, an attack of variola, or to question the good effects of vaccination at all. Rheumatism is of frequent occurrence, particularly "muscular," which is felt most along the spine and scapula. In all these instances I found it to be indicative of a scrofulous diathesis, either hereditary or acquired.

Synovial rheumatism I always treated by counter-irritations, and blisters, which, I consider, affords relief by freeing the eliminations and thus secreting the *materies morbi* of this disease. Pericarditis or valvular complications I have never found to co-exist.

Dracunculus, or guinea worm, is a parasitic disease, which attacks the natives promiscuously, but males more than females. Its origin or cause is not well understood ; it may be in some degree attributed to the filthy habits of the people, who sleep for the most part on the ground squatted together like pigs, or to the custom of not drying themselves after washing on the beach, which seems to be considered the proper place of deposit for human excrement, killing cattle, etc. This disease first appears as a vesicle in or about the joints, and is generally confined to the lower extremities. I have treated this disease (successfully) as a simple abscess of any other region.

Diseases of the skin are very common, and not easily classified, particularly those of a doubtful character, inasmuch as tropical climates exercise a great influence on the appearance and colour of the skin. I have frequently seen suspicious-looking cases which, on inquiry, could not in any way be connected with a syphilitic taint. I would be slow to attach a syphilitic origin to copper-coloured blotches, however large or circumscribed, unless there existed a primary cicatrix or previous marks on the anus, mouth, or ala nasi.

Lepra and psoriasis are common forms of disease ; these, when conjoined with variola, may be said to constitute the eyesores of the people. Some, from their filthiness, extension, and apparent malignity, are loathsome sights.

Elephantiasis is sometimes seen attacking the scrotum or feet ; its origin may be traced to syphilis of remote date. I have no idea how this disease ought to be treated. The natives told me that the sores became worse when the " moon" was up ; they applied green leaves to the raw surfaces, and enveloped the parts in bandages. In this, as well as in most other cases, the uncivilised African does not apply for a white Doctor.

Prickly heat is an endemic disease peculiar alike to all tropical countries, and appears to be due to the combined results of constitutional as well as climatic causes. It manifests itself best amongst the new arrivals, and shows most severely on those who are addicted to the use of alcoholic stimulants. Its occurrence amongst Europeans on their landing is generally supposed to have the effect of fortifying them against a severe or an early attack of fever. To a certain degree this belief is quite correct, as both are rarely seen to coexist.

Remittent fever is an endemic disease, and may be said to be the result of marsh malaria. It attacks Europeans and natives alike, but the former, in proportion to their numbers, much more frequently. This is the inevitable climate fever from which there is no escape ; years of residence, or supposed acclimatisation, affords no immunity—good and careful living no security against its attacks. The sucking child is as liable to be attacked as the mother herself. This fever is supposed to be a modified form of yellow fever. This idea is maintained by my friend, Dr. Cedont, of the French Navy, who served at Martinique during the epidemics of 1853 and 1858. Having had ample opportunities of investigating the etiology and semeiology of both forms of fever, his remarks must be considered not only valuable, but also useful.

Remittent fever is usually ushered in with a dry skin, constipated bowels, pains in the back and loins or knees, with a desire to vomit, loss of appetite, great thirst, and a feeling of lassitude. Should these symptoms progress, want of sleep ensues, and the tendency to vomit becomes really distressing. There is a profuse perspiration, particularly from the head and face ; while the kidneys become thoroughly demonstrative of the changes which are taking place. If there is no improvement, death takes place from debility and inability to retain anything on the stomach. The line of treatment to be pursued must in every instance be governed by the severity of the attack. As a general rule it will be advisable to have the bowels well cleared out. Doing so will prevent the tendency to either existing or acquired congestions of the abdominal organs, particularly of the liver and kidneys, as well as to a concomitant delirium " of a busy restless kind." The best purgative is either a combination of podophyllin and colocynth, or colocynth and calomel. The former combination is preferable, as it exercises all the beneficial effects of a purgative without, as far as we are aware of, diminishing the serum of the blood. Again, we know from Dr. Anstie's experiments that this drug exercises a special effect on the liver, an organ which seems to be in some way primarily and principally engaged in this disease.

If the secretions from the skin are checked, calomel and Dover's powder in small doses will be found useful, with limejuice or tea *ad libitum* as a drink, the treatment to be completed by the administration of quinine in five-grain doses. There are times when stimulants and tonics may be usefully administered. The most useful are champagne, Moselle, or good sherry, which can rarely be procured. The best tonic is ammonia and bark or ammonia and capsicum, made into a pill with common soap.

Remittent fever cannot be cut short. As a rule, large doses of quinine may be usefully given, but more will depend on the constitution of the patient, and on his having suffered from repeated attacks, which appears to have the effect of producing ephemeral fevers, than on the administration of medicines. All cases with a tendency to a comatose condition should be briskly treated and purged as soon as possible. Blisterings will not be inopportune to the shaven scalp. The quickest blister may be obtained by applying with a brush the liquor vesicatorius. Cheerfulness and resolution are nowhere more beneficially employed than on the Gold Coast, where gentle exercise, avoidance of the sun and night air, play no unimportant part in maintaining health.

Quinine may be given in large doses during the period of remission, or as soon as the hot stage subsides. If it should be considered necessary to empty the contents of the stomach, the use of sulphate of zinc will be found the least distressing of emetics. When vomiting has already freely taken place, there should be no recourse to emetics. They should be only given when there is a tendency to nausea, and never when the disease is advanced, as one in a few days becomes sufficiently weak, and will require all his strength to enable him to battle with a dangerous endemic disease—dangerous by itself, and rendered more dangerous from a tendency to abdominal, pulmonic, and cerebral complications. Next in rank to purgatives and antiperiodics, we must place the use of cold affusion as a most useful adjuvant in the treatment of fever. The natives use limes freely as an application to the head and body, as well as for a drink during all their fevers. I borrowed from them the habit of cutting limes in two, and then rubbing them to the head. The cooling and soothing effects, though temporary, are found to be a great luxury, in the absence of ice or snow, or even cold water. I have given from the outset of this fever a kind of lemonade, to be used *ad libitum.* When the stomach rejected everything else, it would sometimes retain this. Dr. Currie recommended towards the close of the last century cold affusion in the treatment of fevers, and I have no hesitation in recommending its application to the shaven scalp. I had not the hardihood to adopt the more heroic method of treatment which I know to have been employed on some European residents at the suggestion of the natives—viz., to take the patient, and put him into a cold-water bath, and rub him all over with limes, and afterwards envelope him in blankets. In the *Medical and Physical Journal* for January, 1803, I find that Dr. Patterson speaks as follows regarding the cause of this fever. I use his words, as they are expressive of my own opinions. He says remittent fever is the result of marsh malaria, and as a proof of this statement he instances the retreat of the water at certain seasons of the year in the northern parts of America, which, on subsiding, leaves the surfaces of the low land exposed to the influence of the sun. Violent bilious fevers ensue, which attack numbers within a certain distance. In Egypt the people are healthy when the Nile inundates the land, and diseases are not generated until the waters subside, leaving a vast extent of country covered with noxious matter, which, when exposed to the solar rays, becomes exalted, and then spreads disease amongst the people. In Africa, as well as at home, epidemics have been known to subside or disappear, hæmorrhages to cease, and endemic disease to become less rife, during the cold months. Results such as these can be only due to some alteration in the state of the atmosphere; whether electrical or chemical we know not. The harmattan seems to exercise the same beneficial agency in purifying the atmosphere in Africa as the cold winds do in this country, and in no instance is this beneficial agency more marked than in stemming the course of those cases known as blood epidemics, such as small-pox, cholera, and typhus fever. *En passant*, I may remark that the educated natives of both sexes use perfumes and scents of the volatile alkali when they feel sickish. I have no doubt but such a proceeding may have the effect of cutting short or mitigating their fevers. Physicians long ago used to treat fevers, especially febris intermittens, which was supposed to be the result of asthenia, by opium and camphor, together with hot aromatic baths. And frictions of spirits of wine, with broth as a drink, impregnated with spices, and the administration of Peruvian bark *per se*, or with a volatile alkali, constituted the general plan of treatment.

In the West Indies the administration of salines is generally resorted to in the treatment of this kind of fever. Of their efficacy I have no doubt, particularly if applied at the outset. I have no statistics to prove, and my experience has not led me to imagine, that the endemic fever of Africa is at all contagious, or even in any way infectious—this, though I have seen solitary cases quickly multiplied. But one cannot be surprised at such an occurrence when we consider the circumstances under which the people live—lying huddled together like swine within and abroad, exposed to the sun and night air, surrounded by an impure atmosphere; and as there are no Hospitals for the sick, there is no other alternative but to allow those suffering from fever to remain in their dirty overcrowded hovels. The healthy inmates now become exposed to the danger of catching the same form of disease as that which prostrates the man sick in bed. Under such circumstances, whether at home or abroad, it can scarcely be considered a matter of surprise that when fever of any kind enters such localities it would prove "infectious," and in consequence of the number of those attacked, as well as owing to the number of causes which serve to make a nidus for concentrating the poison or "infection," we may be led to conclude that in the course of time the fever changes its character and assumes something like a contagious property. So many causes sometimes conspire to produce remarkable changes in disease, that we should be slow to attach the title of either "infection" or "contagion" to such forms of fever. Passing from this subject, we revert to a no less important subject—viz., dysentery, the scourge of armies. This disease is characterised by frequent bloody or feculent stools mixed with mucus and blood. Hence it may be classified as pure and mixed dysentery. The latter form may be better understood as dysenteric diarrhœa, and is attended by tormina and tenesmus. In pure dysentery the stools are occasionally so offensive from the outset as to merit the title of fetid dysentery, which, if preceded either by disease of the liver or diarrhœa, is in my belief incurable. No constitution, however formed, appears exempt from an attack of this disease in some form, particularly if a resident with the bushman, where illnesses of every kind become more intensified and require a greater exercise of judgment in directing than diseases of a similar form on the coast. In all cases it will be safe to begin by administering a mild purgative—such as castor-oil—then small doses of mercury, with chalk, so as to produce an alterative effect, and follow up the treatment with opiates, astringents, and counter-irritation.

The following form of powder I found generally useful:—℞ Acidi gallici ℈j.; plumbi diacet., pulv. kino, āā gr. xiv.; morphiæ mur. gr. iij. M. Divide in pulv. viij.; unum sumat 3tiâ quâque horâ. The best of all stimulant astringents will, I think, be found in the use of the oil of turpentine when given in 20 minim doses with mucilage, to which may be added 10 minims of chloric ether four times a day. A blister may be occasionally applied with benefit over the liver, but my belief is that counter irritation to the seat of the disease is injurious, as it tends to hasten an ulcerated condition of the intestine. I have derived great benefit from the use of ipecacuanha when given in ʒss. doses, and its effects were more readily procured when given in combination with small doses of opium. The origin or cause of this disease can only be approached approximately by observation. It is selective in its situation, and attacks one or more of the intestinal glands, which I have seen ulcerated and nearly in a state of decomposition after a few days' illness. These ulcers are generally confined to the solitary glands and glands of Peyer. The membrane surrounding them appears flaccid, and is easily separated, owing to the infiltration of serous fluid. Not unfrequently the appearance of an intestinal catarrh may be observed in the ileum and great intestine, which exhibits itself under the forms of either a blanched or reddened condition of the mucous membrane. That all those changes are produced by a combination of causes—viz., bad water, innutritious diet, residence in a pernicious and uninhabitable climate—as well as by the alternations of heat and cold, can scarcely admit of a doubt.

Syphilis, as already remarked, exists everywhere along the coast. I have no doubt but its existence may be attributed to the association of the natives with Europeans. For several months I tried to estimate the value of the mercurial and non-mercurial plan of treatment. My observations lead me to believe that syphilis cannot be eradicated from the system after the seventh day without the administration of mercury; local applications will not be inopportune. But in every instance I would administer this drug in preference to the iodide of potassium, which is very slow in its action, and will guard against secondary results.

We may perhaps here fitly consider what rules, if any, can be beneficially observed while living on the Gold Coast. These may be summed up as follows:—Good diet and careful living—in not overloading the stomach, as one can take but little open-air exercise, owing to the persistent heat throughout the year. There should be a partial exemption from all kinds of stimulants, except tea, which is always considered a luxury; avoidance of the night air, moisture, and strong rays of the sun. Daily ablutions and the wearing of flannels are indispensable to those who wish to enjoy good health. If dysentery sets in, there should be an immediate change of climate. Quinine is, I think, greatly extolled. Its continued use does not afford any immunity against repeated attacks, and its habitual use serves to lessen the beneficial power of this drug. I would say that a man gets on as well without his daily draught, and does not by this means counteract its beneficial use when he becomes ill. In large doses it produces noise in the ears and a busy restlessness of the hands and eyes, with headache, which may remain until a crisis occurs. Madeira will always be found a safe and pleasant retreat, but if a man feels strong enough to return home and be gladdened by the voices of his friends, he had better do so, as there exists in Funchal a listless gloom occasioned by the resort of those with bad lungs and weak frames. One sees too much of the intolerable hammocking, and is therefore led to conclude that he is still in an African land. Such associations are in themselves so sickening to a man in fair health, that he has no time to think of anything else than death.

Limerick.

CHEMICAL DISCOVERIES IN URINE.—Mr. E. Schunk has reported to the Royal Society the results of his researches on this subject. By processes described in No. 87 of the Society's *Proceedings* just issued, he has obtained in healthy human urine a small quantity of a substance having the properties characteristic of the fatty acids which are solid at the ordinary temperature. The acid is white, crystalline, has a pearly lustre, melts at 54·3° C., volatilises unchanged when heated, and is insoluble in water, but easily soluble in alcohol and ether. Mr. Schunk inclines to the opinion that it is a mixture of stearic and palmitic acid, which, according to modern investigations, constitute margaric acid. In addition to this acid, he also discovered in healthy human urine crystals of oxalurate of ammonia. He could not determine positively whether these substances were normal constituents of human urine or not. He considers the presence of the oxalurate affords an easy and satisfactory explanation of a hitherto puzzling phenomenon—the formation of oxalate of lime in urine long after its emission. The oxaluric acid decomposes, takes up water, and splits up into urea and oxalic acid; the latter then combines with lime, of which there is always a sufficient quantity present to saturate the acid. The oxaluric acid in the human frame is probably derived, as in the laboratory, from uric acid, the oxidation of which is its only known source.

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Medical Times and Gazette.

SATURDAY, DECEMBER 22.

CHOLERA IN EUROPE.

The Registrar-General has obtained from some of the principal statistical departments of the Continent official returns of deaths from cholera, which, although obviously incomplete, are yet valuable as giving the latest authentic information obtainable with regard to the ravages of the disease in the several States.

Dr. Maestri's elaborate Italian returns will be perused with interest, although they refer only to 1865. The epidemic is stated to have commenced on June 25, in the province of Turin, since which time 35 provinces and 349 *comuni* have been visited by the disease. The general results for the whole kingdom show that 23,577 persons were attacked, out of whom 12,901 died; the attacks were at the rate of 64·1, and the deaths at the rate of 35·1, in every 10,000 of the population dwelling in the communes where the disease appeared; 54·7 per cent. of the cases were fatal. The male sex had the largest proportion of cases and deaths. According to Dr. Maestri, the rich have suffered in a greater degree than the poor; thus in the class *Agiata*—freely translated as "persons in easy circumstances"—the deaths were 60 per cent. of the cases, whilst in what we should call the "lower middle," as well as in the lower classes, the ratio was 54 per cent. The unmarried and married alike lost 54 per cent. of their number attacked, while the widowed lost 65 per cent. 2894 cases were treated in Hospitals where the death-rate was 52·5 per cent. of the attacks. Cholera attacked 69 in 10,000 of the inhabitants of cities and towns, while the ratio in villages was 103, and in scattered houses 34; the fatality of the disease was, however, greatest in the cities and towns, and least in the sparsely populated places. The army, navy, and police were the most heavily visited of all callings; 230 in 10,000 were attacked, but the ratio of deaths to attacks (51 per cent.) was only 3 per cent. above the average. The class which furnished the next largest proportion of cases was the commercial (131 per 10,000); then follow those engaged in manufactures (99), the Government officials (85), miners (79), prisoners and persons of no stated occupation (62), domestic servants (61), the smallest proportion (39·4), occurring in the liberal professions. The fatality was greatest amongst paupers and beggars, those engaged in the offices of religion, and the public servants; least among prisoners, the army and navy, and those engaged in manufactures. The death-rate (ratio to population) was less in the second decenniad of life than in the first; but after middle age the ratio increases very rapidly, so that while the death-rate at all ages is 35 per 10,000, at 80 to 90 years it is 120, and in the next decennial term 163. We hope Dr. Maestri will be able to communicate the results of the epidemic of the present year to the Registrar-General before long, so that a complete view of the extent to which the disease has visited the Italian kingdom may be authentically known.

The returns for Belgium embrace the period from May 1 to October 15 of this year. Cholera attacked 62,899 persons, of whom 32,812 died, throughout the whole kingdom. The following are the facts for the chief cities and towns:—

Towns.	Population 1863.	Cases.	Deaths.
Anvers . . .	120,444	4,865	2,306
Brûxelles . .	184,932	3,966	3,028
Bruges . .	50,981	1,511	773
Gand . . .	122,900	4,135	2,187
Mons . . .	27,173	772	403
Liége . . .	101,710	4,330	2,582
Namur . . .	26,204	1,019	492
Total . .	634,344	20,598	11,771

Holland has suffered very severely, as Baron von Baumhauer's official figures testify. The deaths by cholera from the beginning of April last up to October 27 have been in the aggregate 19,294; the disease was at its height throughout the month of July, and, like the London epidemic, it has fluctuated in its progress towards the decline which had steadily set in at the date of the latest return. Nearly half the deaths occurred in the following thirteen cities and towns:—

	Population.	Deaths from cholera.
Rotterdam	115,354	1,237
The Hague	87,319	1,015
Leyden	38,492	892
Delft	22,032	425
Dordrecht	24,124	398
Amsterdam	262,691	1,104
Haarlem	29,580	216
Utrecht	58,995	1,600
Groningen	37,312	1,011
Bois-le-Duc	24,222	296
Arnheim	29,609	424
Zwolle	20,488	203
Maestricht	28,719	219

The returns from Norway are happily so light as to possess little interest; only 69 cases and 48 deaths are returned by M. Rierhulf, the Medical officer of the Norwegian Privy Council, for the two months ending September 27.

For the empire of France no statistics are given, but Baron Haussmann publishes a monthly return of the births, deaths and diseases in the city of Paris, from which it is found that the deaths from cholera in the twelve months of 1865 were 6653, and from diarrhœa 741; the record of the disease showed its true epidemic character, as the deaths, which were 288 from the two causes in September, amounted to 4803 in October, and declined to 1396 in November. After this there was an interval of comparative immunity until July of this year, when the deaths rose suddenly to 1816, and there the official return ends. We are now in December, but the Prefect of the Seine has not yet published his account for August. We hope the Registrar-General's pointed allusion to the example set by the city of Vienna will stir up the Parisian authorities to recover their lost *prestige.*

The following table brings into a comparative view the death rate from cholera in European cities:—

Cities.	Epidemic Period.	Population.	Deaths from Cholera.	Deaths to 10,000 living.
London	23 weeks, 1866.	3037991	5548	(a)18·3
Paris	12 months, 1865. 7 months, 1866.	1696141	6653 1812	39·2 (b)10·7
Naples	1865.	446921	2301	51·5
Vienna	Aug. 11 to Nov. 10, 1866.	560000	2875	51·3
Liverpool	20 weeks ending November 24, 1866.	484337	1754	36·2
15 Dutch Cities and Towns (including Amsterdam)	June to October, 1866.	826164	8872	107·3
Amsterdam . . .	June to October, 1866.	262691	1104	42·0
7 Belgian Towns (including Brussels). . .	May 1 to October 15, 1866.	634344	11771	185·6
Brussels	May 1 to October 15, 1866.	184932	3028	163·7

(a) Epidemic ended. (b) Epidemic going on.

If Dr. Farr can prevail on his statistical colleagues in Austria, Prussia, and France, to send him returns of the deaths from cholera in those States, he will be doing a great service to those inquirers who are at present striving vainly to get out of blue-books and miscellaneous documents of all kinds what they unfortunately cannot find there—reliable statistics of cholera, of which those we have been commenting on are a valuable instalment.

THE FELLOWSHIP OF THE ROYAL COLLEGE OF PHYSICIANS.

It may be remembered that on the occasion of the election of Fellows at the Royal College of Physicians this year we felt it our duty to make some observations on the discontent then caused, as every year in succession, by the nomination-list of the Council. It is no love of the subject that makes us now return to it. But we are proud of the College of Physicians, of its past history, and of its long roll-call of honoured names. Independently of all personal affiliation to the College, we have felt, as Medical Practitioners, a pride in the position it has maintained as the worthy head of our common Profession, and we earnestly desire that it should never fall from its place of dignity and honour. But we felt obliged to observe that "so much discontent is invariably excited every year by the manner in which the Fellowship is distributed, that there is no little danger of men being induced to question whether, after all, it is worth what it costs."

Now, we would not have this expression misunderstood. We do not mean to hint even that a pounds, shillings, and pence value is to be put on honours and distinctions. Some there are about which no question of value can ever be raised. Such are distinctions proceeding from the Crown. Such also the degrees granted *causâ honoris* by our ancient universities, and the honour of citizenship voted by great cities and old corporations. These are general distinctions, conferred alike on warriors, statesmen, and men eminent in literature, science, art, or philanthropy. No one is tempted to question their value, or to inquire if they are worth striving after. They are almost national tokens of approval and worth. But the Fellowship of the London College of Physicians cannot in any sense be compared with them. It is merely a Professional distinction, and its significance and value are scarcely appreciable by any but the members of the Profession. It does not proceed even from the Profession at large, but is conferred only by a relatively small corporate body in it, and, in reality, by even only a small committee of a minority of that corporation. It is true, however, that that minority—the Fellows of the College—is supposed to consist of the most eminent Physicians in England, and therefore, on the principle that the most desirable honour is *laudari a laudatis viris*, the distinction of the Fellowship ought to take rank as a very marked and valuable one, and one which every Physician can and ought to earnestly desire to be found worthy of. But should it come to be felt that, while men absolutely undeserving of the honour are rarely nominated for it, yet many fully worthy are year after year left out in the cold, and that the selection for it almost seems dependent on personal friendship or caprice rather than guided by judgment and a careful consideration and weighing of merit—if any room should be given for such feelings as these, then the value of the distinction cannot fail to be most lamentably lowered both in kind and degree; then it must fall to such a level that any worth that may still attach to it may be assessed in the most ordinary way. The question then would naturally and fairly arise—Are there any privileges and advantages belonging to the Fellowship which make it worth being worked for and looked up to?

The Members of the College are not entitled to any share in its government, or to attend or vote at any general meeting of the Corporation. They are admitted freely to all lectures delivered at the College, and they have the right to a limited and uncomfortable kind of use of the library, or rather of the books contained in it; that is, they may sit in a big bare room downstairs, and send up to the library for any books they may wish to consult. But the privilege of sitting in the library and studying there is reserved for the Fellows. Why this should be we do not pretend to comprehend; it appears most illiberal. But perhaps the Fellows are all so studious that the library, noble room though it is, would not be big enough for both Fellows and Members; or is it that the profound meditations and studies of the Fellows would be broken and disturbed by the less grave and august Members? Anyhow, the use of the library as a room is one of the Fellows' privileges. Then the government of the Corporation is vested in them, and they may give, as well as attend, lectures; and "no Fellow shall be entitled to sue in any court of law for payment of Professional aid rendered by him." Are these privileges worth much? The reply must depend a good deal on individual tastes and idiosyncrasies. No doubt they have their value; but we doubt whether they would impress most men very profoundly. We are well convinced that it is extremely pleasant and desirable to enjoy such privileges, to belong to such a superior kind of scientific-conversations-club, and to be on "Hail-fellow-well-met" terms with all the most eminent Physicians—which is the same as saying with some of the most accomplished and agreeable men of the day; but is it not natural to inquire whether all this is enough to make the Fellowship very earnestly desired?

Again, does the possession of the Fellowship confer any Professional advantages? Is a Fellow, by reason of the Fellowship, more likely to attain to eminence and celebrity in his Profession than a Member? Does he thereby obtain any higher standing, any vantage-ground as a Physician? Does it give his opinion any greater weight or consideration with the public, or even with the Profession? We are very much inclined to doubt it. We have sought for enlightenment and instruction in this matter; but we cannot say that our search has been very successful. It has appeared to us that whenever we have found the Fellowship praised and magnified, it has been for the "*omne ignotum pro magnifico*" reason. We are quite sure that outside the College very few comparatively of the Profession, and still fewer of the public, either know whether Dr. A. or Dr. B. is a Fellow or a Member of that Corporation, or would understand the difference between the two designations. With the general layman a Physician is a Physician, a Doctor a Doctor, and he looks no deeper.

> "A primrose by a river's brim
> A yellow primrose is to him,
> And it is nothing more."

And with the Profession the question is not, Is such or such a Physician a Fellow or only a Member of his College? but, What has he done? what proofs has he given of his talent and knowledge? Now, no one will pretend to believe either that the Fellowship is an unfailing stamp of great talent, or that even very eminent talent is not to be found without it. It is true enough that the greater number of our most distinguished and successful Physicians are Fellows of the College, if they belong to it at all, but they are not distinguished and successful because they are Fellows; they were elected to the Fellowship because they were men of promise or of good Professional position. The Fellowship and the Professional success do not stand to each other in the relation of cause and effect, but are common effects of other causes.

It is to be remembered that the Fellowship of the College of Physicians does not stand on the same footing as the Fellowship of the College of Surgeons. In the latter corporation the Members and the Fellows occupy much more distinctly different ranks or grades in the Profession. The former are general Practitioners; the latter, as a rule, are Consulting Surgeons, or at least men of high Professional position, and these acquire the distinction of the Fellowship, after prolonged and extended education and study, by passing examinations of wider scope and greater severity than are required of the Members, or they may, on their own application, be elected to it on giving satisfactory proofs of age, experience, and unstained Professional and general reputation. But, in the College of Physicians, the Members and the Fellows are all on exactly the same Professional level; the same degree, extent, and length of education, general and Professional, are required from them; the examination tests are the same for all; and they are engaged in the same pursuits —all practising as Physicians. All the difference is that a Fellow is a Member of at least four years' standing, who has been nominated by a small committee, and balloted for by the Fellows at large. No Member can put in any claim or request for the Fellowship—all depends on the will of the small committee. We have even heard it seriously affirmed that any expression of a wish on the part of a Member to become a Fellow lessens his chance of nomination for it; but this, we confess, we can hardly believe. But it is evident that the Fellowship is not, strictly speaking, a Professional distinction at all, but a collegiate one. From among the Members of the College a few are each year selected to go higher up, and to manage the business of the Corporation, and they are called Fellows, and that is all. It is a collegiate, or corporate, or social distinction—nothing more.

But though we may feel unable to see that it is a matter of any great Professional importance to a Physician whether he be a Fellow or not, it is unquestionably of great importance to the College that its Fellowship should be highly esteemed and earnestly desired; and the welfare and prosperity of the College is of importance to the Profession. And therefore it is that we, with so many others, deeply regret that the elections to the Fellowship should be so managed, or mismanaged, as to be a fertile source of discontent and heartburnings; and we regret this the more because we feel sure that under proper management they might be made the means of enlisting fully the sympathies of all Physicians, and so of greatly increasing and widening the prosperity and influence of the Corporation.

We do not purpose describing or discussing now the present mode of election; we said enough on the subject in our former article, and we think no one can deny that it is a failure, since it excites so much dissatisfaction among the Fellows themselves as to have led, two years ago, to a very hostile demonstration against the nomination list of the Council. After that *émeute* a committee was appointed to consider whether some better system of nomination could not be devised, and it reported against any alteration. But some change must be made if all is to go well with the College, and we confess that we cannot see why there should be any great difficulty in the matter. The Members are practising Physicians, as are the Fellows, and have passed the same Professional examination, as far as the College is concerned. If they continue to be worthy, by general and Professional reputation, to be Members, they are worthy of being made Fellows, for it cannot be held that any very rare or unusual degree or kind of talent is necessary to fit them to take an intelligent part in the management of the Corporation. If any one, from temper or any other cause, would be an undesirable or impracticable comrade, he would be pretty sure to be blackballed, and rightly blackballed, but the nomination list ought to be widely extended. Rather than let the present system with all its attendant evils continue, we believe it would be better to rule that every Member of a certain standing should by right stand for election as a Fellow, unless he declined having his name put up. But we would not propose so sweeping a change as that. We would rather give the power of nomination to the Fellows generally, instead of vesting it, as now, in the Council; and we believe that the Council would gladly be relieved from so invidious a task. Supposing that any two (or more) Fellows might nominate a Member for the Fellowship—the nomination papers to be suspended in the College library for a certain time before the ballot, and while so suspended to be subscribed by any Fellows who wished particularly to support the nomination—could any evil attend such a system? The experience of all societies and clubs goes to prove that the ballot is a safe means for insuring the exclusion of objectionable Members, and the Council would always be able to blackball any Member they objected to. It must be admitted also that the College did do its Members a serious injury when it took their old title of "Licentiates" for its new order of General Practitioners. Formerly, when a Medical Practitioner belonged to the College at all, he was recognised by the public as a Physician—it gave him rightly that honourable position; but now the public might be led (if they know aught of the matter) to make a confusion between the Members and the Licentiates, and naturally suppose that all alike are Physicians, to the inevitable disadvantage of the former.

We may here remark that we have all along assumed that the College desires to grow in numbers and strength, that it wishes to rank as the most distinguished and influential Medical corporation in the empire, and to be ever most prominent in its efforts to uphold and improve the dignity and *status* of the Profession. We may, however, be mistaken in this belief: it may be that the College really only care to be considered as a dignified and very exclusive Physicians' club, to which the Membership is merely a convenient and useful feeder. But, in that case, we think that it had better have let alone the manufacture of General Practitioners, and we would respectfully warn it that its Members are very likely to dwindle down to a very insignificant number. As by the Medical Act any Doctor may, through registration, legally practise as a Physician quite independently of the College, the inducements to become a Member of that body have been greatly lessened; and it is not likely that our public charities will much longer require their Physicians to belong to it. Its power of inducing men to pay thirty guineas for its Membership will then depend solely and entirely on itself. Should there then continue any reason to believe that the possession of a Medical degree of Oxford or Cambridge is not only a royal road, but *the* safe and sure road, to its Fellowship, we strongly suspect that its Members will be very few. The College would in that case become insignificant in numbers and strength, and the position it ought to occupy would be taken by some Corporation distinguished by larger wisdom and a more liberal and generous tone—a consummation which we certainly do not desire to see; for we believe that if the College will advance steadfastly and trustingly in the path on which, with renewed life and energy, it entered a few years ago, guiding its course by wise and generous counsels, and acting in a broad and catholic spirit, it may not only affiliate to itself all Physicians, but may even in time attract within its portals the whole body Medical.

THE WEEK.

THE LONDON HOSPITAL—A COMMITTEE'S THANKS.

At the London Hospital, on Wednesday morning last, the Earl of Shaftesbury had the honour, as he himself expressed it, of thanking the Medical, clerical, and lay officials of the Hospital, for the zeal and activity they displayed in the cholera season. We are glad to say that these thanks were accompanied by something of commoner value. Each official, from the parson to the porters, received some token of a prosaic nature. The honoraria were presented in the most delicate manner, and the Chairman thanked the recipients most warmly, not on behalf of the Hospital Committee only, but on behalf of the general public also. From our own observation we can say these thanks were well deserved. Dr. James Jackson, the resident Medical officer, and his assistants, George Mackenzie, Frederick Mackenzie, J. Macarthy, Bathurst Dove, Jones, and Sanders, did their very hard work with cheerfulness, steadiness, and energy.

The honorary staff came in for their share of praise, but in this instance no "tokens," as one (reverend) speaker called the cheques given to the members of the staff, were presented. It was, this gentleman said, contrary to the traditions of the Hospital to make presentations of value to the honorary staff. Having, however, stated the law of tradition, he suggested that it should be at once sinned against, and that the honorary staff should be asked to accept from the Hospital some visible recognition of their services. Others took the same view, and the matter was referred to the Committee. There is, we believe, no intention to present gifts of much intrinsic value.

CHARING-CROSS AND THE STONE HOSPITAL.

We hear that Mr. Teevan is to have the Assistant-Surgeoncy to the Charing-cross Hospital, but that a peculiar compromise has been accepted by the management of that charity with respect to his holding office at the Stone Hospital. It is not at once to be "No St. Peter's or no Charing-cross," but, as we understand, the two appointments are to be held together for six months, and then the choice is to be made between them. Such an arrangement is certainly very considerate towards Mr. Teevan; whether it is dignified on the part of the Charing-cross Hospital is another matter.

CRIMINAL ABORTION.

It is very much to be regretted that a legal point should have quashed the prosecution in a recent trial for criminal abortion at Warwick, before Mr. Justice Byles. It is to be feared that this crime is not on the decrease in this country, and we should gladly see the full punishment meted out to proved offenders. The case was that in which William Vernon Smith, styling himself surgeon of Birmingham, Ellen Elizabeth Owen, "female doctor" and "ladies' friend," and one William Bromfield, the paramour of the unfortunate girl, were the accused. The charge was that they had used a certain instrument on Elizabeth Ellesmere with intent to procure abortion. The evidence consisted of the death-bed statement of Elizabeth Ellesmere, who asserted that Smith introduced an instrument that caused great pain, and that in consequence she was prematurely delivered of a child. She died shortly afterwards. The point in law urged by the counsel for the prisoners was, that if Smith used no instrument then the prisoners were clearly not guilty. If, however, he did use an instrument, then, Ellesmore being an accomplice, her evidence could not be received without corroboration, and that in that event there was no evidence. His Lordship held the objection to be fatal, and directed the jury to find a verdict of *Not Guilty*. We are happy to say, however, that two of the prisoners, Owen and Bromfield, were convicted on the charge of administering noxious drugs to the deceased, and that the former was sentenced to 18 months', and the latter to 9 months' imprisonment with hard labour.

PROFESSOR SELWYN'S LATIN VERSES, ON HIS RECOVERY.

Professor Selwyn has addressed the following verses to the Vice-Chancellor and University of Cambridge, on the occasion of his recovery from the effects of his late severe accident. Apart from their intrinsic merits, the tribute which they pay to two eminent members of our Profession claim for them a place in our columns, and must be the apology for the translation which our poetical contributor has sent us.

"*Domino Procancellario et Academiæ Cantabrigiensi.*

"Vobis exopto, quâ non fruor ipse, salutem,
  Effundens almâ pro genitrice preces;
Languidus, e lecto; sed non languentia vota;
  Ægroti insolito corda calore tument.

"O Patres, Fratresque, sacratæ Lucis alumni,
  Non leve momentum est, quod tulit una dies:
Plena inter vitæ commercia, plena laborum
  Tempora, ad æternas procubuisse fores;
Et subito lethi affinem sensisse soporem;—
  Hæc sunt queis animum tangit ad ima Deus.

"Vidi etenim, lapsu quamvis confusus iniquo,
  Quam vigil et fervens iste Paternus Amor;
Qui regit errantes stellas moderamine summo,
  Et sine quo passer nullus in arva cadit.
Et sensi, fratrum pietas, e fonte perenni
  Quam læto arentes irriget amne locos.

"O utinam dignas possem persolvere grates,
  Vobis qui e durâ me relevâstis humo; (a)
Vobis qui curâ vigilandi, atque arte medendi, (b)
  Fovistis læsi membra caputque viri:
Vobis. quos scalâ angelicâ conscendere cœlum,
  Et laticem ex Agni promere fonte juvat.

"Et tu, qui, juvenum rapidissime! non ita justo
  Tramite, seu nimium præpete raptus equo,
Sive ipse impellens, lapsus mihi causa fuisti;
  Tu mihi, sub Domino, causa quietis, ave!
Sed precor, hoc posthac reminiscere; *carpe sinistram*;
  Dextram occurrenti linquere norma jubet.

"Omnibus ex animo grates! det Maximus Ille
  Omnibus æternâ luce et amore frui.
"Gulielmus Selwyn,
"Dom. Margaretæ in Sacrâ Theologiâ Lector.
"Nov. 20, a.d. 1866."

Translation.

"*To the Vice-Chancellor and University of Cambridge.*

"I wish you all, what I have not—good health!
  Languid, from bed, but with no languid vows,
Pouring forth prayers for her our mother mild;
  Unwonted fires the sick man's heart arouse.

"O! Fathers, Brethren, students of Light Divine!
  'Twas no light moment which that one day bore,
Amidst life's business, full of toils of time,
  To have lain prostrate at th' eternal door,
Felt sudden death-like sleep, all sense depart;—
These are the means with which God probes the inmost heart.

"And yet, though by the shock confused, I saw
  How warm and watchful was that Father's love,
Without whom not a sparrow falls to earth:
  Who rules the planets from His throne above.
And brothers' love I felt, as parchèd fields
Drink the glad stream some ceaseless fountain yields.

"Oh that I you could pay, as I've the will,
  With worthy thanks, who raised me from the ground; (a)
You, who with watchful care and healing skill, (b)
  Soothed of the head and limbs the hurt man's wound;
And you who love by angel steps to mount
To draw Life's waters from the Lamb's own fount.

"Fastest of youths! who not on your right side
  Did'st urge th' impetuous brute (or had he shied?)—
Cause of my fall and rest! to you—*Ave.*
  But henceforth when you ride remember pray
Keep to your left,—Laws of the road command
To let the comer pass on your right hand.

"Now to all heartfelt thanks! May He above
Grant all eternal joys and light above."

THE DIVISION OF LONDON INTO MUNICIPALITIES.

Why should not all London outside the City proper be able to deal with extortionate gas companies, bad water supply, and, we may add, defective sanitary arrangements of all sorts, as effectually and authoritatively as does the City corporation? The answer to this question was furnished by Mr. C. Buxton, Mr. T. Hughes, Dr. Farr, and other speakers who took part in a meeting of the Metropolitan Municipal Association at St. James's Hall on December 11. The object of this Association is to divide the metropolis into municipalities, each municipality to be completely self-governing—in fact, a city in itself. At present the metropolitan districts are differently divided for all sorts of purposes, and of governing bodies there are only too many. In a pamphlet recently published by Mr. Horton it is shown that "The metropolis is divided into 37 districts for the purposes of registration of births; into 56 districts for the duties of the Building Act; into 19 divisions for police purposes; into 13 County Court districts; into 15 militia districts; and additional divisions for Inland Revenue, postal, gas and water, and parliamentary purposes; so that a map of London must have 14 or 15 different boundaries to represent in each area the controlling powers." Now, it would be clearly a benefit to the inhabitants that for all purposes the boundaries should be the same, and that at least the great divisions of London should possess not less advantages in the way of internal administration than small market towns in the country. Dr. Farr, indeed, insisted that municipalities alone could enforce the regulations necessary to check diseases which now decimate the population. At any rate, we might hope for better pavement, better and cheaper gas, better water, and better houses for the labouring classes, were parishes united into municipal boroughs, and government by corporations substituted for the inefficiency of vestries.

(a) W. Kennedy, King's College; Ravenscroft Stewart, Trinity College; W. H. Anable and J. Hall, of the Pitt Press.

(b) G. E. Paget, M.D., Caius College; C. Lestourgeon, M.A., Trinit College.

MR. WALTER COULSON, THE STAFF OF ST. MARY'S, AND "ST. PETER'S" HOSPITAL.

We have received a copy of correspondence which has taken place between Messrs. S. A. Lane, Spencer Smith, James R. Lane, Ernest Hart, and George G. Gascoyen, on the one part, and Mr. Walter J. Coulson on the other. We are sorry want of space obliges us to give a mere abstract this week.

Letter 1, November 28, from the first-named five gentlemen, expresses the pain and regret with which they learn that Mr. Walter J. Coulson, recently elected Assistant-Surgeon to St. Mary's Hospital, has since his election resumed his position of Surgeon to the institution known as St. Peter's Hospital for Stone. They remind Mr. Walter J. Coulson that when, in 1864, being Surgical Registrar of St. Mary's Hospital, he accepted the post of Surgeon to St. Peter's, his colleagues expressed to him their disgust; and that it was only on the understanding that he absolutely resigned St. Peter's that they supported him as candidate for the Assistant-Surgeoncy at St. Mary's. They consider his reacceptance of office at St. Peter's a breach of good faith.

Letter 2, from Mr. Walter Coulson, denies the "understanding" assumed in the foregoing letter; asserts that his intention to continue his support to St. Peter's, as a committee-man, was well known; says his resumption of Surgical office there arose from unforeseen circumstances; repudiates all imputation on his honour; reproaches his antagonists for their own connexion with special Hospitals, and affirms the necessity of a Hospital for stone.

No. 3 reiterates, in behalf of the five Surgeons, their statement that it was only on the "understanding" aforesaid that they, as members of the Surgical staff and Medical Committee of St. Mary's, concurred in and supported the recommendation of Mr. Walter J. Coulson as candidate for the office of Assistant-Surgeon; "without which recommendation he could not have come before the Governors with any probability of success."

Documents follow No. 3, from which it is evident that the subject was under discussion at St. Mary's in 1864, and that Mr. W. J. Coulson then resigned St. Peter's; but nothing appears as evidence of the "understanding" which one party affirms and the other denies.

In letter No. 4, dated December 18, which reaches us as we are going to press, Mr. Walter Coulson reiterates circumstantially his denial of the "understanding" in 1864, and says he then resigned St. Peter's solely through "pressure of a private nature" brought to bear by Mr. Spencer Smith. He denies, by implication, that the five Surgeons have any claim on him on account of their having supported or recommended him; and adduces a letter from Dr. Broadbent, to the effect that the alleged support of the Surgical Committee, if it had been given, would have made no difference.

It is clear that two quite distinct questions are here involved. One affects Mr. W. Coulson personally, and his five antagonists, and no one else. If full information on this point were laid before any impartial lawyer or man of the world, he would be able to advise as to whether Mr. Coulson really and consciously, whether tacitly or no, entered into the arrangement alleged, or whether the other side assumed it on insufficient grounds. Either party might well demand such a reference, and consent to abide by the decision.

As to the general question of Special Hospitals, it embraces many questions in one. The interests of the public, of the patients, of the Medical officers, and of the Profession, all require to be duly weighed. But we must say, too, that the public, the Profession, the sick, and the healthy alike are interested in the existence of good general Hospitals, considered in their function as Clinical Schools; and that we can well conceive that a man whose heart and soul is in a general Hospital as a machine for Medical education, would view the matter with great suspicion, as a source of jealousy to his colleagues and injury to his school, if one of the staff were to draft off one whole class of cases of the highest Surgical importance to a Special Institution. It is as if one of the firm of Howell and James should set up a separate shop for *moire antique* or Brussels lace. As for the name *St. Peter*, if, as we suppose, there is a pun under the word *Peter*, we can only say of it what old Johnson once said—"Sir, this merriment of parsons is offensive."

TESTIMONIAL TO THE "PALL-MALL GAZETTE."

The *Medical Times and Gazette* for December 15 contains a note from Dr. W. H. Richardson, urging the propriety of testifying to the conductors of the *Pall-mall Gazette* the approbation by the Profession of their courageous and honourable conduct in the trial Hunter *v.* Sharpe. We are glad to find that the same idea has been suggested in other quarters, and we print in another column the names of gentlemen who are willing to support the movement.

CORONER FOR THE CITY.

Dr. Gibbon, who is a candidate for the City Coronership in the presumed event of a vacancy, has issued an able address to the City authorities, containing the following pertinent passage:—

"The wording of the old statute relating to the office, which enjoins that 'the Coroner of our Lord the King shall go to the *places* where any be slain, or suddenly dead or wounded,' and, further, 'that *such bodies are to be seen* whether they are so drowned, or slain, or strangled by the sign of the cord tied streight about their necks, or about any of their members, or upon any other hurt found upon their bodies," would seem to imply considerable knowledge, if not of Medical science, at least of the modes and after-appearances of death, in the president of this court of inquiry. Non-Medical Coroners are apt to be satisfied with such indefinite verdicts as 'Found Dead,' 'Died of Natural Causes,' and 'Sudden Death'—results of solemn inquiries which encourage rather than prevent crime, which do not fulfil the requirements of the Registration Act, and which are valueless for statistical and sanitary purposes."

CONFLICTING MEDICAL EVIDENCE.

A case was tried on December 12 at Durham, before Mr. Justice Lush, which is of considerable importance. It would appear from Mr. Justice Lush's ruling that, however suspicious surrounding circumstances may be, no charge of murder can be sustained if a Medical witness gives it as his opinion that the appearances presented by the body are consistent with a death from natural causes. We were scarcely prepared for the enunciation of such a rule from the bench, because it appears to us that it has not been commonly acted upon. For instance, in Palmer's trial there were a number of Medical witnesses who deposed that the appearances observed in the body were consistent with death from natural causes. We are not disposed to underrate the value to be attached to Medical evidence, but we certainly think that the trial before us affords a somewhat dangerous precedent. Circumstances of the most suspicious character had been detailed, and one Medical witness who had examined the body expressed a decided opinion that the man had died a violent death. Another Medical witness, who had also been present at the examination, expressed a contrary opinion, when immediately the case was stopped by the presiding judge. Now surely the question involved was one which should have been left to the jury to decide. It is quite conceivable that the appearances in a dead body may be reconcilable with a theory of natural death, and yet that circumstantial or direct evidence should prove incontestably that the person had been murdered. The following is a condensed report of the trial:—

Jane Craggs, aged 50, was indicted, on the coroner's inquisition, for the wilful murder of James Cooper, at Hetton-le-Hole, on May 15 last. It appeared from the opening statement of counsel, and from the evidence, that the deceased, an old pitman 75 years of age, lived in a cottage at Easington-lane, and the prisoner, Jane Craggs, separated from her husband, lived in the cottage of the deceased and acted as his housekeeper. On May 5 and 6 there had been quarrels between them, and the prisoner had been heard to make use of threats regarding him—that she would do something that would put an end to him, and would not be long about it. On Sunday, May 13, these threats had been repeated. On Monday, May 14, the deceased was seen at night in a pair of light-coloured trousers. He then appeared in his usual good health. He was never after seen alive. It was proved by several witnesses that the woman shut herself in the cottage and told her neighbours that deceased had gone to Coxhoe, his work, and had not returned. At last after several days, suspicions were aroused by a smell of decomposing organic matter in the house, and by Craggs resolutely refusing to allow any one to examine a four-post bedstead, of which the bed curtains were closely drawn. At last a policeman made a forcible entry. He found the curtains pinned together, and, on pushing them aside and putting his hand on the bed, he found old Cooper lying dead athwart the bed, partly undressed. A pillow was lying beside his face, and he was on one side. There was blood on the bed-tick in spots, and blood, mucus, and vomit on the pillow. The body was in a state of decomposition. The policeman said, "Why, his body is here, dead." The prisoner said, "Yes, he's dead," in a sort of jesting way. The policeman said, "Why, did you not tell me just now that he was at Coxhoe?" She said, "Well, he was at Coxhoe." She was then taken into custody on the charge of murdering the man, and the house was searched to find his clothes, his light fustian trousers being missing. A Medical Practitioner was sent for, and Dr. Parker, of Easington-lane, attended and found the body as already described, the tongue protruding three inches out of the mouth, and the nose swollen and eyes prominent. A post-mortem examination was ordered, and no sign of disease of any kind could be traced, the heart, lungs, liver, kidneys, and brain all being healthy. The stomach and some of these organs were analysed, but no trace of any poison was found. On the right side of the neck, near the external jugular vein, a small clot of blood was found, with surrounding ecchymosis, about the size of a halfpenny. Another Surgeon named Edgar, of Hetton-le-Hole, also attended the post-mortem examination. Both agreed that there was no sign of disease to account for death. The deceased had, in the opinion of Dr. Parker, not died from apoplexy, or epilepsy, or heart disease, or angina pectoris. In his opinion the clot of blood and extravasation of blood on the neck had been caused by a firm grasp on the neck, or by a blow, and the appearances on the pillow and bed were produced by placing the pillow over the old man's mouth. In Dr. Parker's judgment the death of the old man was caused partly by strangulation and partly by smothering. This would account for the protruded tongue, for the clot of blood in the neck, for the spurting of blood, apparently from the nose, and for the appearances on the pillow. These appearances were all consistent with a violent death in the manner he conceived, and were inconsistent with a natural death, or with death from any disease. Mr. Edgar, on the other hand, was of opinion that all these appearances were consistent with death from natural causes. The clot of blood might have been occasioned by a strain from violent coughing. After Mr. Edgar's evidence, Mr. Justice Lush stopped the case. He said "that however suspicious the circumstances might be, it was impossible to ask the jury to convict the prisoner of murder when one of the Medical men stated that in his judgment all the appearances were consistent with death from natural causes."

We can only repeat that if this precedent is to be followed it will not in our opinion tend to the furtherance of justice or promote the safety of society.

NEW SOURCES OF LEAD POISONING.

A GREAT number of persons in Orange County, New York, exhibited symptoms of lead poisoning in the past spring, but for a long time the cause could not be traced. At last it was found that they were associated with the meal produced at a certain mill in Walkill Valley, and on investigation it proved that one set of stones in this mill had become very much worn, and that the miller had filled up some large hollows in them with lead. The meal was consequently impregnated with the metal to a very large extent, insomuch that it was visible by the naked eye on a close examination. We suspect that miller's trade will rather suffer from his penuriousness. Silk thread is sold by weight, and all sorts of tricks are employed for adding to this; the simplest is the addition of some glutinous substance which will not be readily removed by drying; but this method has been improved upon. The thread is steeped in acetate of lead, and then exposed to a current of sulphuretted hydrogen, which deposits the lead in the thread in the form of sulphide. Of course the thread is rendered much heavier, but at the same time it becomes highly deleterious, especially as workpeople are very often accustomed to bite the end off. Several instances of lead poisoning have been recorded as taking place from this cause.

FROM ABROAD—PRIZES AND PRIZE QUESTIONS AT THE ACADEMIE DE MÉDECINE—THE CHOLERA IN BELGIUM AND PARIS.

THE Academy of Medicine has just held its annual public *séance* with splendid effect. Before a brilliant audience of both sexes M. Béclard delivered an eulogium on the late academician, Gerdy, which is acknowledged on all hands to have been a great success, and to which we hope hereafter to return. In the meantime, we may notice that the passages which were most favourably received were those which related to the present inefficient condition of the Paris Faculty, and to the regenerative power to be anticipated from the establishment of free teaching, and especially from the revival of the *concours*. This last aspiration was received by the audience with salvos of applause, which became deafening when the lecturer pointed out that to its influence it was that the Faculty owed the honoured names of Gerdy, Velpeau, Bouillaud, and Trousseau. It is quite evident from many signs that the Medical public in France, whether represented by the general aspirations of student life or the more matured convictions of sedater men, has made up its mind that the days of the present system of repression and monopoly are numbered, and it loses no opportunity of intimating this to those in power.

On this occasion the decision with respect to the prizes of the Académie for 1866 was likewise announced, and it appears that for several of these either competitors did not present themselves, or their productions were not considered as coming up to the mark. It has been suggested that this arises in some degree from the subjects being determined, and that were these left to the choice of the candidates the results would be far more satisfactory; and, indeed, for those of the Academy prizes which are in that position much better essays were presented. The following were the awards:—1. The Academy Prize, subject "Epidemic Erysipelas," was divided, 700 fr. being awarded to M. Daudé and 300 to M. Pujol.

2. The Portal Prize, "Pathological Anatomy of the Nerves in Visceral Affections," was not adjudged. 3. For the Civrieux Prize, "The Migraine," ten essays were sent in, but none good enough for the prize; but encouragements were given to two of the candidates. 4. No memoir for the Capuron Prize, "Shivering in the Puerperal State," was deemed worthy of it. 5. The Barbier Prize of 5000 fr. is one of those the choice of subjects of which is left to the candidate, and it was divided between M. Notta, for his "Researches on the Employment of the *Liqueur de Villate*," and M. Legros, for an essay on "Imminent Death from Suffocation." 6. The Orfila Prize, "Digitaline and Digitalis," was not awarded. 7. The same with respect to the Lefèvre Prize, "Melancholy." 8. The Godard Prize, for the best essay on Internal Pathology, was awarded to M. Lancereaux for his memoir on Alcoholism.

This is indeed a poor show of work and its recompense for last year, and we must hope that the future prize questions will elicit more satisfactory responses. They are as follows:—1. The Academy Prizes of 1000 fr., for 1867, "The Clinical History of Fibro-plastic Tumours;" for 1868, "Sanguineous Effusions into the Substance of the Tissues." 2. The Portal Prize of 1000 fr., for 1867, "The Various Species of Melanosis;" for 1868, "Tumours of the Encephalon and their Symptoms." 3. The Civrieux Prize of 1000 fr., for 1867, "Dementia;" for 1868, "The Psychological Phenomena prior to, during, and after Induced Anæsthesia." 4. The Barbier Prize of 4000 fr., for 1867 and 1868, to be decreed to the discoverer of the means of cure of diseases hitherto regarded as incurable, as hydrophobia, cancer, epilepsy, scrofula, typhus, cholera, etc. In the absence of such, encouragements will be awarded to those who nearest approach the end in view. 5. The Capuron Prize of 1000 fr., for 1867, "The Changes undergone by Infants who have sojourned in Utero for a more or less long period after their Death, indicating the Nature of such Alterations and the Epoch at which Death took place;" for 1868, "The Treatment of Uterine Affections by Mineral Waters." 6. The Amussat Prize of 1000 fr., for 1867. "This will be adjudged to the author of the work which, based both on anatomy and experiment, shall have realised or prepared the way for the most important progress in Surgical Therapeutics." 7. The Itard Prize of 3000 fr. for 1867 will be accorded to the author of the best work or memoir on Practical Medicine or Applied Therapeutics—such works having been published for at least two years. 8. The Godard Prize of 1000 fr. for 1867 for the best memoir on External Pathology; for 1868, for the best memoir on Internal Pathology. 9. The Orfila Prize of 4000 fr., for 1868, "Digitaline and Digitalis." 10. The Argenteuil Prize of 8000 fr. for 1869 will be adjudged to the author of the greatest improvement in the means of treating stricture of the urethra during the years 1863-68; or, subsidiary to this, to the author of the greatest improvement in the treatment of the other diseases of the urinary passages. 11. The Rufz de Lavison Prize of 2000 fr. for 1870, "The Modifications and Alterations in Functions and Organic Lesions observed in Man and Animals passing from one Climate to another, and attributable to Acclimatisation." Foreigners as well as Frenchmen are admitted to compete for all these prizes, the essays for which, written in French or Latin, must be be sent in to the Academy by March 1 of the respective years.

A few last words on the cholera of 1866. Dr. Van den Corput has just published in the *Journal de Médecine de Bruxelles* an official statistical account of the ravages it has committed in the various provinces of Belgium, and these for so small a country have indeed proved immense. Without specifying the various provinces, we may state that the total number of cases from the beginning amounted to 62,899, with 32,812 deaths. The principal towns have suffered as follows:—Antwerp, 4865 cases, with 2306 deaths; Brussels, 3966, with 3028 deaths; Bruges, 1511, with 773 deaths; Ghent, 4135, with 2187 deaths; Liege, 4330, with 2582 deaths; and Namur, 1019, with 492 deaths. The epidemic invaded Belgium at four distinct points at almost the same dates; and observation has almost always been able to trace the propagation of the scourge to the contact of contaminated individuals with the healthy; it being also in the great industrial centres and populous communes in which the fluctuation of population established frequent intercommunication with infected districts, that the disease has raged most persistently and most violently. The Belgian Government, taught the necessity of stirring itself by this rude lesson, is about to obtain important changes in sanitary matters from the Legislature.

The Préfet of the Department of the Seine, in a report which he has just delivered to the General Council of the Department, claims credit for the great benefits which his efforts for improving the sanitary condition of Paris have been the means of producing, instancing in proof the comparatively slight mortality which has ensued from the recent epidemic of cholera in Paris. This scourge sojourned for a whole year in Paris and the Department; and yet, while from the epidemic of 1831-32 there resulted 21,670 deaths; from that of 1849, 25,052 deaths; and from that of 1853-54, 11,873 deaths, from this last invasion 6626 deaths only occurred in 1865, and 5700 in 1866. Comparing this mortality with the population at these respective periods, the cholera gave rise to 2·28 deaths per cent. in 1831-32, 1·79 per cent. in 1849, 0·76 per cent. in 1853-54, 0·31 per cent. in 1865, and 0·26 per cent. in 1866.

> "To what, gentlemen, can we attribute this result if it be not—at least in a very great part—to the sanitary works which I just now alluded to, and which have been so often and so unjustly criticised? At the same time that they have rendered Paris the finest capital in the world, and have bestowed on this Department conditions harmonising with the vicinity of such a capital, these works have modified in a favourable manner the conditions of human life. They have established a free circulation of air, light, and water; they have destroyed infected localities, narrow and tortuous streets, and unhealthy and uninhabitable dwellings; and their final aim has been to insure to all the greatest possible amount of well-being (*bien-être*)—the best of preservatives against the epidemic or contagious diseases which mark so cruelly their passage through cities and empires."

Who that compares the condition of Paris as it was and as it is, and the augmented value of life that has been accomplished, will deny that Baron Haussmann has good grounds for self-congratulation?

YELLOW FEVER—"TASMANIAN."

(From a Correspondent.)

The yellow fever seems determined, if it possibly can, to effect a lodgment in this country, for we have again to record the arrival of another ship with the pestilence on board.

This ship, the *Tasmanian*, like the other yellow-fever-stricken vessels, is one of the fleet belonging to the Royal Mail Steam-packet Company, and is engaged in the West India mail service.

It appears that she left St. Thomas's on the 30th ult., and though the weather was cold, and therefore not favourable for the development of such a disease, yellow fever not only was existing, but actually spread—a fact which would appear to cast some doubt upon the theory that yellow fever cannot live without a tropical heat.

From what we have been able to learn of this ship, she originally had a crew of 140 men, and out of this number 71 have been attacked with the fever, and 21 have died. Amongst the deaths is that of Dr. Hudson, Surgeon of the ship. In addition to these deaths others were expected to succumb to the disease, and we believe that three or four deaths have taken place since the vessel has been in quarantine. Two patients of the 71 were left in Hospital at St. Thomas's.

The *Tasmanian* arrived off Netley about 4 p.m. on Friday, the 14th, and the yellow flag, having been hoisted, proclaimed her as having yellow fever on board. Immediately the fact became known, the quarantine authorities at Southampton took action in the matter. On the following day the mails and specie were landed under the ordinary system of disinfection. The passengers were sent to the Company's steamship *Parana*, and the convalescents, of whom there were 16, were sent to the hulk *Menelaus*. The healthy portion of the crew of the *Tasmanian* were ordered to be sent on board her Majesty's ship *Æolus*, the ship herself being ordered to the Motherbank. The transfer of the sick to the *Menelaus* was attended with both danger and difficulty, for the weather and sea were very rough during the progress of the transhipment. It was fortunate that there were no fewer than three Medical men on board as passengers, including Drs. Oxham and Ellery, who appear to have set to work in a most praiseworthy manner in taking the place of their deceased brother. One of the Medical men, a passenger from Honduras, had taken Medical charge of a portion of the people on board the ship, and we believe still exercises his self-imposed duties. The other two were both suffering from the effects of their voluntary efforts to stay the progress of the pestilence, and were in a very weak state consequent upon their having contracted the disease which they were doing their best to combat. If it had not been for these three gentlemen, there would not have been any one to see to the necessities of the sick or to the precautions to be taken by the healthy.

So far as we have been able to ascertain, the first attack took place on November 17, and the others followed at irregular intervals, so that, though there have been numerous cases, it has not been possible to draw any deductions as to the length of time the disease has taken to incubate—a question upon which there is a great division of opinion, and a satisfactory solution of which it would be of very great advantage to obtain. As in the case of the *Atrato*, the fever on board the *Tasmanian* has been confined almost entirely to the crew, for we have only heard of two of the passengers as suffering from it. Two deaths have occurred since the quarantine was commenced, and the bodies were buried in the sea.

The latest intelligence which we have been able to get is that all are going on well, and that none of those who have yet escaped the infection have shown any signs of having contracted the fever.

We believe that, in consequence of the prevalence of yellow fever at St. Thomas's, the French packet which carries the mails to Havana and Mexico will not go thither, but will call at the island of Martinique instead. It would be well, we think, if the Royal Mail Steam-packet Company were to act in a similar manner, and discontinue going to St. Thomas's at such risk of life.

THE YELLOW FEVER AT DEMERARA.—It is sought to saddle the mortality from yellow fever in the 16th Regiment on the garrison Surgeon, who, it is reported, objected at first to the men being removed to another locality. We must wait for the official account; but, *primâ facie*, this statement seems very improbable.

"NEW YORK MEDICAL JOURNAL."—The *New York Medical Journal* for November contains an excellent clinical history of a case of poisoning by morphia, treated with belladonna. The patient had taken no less than five (ten by his own account) grains of sulphate of morphia, and was not seen for some hours after taking this. In spite of all the ordinary appliances, coma appeared, and gradually deepened until but little hope of recovery could be entertained. Dr. Mitchell, by whom the case is narrated, had on his first seeing the case ordered an enema containing a considerable quantity (1 drachm) of tincture of belladonna, but when the symptoms became exacerbated he administered by subcutaneous injection altogether a quarter of a grain of atropia; warmth was kept up, and the breathing was regulated by a galvanic battery. Gradually the patient recovered sense and motion, and, after a somewhat protracted convalescence, completely recovered. The case is a model one, and will well repay perusal.

THE MEDICAL HISTORY OF ENGLAND.

By B. W. RICHARDSON, M.A., M.D., F.R.C.P.,
Senior Physician to the Royal Infirmary for Diseases of the Chest.

THE MEDICAL HISTORY OF NOTTINGHAM.

(Continued from page 645.)

IN addition to the General Hospital, there are several other Medical charities in Nottingham, to which, to render our report complete, brief reference must be made. The institutions are the Dispensary, the Eye Infirmary, the Asylums, and the Workhouse Hospital.

THE NOTTINGHAM DISPENSARY.

The Dispensary was established in the year 1831. It receives each year under Medical treatment between eight and nine thousand patients, of whom nearly a thousand are visited at their own homes. For the years 1863-64-65 the mortality on the total number of patients treated was 110. The income averages £500 a year, and is raised entirely by voluntary effort.

An Auxiliary Fund for Surgical Appliances has been raised by this institution, and has been found to work well, as it enables the Surgeons in special cases to supply expensive instruments to poor patients who require constant mechanical support. The number of dental cases treated is remarkably large, amounting in the year 1865 to upwards of 2000.

THE MEDICAL STAFF.

The Medical staff consists of a Consulting Physician, Dr. Robertson, and four Consulting Surgeons, Dr. Massey, G. E. Stanger, Esq., H. Taylor, Esq., and S. D. Hine, Esq., a resident Surgeon, B. L. Powne, Esq., and an Assistant-Surgeon, Allan A. Wearing, Esq.

THE EYE INFIRMARY.

The Eye Infirmary was established in 1859 in a very modest way. It was soon discovered to be an institution worthy of active support, and at my last visit to Nottingham I found that the position of the institution had been changed, and that a large house well situated had been fitted up with accommodation for the reception of several in-door patients. The number of patients treated at the institution exceeds a thousand annually. The Duke of Newcastle is President.

MEDICAL STAFF.

The Medical staff consists of J. O. Brookhouse, Esq., T. A. Stephenson, Esq., and Dr. Charles Taylor.

POINTS OF PRACTICE.

Some new and useful points of practice which have been carried out at the Infirmary by Dr. Taylor seemed to me worthy of special note. I therefore asked Dr. Taylor to be good enough to report them to me, and herewith I subjoin his communication:—

Points in Practice from the Nottingham Eye Dispensary. By Charles Taylor, M.D. Edin., one of the Surgeons to the Institution.

In the sense of malaise attributable to overwork, in cases of congestion of the choroid, sclerotico-choroiditis posterior, in various inflammatory affections of the eyeball, and whenever a sensation of heat and oppression is complained of, the topical application of cold is of the greatest service. The following are modifications of the methods ordinarily employed for that purpose, and which I have found of great practical benefit:—

1. *The Eye Douche.*—The instruments advertised for this purpose are not usually within the reach of Dispensary patients, and are not nearly so effectual as a piece of vulcanised india-rubber tubing two feet in length and of sufficient diameter to fit on to the nozzle of an ordinary tap. One-half of an ordinary large silk bobbin is thrust into the other extremity, so that the stream may be condensed at the point of issue, and the instrument is complete.

2. *The Application of Ice.*—This is difficult to procure, especially in summer time, and, generally speaking, the poor can neither purchase nor keep it. I have therefore employed freezing mixtures instead. Equal parts of nitrate of potash and hydrochlorate of ammonia answer very well if moistened and applied in a very thin vulcanised india-rubber pouch. Of internal remedies not commonly prescribed, I have found much benefit from the administration of belladonna and bromide of potassium in strumous ophthalmia, and arsenic in phlyctenular conjunctivitis. Iron and cod-oil are always useful

where there is constitutional defect, and small setons sometimes act like specifics in recurrent vascular ulcers of the cornea. When the deeper tissues are involved in acute inflammatory action, and the pain is such as to prevent sleep, nothing is so efficacious as the rapid abstraction of blood, and I have found that by far the best means of effecting this object is to open the temporal artery or one of its branches. A teacupful of blood may be thus obtained in a few minutes, and the pain vanishes as the blood flows. I am aware that there are certain theoretical objections to this measure, but am quite satisfied with the results in my own cases. After the abstraction of blood a good sleep becomes an important remedy, and this is best obtained by the hypodermic injection of morphia. Four grains boiled in one drachm of distilled water until dissolved is the form I usually employ. Five minims contain one-third of a grain; and this dose, or one-half the quantity may be injected into the loose tissue of the upper lid. I have used strychnine and atropine in the same way with good results in certain cases. When it is necessary to produce the specific action of mercury as quickly as possible, I have found the mouth become sore much more rapidly under the simultaneous exhibition of quinine. In asthenic ulcerations of the cornea hot fomentations and complete closure of the lids until sufficient reaction is established are most important. In traumatic keratitis, paracentesis of the cornea, after the manner of Sperino, of Turin, is often necessary. I have performed this little operation forty times in one case, thirty in another, and twenty-eight in another. In one only was sufficient irritation induced to necessitate leeches and repose. Should sloughing threaten, iridectomy is the only remedy, and the choice is between this operation and loss of the eye. In cases of interstitial keratitis, where cloudy cornea is associated with the peculiar facial conformation, scarred angles of the mouth, and notched teeth, described by Mr. Hutchinson indicative of the inherited syphilitic constitution, bichloride of mercury and iodide of potassium are often of singular efficacy. Indeed, I have known the same remedies perseveringly continued restore sight in a patient aged 45, who had been six years completely blind from opaque cornea. When I first saw him not a trace of iris could be seen, and an attempt had been made during a three months' residence in the ophthalmic wards of a general Hospital to diminish the opacities by shaving off slices of the cornea. A similar case of opaque cornea, occurring in a blind beggar, and complicated with adhesions and closed pupil, has recently been under my care. The man, who had been blind and begging his living for nine years, was able four days after the formation of an artificial pupil to read No. 16 Jager, and recognise persons at ten yards' distance. Opacities are sometimes occasioned by granular lids; scarification and various caustics are then indicated. When complicated with aggravated pannus, the remedy is inoculation. In one remarkable case which has recently been under my care both orbits were occupied by a mass of fleshy looking substance, and the patient had been frequently assured that the eyes had burst and shrunk, their places being occupied by fleshy granulating stumps. Here direct inoculation of gonorrhœal matter in both eyes was twice repeated. Violent inflammation was on each occasion induced, and the result was that both eyes became quite clear. The cornea had, however, evidently been long opaque, and the lids were in great part adherent to the globe. In one eye only could a bit of brown adherent iris be observed through a minute slit of clear cornea. Here I practised an artificial pupil, the result being still *sub judice*. Opacities of the vitreous body are sometimes the cause of loss of sight. One patient, syphilitic, who was blind from this cause, and had to be led to the Dispensary, recovered perfectly, resuming her occupation as mender of lace after nine months' treatment. In cases of squint, I have found a useful modification of the ordinary subconjunctival method is to divide the rectus on a grooved hook, passing a sharp bistoury under the tendon and out of the conjunctiva above it. The tendon is now readily divided by a gentle sawing motion; and a band of conjunctiva and subconjunctival tissue being left, there is little danger of the eye diverging, while the two incisions permit free exit of the blood. In a large number of cases in my practice, division of the internal rectus has been followed by divergent squint in three cases. These I have remedied by dissecting down to the divided tendon, and then stitching it to the edge of the cornea, at the same time practising free division of the external rectus, and securing inward approximation of the eye by stitching its tendon to the tarsus. In acute glaucoma, iridectomy is the only remedy on which we can depend. The morbid processes are arrested from the hour of its performance; and the same may be said of cases of chronic glaucoma, although in these latter little or no benefit to sight can be expected. All pain and irritation vanish so soon as the patient has recovered from the effects of the wound.(a) In performing this operation, I much prefer to use a small ground-down cataract knife, making puncture and counter-puncture as in extraction, to the ordinary Jager, which is very apt in the hands of the best operators to wound the lens.

As an adjunct to extraction in some cases of cataract, removal of a small portion of iris is a most important preliminary measure. Von Graefe first directed attention to this subject in his classic memoir on iridectomy, and Mooren has for some years past systematically adopted it. In a paper on improved methods of extracting, published in the second volume of *British Medical Journal*, 1864, I have entered fully into this subject, and quoted some of his most interesting cases. Morren operated in 62 cases condemned as unfit for ordinary extraction, with the loss of only two eyes. The iridectomy and extraction were performed at twice with an interval of five or six weeks. This, however, was in many cases so palpably inconvenient, that Jacobson modified it by an operation of his own, performing the iridectomy and extraction at the same time, cutting off a piece of iris after removal of the lens. It is necessary in this operation to remove a large piece of iris, and always use the inferior section, while the patient is deeply anæsthetised. The operation is followed by great deformity, excessive dazzling, and interference with sight, so that, although very successful, so far as saving the eye is concerned, I am not aware that it has ever been adopted in this country. After some experience of the different methods of operating for cataract, it became evident to me that another operation was required, and this want I have endeavoured to supply by two methods of my own. Before describing these, however, I will just allude to the class of cases in which ordinary flap extraction is inadmissible, merely premising that I have found the ordinary operation much facilitated by leaving a small bridge of cornea before completing the section, so that the capsule may be freely lacerated through the previously dilated pupil, while there is a possibility of fixing the globe. The class of cases where flap extraction is almost certain to fail, and where we must, to have any chance of success, avail ourselves of the preservative influence of an associated iridectomy, are those where there is excessive senile marasmus, general constitutional cachexy, asthma and persistent cough, or where, from any cause, the patient is unable to maintain the recumbent posture. In the various diseases of the eyeball itself the same holds good, and notably where the cornea is extremely thin—a condition we may always suspect when the skin is fine, silky, and may be readily pinched into numerous folds. There are three degrees of this condition which cannot be diagnosed with certainty until the cornea is incised. The first is marked by a central depression, often with transverse wrinkling; a second, where the shrinking is such as to cause withdrawal of the flap; and a third, where there is positive retraction. This last implies absolute loss of the elastic properties of the cornea, and, whenever it exists, leads to total destruction so soon as the ordinary reaction attains the height of an inflammatory process. The following brief notes of two cases of double extraction, selected from several in which I have operated by Mooren's method, illustrate forcibly the preceding remarks:—

Julia G., aged 65, was led to the Eye Dispensary in October, 1864; completely blind on the right eye for seven years; left, two years. Blindness and poverty had entailed the usual results, and she was emaciated and feeble, so as to require the support of a stick. The skin was thin and flabby; she was suffering from a chronic discharge, probably connected with diseased bone, of the lower jaw, and had chronic abscess of the breast; she was also troubled with frequent cough, and the legs were œdematous and ulcerated. On examining the eyes I found a portion of the lid of the left eye was deficient; that the conjunctivæ of both were suffused from the long-continued irritation of ingrowing lashes, and that both corneæ were surrounded by a ring of fully formed arcus senilis; the lens in each eye was opaque, with a hard amber-coloured nucleus; altogether, one of the most unfavourable cases for operation that could well be conceived. Iridectomy (superior), right eye, October 27, 1864; extraction, November 7; the operation by upper section was completed without misadventure. Two days after the operation she became delirious, and manifested various delusions. Eye opened on the fifth day; wound completely healed; only slight injection of conjunctiva; with 2½ biconvex read brilliant type; and had such excellent distant vision that she did not require spectacles. Left eye, iridectomy (superior), December 26. Six weeks later, extraction; upper section (weather bitterly cold); eye opened on the seventh day; wound healed; excellent vision; discharged. Two days after her return home I received a message to say that she had burst her eye. In fact, on calling upon her I found that, in stooping over the hob, she had thrust the spout of a kettle into the eye just recovered from operation. The aqueous and some portion of the vitreous humour were evacuated; the iris was in contact with the cornea, and she was suffering acute pain. With a little careful management, she recovered completely, and has now excellent sight with this eye, although the pupil is much drawn up and distorted from the effects of the blow. About eight months later this patient called upon me, stating that her friends told her the cataract had returned in the right eye. In fact, I found on examination the anterior chamber nearly filled with pus, the result of acute inflammation of the eyeball, which was apparently initiated by a remarkably stiff eyelash, which I found impinging upon the globe; this I removed, and on three occasions laid open the cornea to let out the matter. The eye is now perfectly clear; iris natural, and she has good vision, though she cannot now read with it, owing to a shred of lymph stretched across the pupil, the remains of aplastic matter formerly occuping the chamber.

(a) See paper by the author on Iridectomy in Glaucoma, *Brit. Med. Journal*, vol. ii., p. 63.

Hannah M., aged 67, was led to the Eye Dispensary on June 19, 1865, completely blind from fully formed cataracts in both eyes; pallid, flabby, cachectic, having long suffered from extreme poverty. The principal feature in this case, however, was the existence of asthma and cough, accompanied with paroxysms of dyspnœa during which the patient would become blue in the face, and appear on the verge of suffocation. As this condition constituted a serious contraindication to the ordinary operation, I performed iridectomy on both eyes at once. The cornea proved to be extremely thin and wrinkled in the centre. July 31.—Extraction right eye, no misadventure; discharged on the seventh day; excellent vision; never learned to read, but can sew and thread a needle. October 7.—Extraction left eye; cough worse, owing to increased coldness of weather; a little cortical matter broke off the lens and floated into the anterior chamber; this I removed with the scoop; while doing so the patient suddenly closed the eye. I turned the attenuated flap down; I seized the lashes, however, and replaced it, waited until the aqueous resecreted, ascertained that it was *in situ*, and closed the eye. No pain; no bad symptom whatever. Owing to my temporary absence, the eye was not opened until the seventh day, when I found the flap was completely turned down and as effectually creased in that position as if it had been a piece of thin paper. The vitreous covered by hyaloid membrane protruded, and through this clear structure she could see the tiles of the house opposite, people passing, and in an uncertain sort of way did some coarse sewing with the aid of 2½ biconvex; the lower segment of the cornea was quite clear, and the iris perfectly natural in appearance. The patient could only account for the accident by a paroxysm of cough, which came on shortly after the operation; she felt a gush at the time, and afterwards a feeling as though a foreign body were in the eye; this sensation subsequently so completely passed off that she did not mention it next day. I was puzzled whether to stitch up the flap or transplant a piece of conjunctiva, but as neither appeared practicable, I determined to do nothing. The flap projected from the globe, and created considerable irritation by friction with the upper lid, so that I should have cut it off but for the difficulty of fixing the eye. In a fortnight's time the projecting hyaloid became coated with plastic lymph, which adhered to the sclerotic and edge of the flap, so that the patient could no longer see. This subsequently contracted and pulled up the flap, so that now they are nearly in apposition and in the natural position of the upper lid. The contour of the eye is quite normal—in fact, but for the slight opacity of the recently reflected flap, the result of the operation would be excellent; as it is, I hope shortly to be able to form an artificial pupil opposite the clear lower segment of cornea, when I do not doubt the patient will have excellent sight with it. This case I consider unique, and one that could not possibly have occurred but for the preservative influence of a preliminary iridectomy.

Mooren's operation clearly renders extraction as safe as may be. The iridectomy promotes the healing process, removes the special danger of iritis from compression of the iris during the exit of the lens, and in almost all cases a favourable result may be anticipated. The serious objection to the operation, and one that has in great measure prevented its adoption in this country, is the inconvenience of its division into two parts with a prolonged interval. This I have endeavoured to obviate by the following operation, which is a modification of my own, and by the adoption of which all inconvenience to both patient and Surgeon may be spared:—Having decided to associate iridectomy with extraction, I make a very small incision in the cornea just large enough to admit a fine blunt hook. I then insert the hook, pull out a piece of iris, and cut it off. There is scarcely ever any bleeding, for the iris is compressed in the narrow aperture. I dilate the pupil the day before operation, when practicable, and apply atropine immediately after the iridectomy. In half an hour or an hour the chamber is filled, and the extraction may be proceeded with in the ordinary way. In an extremely bad case I should prefer to do an inferior iridectomy, and extract by the lower section, because any portions of cortical matter that may be left pass harmlessly through the coloboma, and are extruded in the frequent gushes of aqueous, while there is no danger of the flap turning down. In all others the superior section is the best, because the coloboma is completely concealed by the upper lid, and the results are quite equal, both as to vision and appearance, to the best flap extractions. In some peculiar cases where the results of sclerotico-choroiditis posterior, extensive atheroma of vessels, staphyloma, fluidity of vitreous, or disease of the chorid would render the large incision required for flap extraction dangerous from too sudden reduction of tension under any circumstances, and likely to be followed immediately by escape of the vitreous and intra-ocular hæmorrhage, I would suggest the following modification of Schuft's operation, either with or without premising an iridectomy as above. I make the incision with a small knife, similar to the one termed secondary cataract knife sold in most cases of eye instruments, or the ground-down cataract knife, which I use for iridectomy; entered in the corneo-sclerotic junction; passed across the upper portion of the anterior chamber, emerging at a counter-puncture similarly placed, so that the incision shall be linear, well back, and rather larger than the large one sometimes practised for Schuft's extraction. The lips of the wound are the more readily retained in apposition the further they are removed from the central curve of the cornea, and the incision, being in the dense tissue of the sclerotic or the corneo-sclerotic junction, is not nearly so likely to gape or be pushed open by protruding vitreous as if made in attenuated cornea; while it is nearer than usual to the materials for repair, and would consequently heal in a few hours. The eye may be safely held while the capsule is incised or a portion of iris removed, if iridectomy be deferred to this stage; while there is no danger of the lip turning down, or any of the accidents we usually have to fear when one half of the cornea is converted into a flap. The position of the wound being close to the edge of, and almost in a line with, the vertical axis of the lens, it is more readily extracted than when a movement of rotation is necessary to bring it in a line with the wound—to say nothing of the danger of rupturing the zonule of Zinn during such movement. If the posterior lip of the wound is now gently pressed back while the forceps or scoop is applied to the lower border of the cornea, any lens not particularly large and hard may be extruded without passing an instrument into the eye. I prefer the above knife in the ordinary traction operations to Jäger's bent iridectomy knife, which is apt to wound the lower segment of the iris, and during the collapse of the eye following the discharge of the aqueous to cut into the cornea, forming arcs of smaller circles, and so making wounds to no purpose.

I am in hopes that the above operation will in many cases supersede those methods of extraction where it has been necessary to introduce various instruments into the eye, and which have been followed by secondary cataracts, prolonged attacks of iritis, and occasionally suppuration of the globe, so generally as to preclude their adoption by many Ophthalmic Surgeons.

Note.—The preceding observations were written in December, 1865, and since that period have been in Dr. Richardson's possession. I had adopted the above-mentioned method of extracting some months previously, and pointed out its advantages to my Medical friends. It is almost identical with Von Graefe's present method of extracting, which has proved very successful, and is, I believe, destined in most cases to supersede all former methods. Von Graefe's first case occurred in May, 1865; up to August in the same year he had 69 operations, without a single complete failure. The above description was written, and I had used this method, long before I was aware that Von Graefe had adopted a similar operation. Indeed, it is probable that our first cases occurred about the same time. —C. T.

UNITED LUNATIC ASYLUM FOR THE COUNTY AND BOROUGH OF NOTTINGHAM.

The County and Borough Lunatic Asylum is situated in the suburb of Sneinton. By some of the Nottingham historians this suburb is considered to have been the site of the original town, and the origin of the name has been traced again as a contraction or modification of the Saxon word Snottinga, a cave, to which Nottingham in its first days was the hamlet. However this may be, it is certain that in no recorded time was Sneinton more than a suburban parish of Nottingham, while at this time it is best known by the Asylum, which is situated in its boundaries.

The County and Borough Asylum was founded in the year 1810, according to the provisions of the Act of Parliament (48 George III.) of that year. It was first called the General Lunatic Asylum, and it was opened in 1812 for thirty-five patients. The prime cost of the building was £20,984, which sum was raised in great part by voluntary effort; the remainder was obtained by a town and county rate. In order fairly to equalise the benefits conferred, it was agreed that the borough should supply a fund for the patients who came from it, that the county should in like manner provide for its patients, and that the voluntary subscribers should produce a special fund on which middle-class patients should receive a basis of support. This arrangement, as we learn by an account of the Asylum kindly placed in our hands by Dr. Stiff, the Medical Superintendent, remained in force until the year 1855, when the institution was purchased by the county and borough authorities, the county becoming possessed of two-thirds of the property and tne borough of the remainder.

In the year 1865 the Asylum had accommodation for 379 patients—viz., 207 males and 172 females—but during the year it had not been filled by the number of sixty-two. The average weekly cost of maintenance, medicine, clothing, and care of patients during the year 1865 stood as follows:—

	s.	d.
Provisions	4	5½
Clothing	0	9
Salaries and wages	1	9
Necessaries—*e.g.*, fuel, light, washing, etc.	0	8½
Surgery and Dispensary	0	0¾
Wine, spirits, and porter	0	0½
Furniture and bedding	0	4¾
Garden and farm	0	4
Miscellaneous	0	0⅞
Fractions	0	0¼
	8	7⅛
Less moneys received for articles, goods, and produce sold (exclusive of those consumed in the Asylum)	0	1⅝
	8	5½

Weekly charge for paupers from counties and boroughs to which Asylum belongs—for 1865, 8s.; for 1866, 8s. 6d.; do. from other counties and boroughs, 12s and 14s.

Daily average number of patients resident, 335·48.

RESULTS OF TREATMENT.

The recoveries in the year 1865 amounted to 42, or 38·5 per cent on the admissions. This exceeds the rate of 1 in 3 compiled from various sources by Esquirol. The deaths were 41, or 9·55 on the total number under treatment, and 12·22 on the daily average.

Historical Notes.

It is claimed for this Asylum that in it padded rooms were first brought into use to prevent lunatics from injuring themselves during stages of great maniacal excitement. There is also in connexion with the institution, as a novelty in asylums, a fund or charity founded under the name of the Middleton Fund, and well supported. From this fund sums of money are drawn by the Committee of Visitors, on the recommendation of the Medical Superintendent, for the assistance, in cash and clothing, of patients who are about to be discharged, and who would otherwise be sent adrift without means.

The Asylum is under the superintendence of Dr. Stiff, and the management in every particular is admirable. Wanting externally in those architectural advantages which are claimed by the newer county asylums, its internal arrangements are, nevertheless, extremely perfect, and, indeed, leave nothing to be desired.

THE LUNATIC HOSPITAL FOR THE COUNTY AND TOWN OF NOTTINGHAM.

The Lunatic Hospital is a magnificent building situated at the Coppice, near Nottingham; it is intended for patients who, not being paupers, are unable to pay the whole expenses of their care and maintenance. The Asylum was founded in 1853. By the last report it appears that the number of patients resident in the Asylum was 52, 29 being males and 23 females. The estimated cost of each patient is 25s. per week. In the same year the annual subscriptions amounted to £306 19s.

I have already in these histories supplied very full descriptions of the great county asylums of this kingdom, and in regard to the Asylum now under notice I need scarcely say more than that it is inferior to none. By its position it commands one of the most extensive and loveliest of landscapes, and the peace and order that reign within strike one as wonderful. The patients are treated to amusements of every possible kind. Gardening, archery, bowls, quoits, and croquêt for the grounds, and bagatelle, chess, draughts, needlework, reading, music, and drawing within doors. In the summer, also, a certain number of patients are sent to the seaside for change of air and scene.

Of the 71 patients treated in 1864, 11 were discharged recovered, 2 were relieved, and 6 died.

The Asylum is under the very able management of Dr. W. B. Tate.

THE WORKHOUSE HOSPITAL.

The Workhouse Hospitals would admit of improvement. The wards are indifferently ventilated, notwithstanding attempts that have been made to remedy the defect, and the allowance of cubic feet per patient is almost everywhere below the standard. In the winter of 1865 some enlargements of the wards in the lower floor were made, and this year the Sanitary Inspector did good service in the house by trapping all the drains, and removing two privies from the vagrant ward, but much remains to be done.

The means for separating cases of infectious disease are most imperfect, and the size, situation, and accommodation of the so-called "fever wards" are such that these wards cannot be safely used at all. Both the men's and the women's wards open upon the boys' playground; the Medical officer has consequently been obliged to place cases of fever occurring amongst males in a room adjoining the lock ward in a lower yard—a room which is very unfit for the purpose. Fortunately, cases of fever are not admitted in large numbers; were such cases numerous they could not be disposed of in the building without serious difficulty and danger; indeed cases of scarlet fever can now often not be separated at all.

Typhoid fever does not break out, nor show any tendency to spread in the house, and the same is true of puerperal fever in the lying-in ward.

The number of deaths in the Hospital from July 1864 to July 1835 was 135, and from July 1865 to July 1866 they were 151.

Altogether, I must say of this Workhouse Hospital that it does not do credit to the advancing town of Nottingham. It is true I have seen worse accommodation for the sick poor in other parts of the kingdom, but this only suggests the thought that Nottingham should take the lead in showing what can be done in the way of improvement, and in proving that humanity to the poor is the soundest economy for the rich.

Forbes Watson, Esq., is the very efficient Medical officer of the Workhouse Hospital.

SANITARY AND SOCIAL FACTS RESPECTING NOTTINGHAM.

The sanitary state of the town of Nottingham improves, but the work is slow. Nineteen years ago the Town Council appointed a sanitary committee, which has been continued ever since. Of the labours of the committee I have heard many opinions, *pro* and *con*, from the whole of which I gather that the committee here, as elsewhere, has been most anxious to move, but has been met by local oppositions and local prejudices, which for a time are as hard to meet as the clamours of those who are outside and are bent on rapid progress are hard to bear.

As Mr. White in his "Topography of Nottingham" (an essay published in 1852, and a model of classical scientific composition) points out, the town is admirably situated for health. It is in fine open country; it rests mainly on red sandstone rock, and on an inclined plane which rises nearly 200 feet in little more than a mile. The mean temperature of the air is 49·73°, and the range is so moderate that the climate approaches the climate of the southern coast. "The same causes," says Mr. White, "which produce so mild a temperature evidently tend to deprive the atmosphere of an undue amount of moisture, and, as might be anticipated, the amount of rain which falls is considerably below the average—viz., 23—whilst the average height of the barometer is high, and the difference between the temperature of the air and that of the dew point is considerably above the ordinary average."

The water supply of the town is good, and is obtained from three sources—from a reservoir on the Trent, three-quarters of a mile from the town; from springs near the banks of the Leen, a mile and a half from the town; and from works in the Park, by which water is obtained from the wells sunk in the new sandstone rock. The quality of the water is pure, and the supply sufficient.

The disposal of sewage has been for some time past a vexed question. The present position is most ably summed up by G. Tarbotton, Esq., C.E., in his late report on the sanitary operations and improvements of Nottingham, in Allen's Illustrated Handbook.

"The sewage of the borough," says Mr. Tarbotton, "is collected in the several road and street culverts, and conducted, along with the sewage of the adjoining districts of Sneinton, Radford, Lenton, &c., into two large outfall sewers, which convey all liquid refuse across the Eastcroft meadows into the river Trent. The borough contains three watersheds; the central one discharges into the river Leen, which is now the middle main outfall sewer; the northern and eastern shed discharges into the Beck sewer, which is built on the course of the old natural stream. Thus two small rivers, one of which supplied the town with water thirty years ago, have been extemporised into sewers, and, like similar outfalls of large towns, disembogue themselves into the nearest river.

The third watershed consists of the Meadows, and discharges into a large artificial sewer, which passes under a wide part of the Nottingham canal in order to conjoin the Leen outfall The crossing of the canal is effected by two iron tubes, each 3′ 6″ diameter, forming an inverted siphon 200 feet in length, with a dip of about 5 feet.

The size of the Leen outfall is 9′ 0″ by 7′ 6″, the Beck is 7′ 0″ diameter, and the Meadows outfall 6′ 0″ by 4′ 0″. These have been made at considerable cost, and since their completion the internal sewerage of the borough has rapidly proceeded. The main sewers are all of brick, of circular and egg-shape form, and vary from 6′ 0″ by 4′ 0″ to 1′ 8″ by 1′ 4″ in size. They are constructed of the best materials in blue lias mortar, are laid at depths from 6′ 0″ to 15′ 0″, according to circumstances, on gradients from 1 in 10 to 1 in 1000, and means of access and flushing are provided.

The smaller sewers and tributaries are of glazed earthenware pipes, none being less than 9 in. or more than 18 in. diameter.

A total length of permanent sewerage has been made of about 20 miles, and a length probably double the foregoing requires yet making in the streets of the old town and the later-made streets of the new part.

Means of ventilating the sewers are now in progress. These consist of shafts erected upon the several lines of sewer, at the top of which are placed iron ventilating boxes, in which open cages filled with vegetable charcoal are fixed; through these sulphuretted hydrogen and ammonia, generated below, are passed, and therein absorbed and deodorised.

This plan has been adopted extensively in the sewers of the city of London and other places, on the recommendation of that high chemical authority, Dr. Letheby.

Plans are now under consideration for extending the Leen outfall beyond the borough in a northerly direction, so as to subserve the requirements of Old and New Lenton and Basford; the sewage from the former place, in the absence of a proper outfall, being now emitted into the dykes and ditches of the fields, and ultimately flowing into the Trent a very short distance above the Trent Waterworks.

In connexion with the above work it is intended to form a low-level road over the said Leen, when culverted and covered, to connect Old Lenton with Nottingham in a more direct and easy manner; this road would be planted and made a sort of southern boulevard, adding to the attractions of the Park scenery, and being of great local advantage to the district generally.

The total daily quantity of the Nottingham and district sewage is about 4,0 0,000 gallons, and plans are in course of preparation for distributing this over a sufficiently large area of land, whereby the pollution of the river Trent may be abated, and the full agricultural value of the sewage may be secured.

As to the courts and alleys of the poor.—These are required to be drained and paved, and supplied with water, at the cost of the owners thereof. Much work of this nature has been carried out; the drains are made of glazed piping, the surfaces are paved with an impervious material such as Yorkshire flags, or more commonly Ilkeston bricks, which are extremely durable and present a clean and cheerful appearance. On the completion of such arrangements the drains are regularly flushed, the surfaces of the courts cleansed with water, and the gully-pits emptied by the sanitary staff, at a cost of about £100 per annum. Some of the yards and courts are remarkably neat and clean.

As to the removal of excretal and other refuse.—This is a laborious duty, and a work of some magnitude in many places. In Manchester the midden system is so universal, that emptying and cleansing the pits cost about £10,000 a year. In Birmingham, also, the cost is enormous. The process is conducted here by means of contractors, who nightly convey all soil and refuse from the several districts into which the town is apportioned. About 20,000 cubic yards are annually removed at present, but this is increasing yearly.

All the large establishments and most of the superior houses are supplied with water-closets; otherwise the cost of this department would be greatly enhanced. Deodorisation is effected by chloride of lime or carbolic acid.

Disinfection of dwellings.—The houses of the poor are required to be regularly cleansed and lime-washed, and for the purpose lime is freely and gratuitously supplied. After fever or infectious disease chloride of lime is also given, and the construction of public disinfectories for desiccating and purifying bedding and clothes, after contagious illness, is in contemplation.

The common lodging houses are all registered under the provisions of an Act for their "well ordering." Each house has a regulated complement, and is under the direct control of the Local Board. Notice of fever or infectious disorder (if existing) is required to be given to the local authority, and also to the Medical officer and relieving officer of the parish, and the keeper of every lodging-house is compelled to thoroughly cleanse and keep cleansed all the rooms, passages, stairs, floors, windows, doors, walls, ceilings, privies, cesspools, and drains, to the satisfaction of the inspector, and to lime-wash the walls and ceilings every April and October. About 1000 people are lodged night by night in these houses, and consist of peripatetic vendors, labourers, showmen, vagrants, and thieves.

Inspection of food.—The laws to prevent adulteration of food and the sale of bad food are very stringent. The sanitary inspector may at all reasonable times inspect and examine any carcase, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, or flour, exposed for sale, or in the course of or on their way to slaughtering, dressing, or preparation for sale or use, or landed from any ship or vessel in any port in England. In case any article appear to him unfit for food, he may thereupon seize it, and a justice may order it to be forthwith destroyed, and the owner or person in whose custody the same is found is liable to a penalty of £10 for each offence.

Proceedings are constantly taken under these powers, and thus every protection is afforded to those, particularly to the poor, who are mostly exposed to imposition.

The potency of the local authority to correct sanitary defection extends also to imperfect house drainage, inefficient supplies of water, absence of or insufficient conveniences in dwellings and factories, offensive ditches, keeping swine in improper situations, accumulations of filth, and the establishment and continuance of offensive trades; and the daily labours of sanitary officers consist *inter alia* of receiving notifications of nuisance and exercising their powers of suppression.

The prevention of smoke, and the supervision of slaughter-houses.—Smoke is a great nuisance and waste of material, but by judicious firing may be avoided. It is extraordinary how much difficulty there is in dealing with this matter. During the last fortnight between 500 and 600 notices to smoke-makers have been issued. Slaughter-houses are intolerable evils in confined situations; they are mostly here kept as clean as possible, but ere long public abattoirs will doubtless be erected. The sale of cattle in streets and market-places, and slaughtering them among the people, should be inflexibly forbidden.

The erection and maintenance of places of public convenience and decency, in suitable situations, have had special attention in this town.

The provisions of the Nottingham Enclosure Act have had beneficial influence on the character of the newly enclosed lands. Prior to this Act of 1845 the town was surrounded by commonable fields, and its development altogether obstructed, but since that period its rapid growth has exceeded the most sanguine anticipations. Miles of streets have been formed and thousands of buildings have been erected, but the requirements of the Act have prevented overcrowding, and compelled an observance of sanitary laws of almost exceptional rigour. Each house must have three distinct bed-rooms, with means of ventilation; back to back houses are not allowed; every dwelling must have an attached yard or garden thirty feet in length; no privy, ash-pit, or offensive building, can be erected or used within fifteen feet from a house or workshop; cellar dwellings are prohibited, water and drainage are compulsory, etc., etc., and all buildings unconformable hereto are declared a nuisance. No doubt the great stringency of this Act is due to the remarkably bad state of things in the old town previous to the enclosure, but much good has been effected, and though there are many anomalies and deficiencies in the Act generally, it is expected they will soon be rectified by amended legislation.

Under this Act the beautiful places of public recreation which adorn the town have been provided; few places possess such charming resorts for health and enjoyment as the arboretum, the forest, and the several avenues or public walks, all which are free and open daily.

Town improvement has not been neglected in Nottingham. It is strictly a sanitary proceeding, and is sequential upon the accession of property and the growth of intelligence. Few can have failed to observe the marked alteration which many towns in the kingdom have undergone, in their principal thoroughfares and public buildings, since the spirit of improvement first began to dawn. London has shaken off its lethargy, and is fast demolishing every remnant of the past (stimulated and encouraged, probably, by the magnificent operations of Paris), to become a city worthy of this great and powerful nation, and many other towns have exhibited equal earnestness in their desire to do honour to themselves and make amends for defaults of bygone times. The necessity for town improvement in Nottingham was twofold; firstly, the increase of the population and traffic was found to gorge the ancient narrow streets, and make them dangerous and unfit for enlarged commerce; and secondly, in the very heart of the town a large mass of property existed, of an inferior and dilapidated character, which could only be thoroughly dealt with by sweeping measures of improvement.

Numerous have been the improvements on a small scale; houses and warehouses, when rebuilt, have been set back to widen streets and straighten their lines, awkward and acute angles have been cut off and easy curves substituted, dwellings have been removed to increase ventilation, and money has been subscribed in aid of local alterations when it was manifest that the public would reap corresponding advantages.

The three great works of town improvement, however, during the last seven years, have been the formation of Victoria-street and Queen-street, the widening and raising of Listergate, and the construction of Market-street, with its approaches from Sherwood-street and Goldsmith street.

All these have been effected under the powers of the Local Government and Lands Clauses Consolidation Acts, and the money required has been borrowed on the security of the general district rates, repayable within a period of thirty years."

(To be continued.)

Pharmaceutical Society of Great Britain. — Names of candidates who passed the Major Examination December 19, 1866, as Pharmaceutical Chemists:— Robert Leman Churchyard, Bungay; Jules Moussempés, Biarritz; Thomas Boulton Allkins, Tamworth; Richard Bayly Cornelius, Clapham; Edward Beeks Ford, Hereford; Edwin Eli Johnson, Nottingham.

REVIEWS.

Traité de la Dyspepsie. Par le Dr. Beau, Ancien Médecin de l'Hôpital de la Charité, Professeur Agrégé de la Faculté de Médecine de Paris, etc. Paris: P Asselin. 1866. Pp. 268.

The publication of this book is well-timed. Those amongst ourselves who regard inflammatory diseases as the result of exuberant power, as entities to be ruthlessly bled to death, are very few and very far between. The teachings of the school of Physicians who recognised in the flushed cheek and full bounding pulse the evidence of exalted vital energy are of the past. A few well-directed experiments by Brown-Séquard sufficed to show their utter falsity; and now we all—with but few exceptions, it is to be hoped—are satisfied that disease generally represents to us the signs of a condition the reverse of excessive force—the symptoms of asthenia. A marvellous revolution of Medical opinion has thus taken place. In itself this is nothing new. The history of Medicine affords abundant instances of a similar thing having happened before. We are constantly exposed to the taunts of the public press on this very ground. We know, too, how unjustly we are thus assailed. They are the penalty we must pay for the faults of our forefathers who elevated their speculations into dogmata in place of following in that narrow path of close induction which, however lamely, we all now profess and strive to follow. Guesses as to what may be, and as to what nature ought to do, and therefore must be doing, under certain circumstances, no longer gain a moment's tolerance at the hand of Medical philosophers, and opinion is led, as it should be, by observation and well-devised experiment. Falter, however, as we may, and as we erring mortals needs must, still we know ourselves to be in the right road, and can afford to bear the sneers of those whose ignorance of the methods of modern science should only stimulate our pity.

The lamented and talented author of this posthumous work, which was found nearly completed amongst his papers, speaks of it modestly as an essay; his editors, appreciating it more highly, dignify it with a more appropriate title. Although we think that here and there M. Beau allows his views to carry him too far, we cannot overlook the extreme importance of the truths which he enunciates, and would gladly see the book extensively read. That it will be so amongst those who have leisure for the purpose, we have no doubt; but as there are many who will probably have no opportunity of perusing it, we propose according it a full review.

M. Beau's definition of dyspepsia is a very broad one. It is so necessarily, inasmuch as he holds that it forms the commencement of that long chain of events which terminates in such diseases as tubercle, cancer, and a whole host of nervous and inflammatory disorders. Truly, in the adoption of this view, he is strongly supported by the older classical Medical writers, to whose opinions he continually reverts. He would have us, and with propriety, look back to those acute observers whose opportunities of investigation were only inferior to our own because they did not possess the appliances of modern inquiry. For him, dyspepsia exists "where there are disturbance, weakness, or absence of the digestive process, whatever may be the symptoms exhibited, and whatever may be the causes in operation." He includes within his idea of dyspepsia "the absence or alteration of the absorbable alimentary products, whether resulting from such weakness, absence, or disturbance of the digestive process." The symptoms of dyspepsia thus defined he divides into primary, secondary, and tertiary symptoms. The primary symptoms we may pass over; they are such as every one knows, and are distinctly referable to the digestive canal itself. M. Beau divides the secondary symptoms into two series, a neuropathic series and a hæmopathic series, the former being such as we should designate "reflex," and the latter consisting of those alterations in the constitution of the blood which a defective or altered supply of pabulum necessarily occasions. The author dwells emphatically upon the importance of not overlooking the latter of these results in our estimate of the phenomena of dyspepsia. Quoting Van Helmont, who, under the term *Archæus*, placed the seat of the nervous centre in the region of the stomach, he urges his reader to accustom himself to regard the epigastric region as the nervous centre of organic life. The neuropathic symptoms which he enumerates as of the greatest importance are *dyspnœa*, referred first to the epigastrium, then to the sternum, and ultimately to the larynx. In the last situation it is not distinguishable from the hysteric globus. He regards this symptom of gastric dyspnœa as "an ascending neuralgia of the pneumogastric nerve." *Cough*, when gastric, he regards in a similar light, as produced by an *aura* which takes its departure from the stomach and due to a sensation of pricking or tickling in the extreme branches of the recurrent nerve in the larynx. Into the same category he brings aphonia, hoarseness, yawning, hiccup, nightmare, and intercostal neuralgia. Upon the last of these he has a good deal to say. Allowing that the uterus is often the organ from which the nervous radiation first takes place, M. Beau holds that the irritation in the uterus first of all provokes a gastric disturbance, and that it is this which is the immediate cause of the intercostal neuralgia. He quotes in illustration the severe cutting pain under the left mamma to which the first Napoleon was a martyr while suffering from cancer of the stomach. He says:—"From the disordered stomach there proceeds an *aura* which traverses the filaments of the solar plexus, reaches the semilunar ganglia, mounts by the splanchnic nerves to the thoracic ganglia, and from there is reflected upon the spinal nerves, among which are the intercostals. Imperceptible until it reaches the thoracic ganglia, it becomes sensible or neuralgic from the moment it reaches the spinal nerve." Into the same category of neuropathic symptoms he also brings palpitations, syncope, cardiac neuralgia (angina pectoris), headache, vertigo, somnolence, sleeplessness, mental alterations and changes of personal character (temper), disturbances of ordinary and special sensation, and of motility, febrile disturbance, such as sometimes accompanies a difficult digestion, local congestions, and, following the teaching of Claude Bernard, such modifications of the process of secretion as ptyalism, sudoresis, hydruria, etc. The hæmopathic series consists necessarily of the several impoverishments of the blood as dependent upon the diminution of its globular, albuminous, and fibrinous elements, globular anæmia, albuminous anæmia, and fibrinous anæmia. He appears to have no great faith in such a thing as spontaneous globular anæmia, to which many writers attribute dyspepsia as an effect. Where there has been no absolute loss of blood, and no great drain upon the secretions, such as happens in over-lactation, he regards anæmia as the result of dyspepsia, and not as its cause. But, then, it is to be recollected that a mere insufficiency of food is a cause of dyspepsia such as it is constituted by his definition. He looks upon globular anæmia as a condition mostly intermediate between the gastric disorder and the neuropathic series of secondary symptoms. Thus, after describing the phenomena of globular anæmia, he says:—"We must be struck by observing that most of the nervous symptoms due to globular anæmia have been already presented as phenomena due to radiation from the suffering stomach. This double origin of the nervous symptoms in dyspepsia is undeniable. It is put beyond doubt by the fact that on the one hand such symptoms are observed when the stomach is suffering whether from fulness or from emptiness, and, on the other hand, the same symptoms show themselves in anæmia of hæmorrhagic origin, and therefore where all gastric disturbance is out of the question. Still, there is always this difference between the nervous symptoms of anæmia and those of gastric origin—that the former may exist under the single influence of the anæmia, while the latter are not dependent upon the gastric disorder solely. Another condition is necessary for their production, and that condition again is anæmia, the influence of which is conjoined with that of the gastric disorder." Thus he draws attention to the fact that the neuropathic symptoms are not observable at the outset of dyspepsia, even where the pain and gastric uneasiness are most intense—a certain time must elapse during which the blood loses more or less of its globular element. Hence the importance of paying proper attention to this link in the chain of morbid conditions which commence with the dyspeptic affection.

Resting now for a while in his argument, M. Beau passes under review those varieties of dyspepsia which arise out of a predominance of one or the other of these primary or secondary phenomena. First, he discusses those cases where the primary symptoms predominate, and then passes on to those in which the neuropathic secondary symptoms predominate. Here he dwells upon the symptom of gastric dyspnœa as producing a condition that simulates asthma, but is distinguishable from it by auscultation, and then discusses the diseases which pass under the designation of hypochondriasis and hysteria. The former term he uses in its classical sense, and expresses his concurrence with those of our older writers who regarded these terms as almost convertible. His chapter on Hysteria deserves close study. Gastric dyspnœa, as undistinguishable from the hysteric globus, affords the starting-point in his argument. In his mind the uterine disturbance, which is often present, does but excite a "gastropathy," of which the neuropathic disturbance and precedent anæmia are the direct results. "Thus all hysteric people are necessarily dyspeptic, but let us hasten to add that all dyspeptics are not hysterical. Why? . . . For the development of hysteria there must be not only a dyspepsia, but also a nervous aptitude which disposes the dyspeptic to neuropathic manifestations. And more than this, for there must further be an idiosyncrasy which disposes the pneumogastric nerve to be specially affected, in order for it to become the seat of that ascending dyspnœa which excites the spasm of the glottis and the great convulsions of the animal life." Insanity M. Beau also refers to a dyspeptic origin, regarding it as an exaggerated form of those minor cerebral disturbances which he had before mentioned in the neuropathic series of dyspeptic symptoms. We believe thoroughly that, regarding dyspepsia as he does, he is right here, and we think that his opinion of the common origin of insanity in defective alimentation, either absolute from want, or relative from the disturbance of the digestion, arising out of moral causes, will be indorsed by our own psychological Physicians. Certainly, modern practice, as carried out in our asylums, would appear to be based upon some such assumption.

But in respect of our modern views of pathogenesis, the section in which M. Beau treats of the ternary symptoms of dyspepsia is the most interesting, and we only regret that our space will not permit us to give a full abstract of his ideas upon this subject. Various abnormal modes of nutrition are attributed in part by our author to the influence of a precedent dyspepsia. In part, we say, because they require for their occurrence other conditions, either diathetic or occasional, such as some exterior or atmospheric influence. Thus, among the ternary symptoms of dyspepsia he enumerates tubercle, cancer, scrofulous affections, and tertiary syphilis. Here "we see the diathesis constituting the predisposition to one lesion or the other, according to the nature of the diathesis, which affects the individual, and that the diathetic lesion declares itself on the occurrence of the disturbance or debility brought about in the organism by the dyspepsia. Consequently the predisposing cause varies according to the diathetic nature of the individual, but the occasional cause is always the same, whatever may be the varied circumstances which produce it." Among the ternary symptoms dependent upon an external cause, M. Beau enumerates the various phlegmasiæ and epidemic and endemic maladies, together with such special maladies as skin diseases, angina pectoris, carbuncle, diseases of the eye, and a variety of Surgical diseases. For the production of no one of these will dyspepsia alone suffice, but for all it is one of the necessary factors, inasmuch as it tends to impoverish the blood and to lower the resistant forces of life.

We are sorry to be compelled to hasten over the remainder of the volume, every word of which we have read with deep interest. Among the causes of dyspepsia he includes the abuse of liquids, and especially the habitual drinking of tea and coffee, which, he says, have the unhappy property of lowering the appetite and weakening the digestive powers. Speaking of the dietetic treatment of ulcer of the stomach, he condemns the prescription of a very low diet under the false idea that food hinders the process of cicatrisation, and recommends the use of such food as the appetite of the patient indicates and his digestive powers can manage. We should have preferred that M. Beau had been more explicit upon this head, as it is possible that he might be misunderstood. While giving such food in such quantities as the diseased stomach can digest, we yet hold that the matters brought in contact with the ulcerated spot should be such as are unlikely to give rise to mechanical irritation. In the treatment of dyspeptic disorders, M. Beau objects strongly to the use of narcotic drugs and antispasmodics, except for the purpose of obtaining some temporary advantage. To rely upon them is doubtless bad practice, and especially it is bad practice to continue their use as habitual remedies. He estimates fully the use of mineral waters drunk at their spring, and remarks upon the fact that waters of very different composition are beneficial to different individuals. Indeed, like most previous authors, he tells us that individual idiosyncrasy has very much to do with a Practitioner's success in the treatment of any individual case. The treatment of dyspepsia depends very much upon ascertaining and removing its cause; beyond this it is a series of tentative proceedings. He speaks highly of the intelligent use of hydrotherapeia, calling it "a grand conquest of modern therapeutics." And here, we regret, we must close our review, recommending all who read French—and there are few now-a-days who do not—to procure the book and study it for themselves. They will rise from its perusal, if not better fitted for the practice of their art, yet confirmed in those great doctrines on which modern therapeutics take their stand.

FOREIGN CORRESPONDENCE.

GERMANY.

Munich, December 6.

Professor Pettenkofer, ably assisted by Professor Voit, still continues his important researches on respiration and waste of animal matter with the aid of his large respiration-apparatus, which was described in the *Medical Times and Gazette* a few years ago. The last communication made by the learned Professor to the Academy concerning the results of his investigations was on the elimination of carbonic acid and the absorption of oxygen during sleep and waking in man. As a bed can be easily placed in the apparatus, there were no accidental difficulties connected with these experiments.

At first a day of rest was chosen for the subject of the experiment. The man and his bed having been weighed, he was, during the day, given an average quantity of food, the elements of which were accurately determined, and he took his meals at times usual with him. He occupied himself during the day only just so much as not to feel too dull; he read newspapers and novels, and, being a watchmaker, set himself to repair and clean a small watch, which he had taken with him into the machine. He went to bed at 8 p.m., and slept exceedingly well until 5 a.m., when he was called. He felt well during the whole progress of the experiment. The following table shows the results of it, "day" being meant for the hours from 6 a.m. till 6 p.m., and night for the hours from 6 p.m. to 6 a.m. The numbers are given in grammes :—

Day of Rest, July 31, 1866.

Time of Day.	Eliminated. Carbonic Acid.	Eliminated. Water.	Eliminated. Urea.	Absorbed Oxygen.	Proportion.
Day . .	532·9	344·4	21·7	234·6	175
Night . .	378·6	483·6	15·5	474·3	58
Total. .	911·5	828·0	37·2	708·9	94

On August 3 the same man again entered the machine to stay another 24 hours in it; but this time it was to be a day of work. He had to turn a wheel with a handle. On the wheel so much weight was placed as to correspond as nearly as possible to the weight which is driven by a turner's wheel in a workshop. For this a weight of 25 kilogrammes (50 pounds) was required, which was suspended by a chain and roller. The man took his rest and his meals at the times usual with workmen, and made during the day 7323 turns of the wheel. He stopped work at half-past 5 p.m. At that time he felt fatigued, as after hard work or a long walk. The food was exactly the same he took on July 31; he only took 600 grammes more water, which he had *ad libitum* both days. After supper he retired to rest, fell soon asleep, and awoke only at 5 a.m. next morning, when he felt perfectly well and refreshed.

Day of Work, August 3, 1866.

Time of Day.	Eliminated. Carbonic Acid.	Eliminated. Water.	Eliminated. Urea.	Absorbed Oxygen	Proportion.
Day . .	884·6	1094·8	20·1	294·8	218
Night .	399·6	947·3	16·9	659·7	44
Total .	1284·2	2042·1	37·0	954·5	98

On comparing the numbers obtained for day and night, and for rest and work, the most curious results are obtained. During the day of rest there was, in spite of the repose during the day, a very large difference between day and night, as regards the elimination of carbonic acid and the absorption of oxygen. The day numbers are large for carbonic acid and small for oxygen, and the reverse is the case with the night numbers. In taking the percentage we find that, as regards carbonic acid, 58 per cent. were eliminated during the day, and only 42 during the night; while of the oxygen 67 per cent. were absorbed at night, and only 33 per cent. in the daytime.

The elimination of urea was always more rapid by day than by night. During the day of rest, urea was eliminated in exact proportion to carbonic acid—viz., 58 per cent by day, and 42 by night. The most surprising result, however, was no doubt the antagonism between the elimination of carbonic acid and the absorption of oxygen during the day of rest, when all muscular exertion was purposely avoided. It appears from this that the mere act of being awake, the mere perception of sensorial impressions, no matter what they may be, has a certain influence upon the waste of matter, so as to increase the elimination of carbonic acid in the same manner as muscular work would do. We need, therefore, not be surprised if persons suffering from illness are anxious for the exclusion of light, for absolute silence, etc., since every perception entails a waste of matter, which must be more sensibly felt by a sick than by a healthy person.

This antagonism between night and day becomes still more strikingly apparent on studying the numbers obtained for the day of work. The elimination of carbonic acid and the absorption of oxygen are then seen to take place in reverse proportion, the percentage being 69 for carbonic acid by day and 31 by night, while the numbers for oxygen are 31 during the daytime and 69 by night.

It is therefore obvious that during the day, in waking, we produce a large quantity of carbonic acid at the expense of that oxygen which we have taken in the night before. Volition thus finds matter ready prepared for its voluntary movements —the trigger need only be pulled for the gun to go off. *The extra waste of oxygen during the day is thus compensated by a larger absorption of it during the following night;* and as long as we are able thus to lay in stores of oxygen during sleep, we are every morning freshly prepared to do our work. The importance of large and airy bedrooms, containing a liberal supply of oxygen, for the preservation of health—a fact with which we have long been practically acquainted—has thus, by the light of German science, at last been satisfactorily explained.

It is a curious fact that on the day of work, when considerable muscular efforts were made, the absorption of oxygen was not sensibly larger than on the day of rest. On July 31, when the person experimented upon did not exert his muscles much more than anybody might do who turns and stretches in his bed during sleep, when he only read novels and cleaned a watch, he absorbed 234 grammes of oxygen from 6 a.m. to 6 p.m., while on August 3, when he worked very hard with his muscles and eliminated a much larger quantity of carbonic acid, he absorbed 295 grammes—that is, only 43 more than during rest. From this we may conclude that it is not the want of oxygen which makes us breathe faster and harder during bodily exertion, but the want of getting rid of the additional quantity of carbonic acid, and of moderating the heat of the blood.

The absorption of oxygen, whether by day or night, or in sleep or waking, is far more equable than that of the elimination of carbonic acid, as shown by the following table :—

	Of 100 parts of Carbonic Acid there are eliminated By day.	Of 100 parts of Carbonic Acid there are eliminated By night.	Of 100 parts of Oxygen there are absorbed By day.	Of 100 parts of Oxygen there are absorbed By night.
During rest .	58	42	33	67
During work .	69	31	31	69

Another interesting fact is seen in the proportion between the elimination of carbonic acid by night and the absorption of oxygen by day. Just as there is scarcely any difference in the absorption of oxygen by day, whether a man may work or rest, there is likewise very little difference in the elimination of carbonic acid by night, whether a man may have worked hard during the previous day or not.

A very considerable difference between rest and work was, however, shown to exist in the elimination of water through the skin and lungs. The two experimental days succeeded one another so rapidly (being July 31 and August 3) that there could not be any great change in the physical condition of the person experimented upon, nor in the condition of the atmosphere, so that the difference had to be accounted for by the muscular exertion alone. As regards the condition of the atmosphere on the two days mentioned, it seemed to favour rather the opposite result of what was actually obtained. The elimination of water on the day of rest amounted to 828 grammes, and on the day of work to 2042 grammes—that is, two and a half times as much as the former. On both days the elimination of water was pretty equal by night and day. On the day of rest the quantity was 344 grammes by day and 483 grammes by night, while on the day of work it was 1095 grammes by day and 947 grammes by night. It therefore appears that the elimination of water through the skin and lungs does not rise and fall like that of oxygen and carbonic acid, but follows a rhythm of its own. A man does not merely perspire sensibly during some fatiguing work which he may be doing, but he also perspires more in the night following that day than he would do after a day of rest, most probably in order to complete the work of cooling throughout the system.

GENERAL CORRESPONDENCE.

DR. PUSEY ON THE BESETTING TRIAL OF OUR BOYS.

Letter from Dr. Lionel Beale, Physician to King's College Hospital.

[To the Editor of the Medical Times and Gazette.]

Sir,—In two letters on confession published in the *Times* during the past week, Dr. Pusey has made some very startling statements on a "delicate subject" to which it seems to me the attention of the Profession should be directed. In the last letter occurs the following remarkable passage:—

"Fifty years ago, before the intercourse with the Continent had been much renewed, I have reason to believe that that sin was unknown at most of our public schools. Now, alas! it is the besetting trial of our boys; it is sapping the constitutions, and injuring in many the fineness of intellect."

If this be so, it is surely high time that the conditions under which large numbers of boys are congregated and live in our public schools were very carefully inquired into by competent persons, in order that something might be done to mitigate the evil.

If it be true that the sin referred to is "the besetting trial of our boys," whose fault is it? If the clergymen who govern our public schools were a little better informed upon physiology and hygiene, and made to study man's mind and body a little, before they commenced to train them both, I venture to think that many of the existing faults of education would soon be corrected, and evils such as this prevented. If it be probable that every boy in any public school knows all that a head master would wish to keep from him concerning the seventh commandment, and if books of self-examination are required, surely there must be something very rotten and almost criminally wrong in the management. Those who have studied boys and men would, I think, concur in the opinion that far more good is to be done by occupying the boy's mind and endeavouring to make him feel an interest in his work and play, than by putting in his hands books of self-examination in which allusion is made to the seventh commandment. If the boy life be miserable and monotonous, or selfish, indolent, and luxurious; if the boy be compelled to submit to the dull routine invented by dismal, dejected dyspeptics; if his vivacity be checked and his spirits depressed; if he be made melancholy or hypocritical by confession and books of self-examination which he cannot understand, evil—bodily as well as mental—may follow. But if cheerful, happy, hopeful men direct and encourage him in his hard head-work; if the workshop, the turning-lathe, and the laboratory are all encouraged and form part of the school course; if plants and animals be studied in the fields, and he have music and now and then a little harmless fun and frolic in his evenings at home, there will be little room for sin which may desolate or blight the subsequent life; which, according to Dr. Pusey, is sometimes "fully known" to poor little boys of eight or twelve.

In the main I agree with "S. G. O." that the evils alluded to were "best, with the very rarest exceptions, ignored," and believe that Dr. Pusey has been greatly misinformed, that he exaggerates the evil most extravagantly, and has been led to take an absurdly gloomy view of the whole matter. But, admitting, as we all must, that the evil exists, and always did exist to some extent, is not the family Doctor the right person to receive the confession, and would he not on this matter, in nine cases out of ten, give far sounder advice than the priest? It is very strange that the clergy—who, as a body, are most terribly, and I cannot help saying perversely, ignorant of physiology, psychology, and medicine—should be so ready to express opinions on matters connected with perhaps the most complex, the most abstruse, and one of the most extensive of all Medical inquiries. Looking from a Medical point of view, it seems to me that the advice of "S. G. O." upon this matter is far more judicious than that of Dr. Pusey; and I imagine most of us would cordially support him when he says, "The wisest and best of men have ever held that there is a guilt of a nature that it is best, as the rule, to ignore all writing or talking about to the very young—to leave it thus stamped with its own brand, and leave that brand to be its best punishment."

I cannot but think that Dr. Pusey committed a grievous error in alluding to this subject at all in the columns of the *Times*, and that his apology for doing so is calculated to do much harm by exciting the curiosity of those who do not understand, and leading them to inquire into this "delicate subject," in which case they may be made very unnecessarily wretched and anxious by the very false information they may obtain from those who know little more than they do themselves, but talk as if they knew all about it. If Dr. Pusey is really in possession of facts which justify him in the assertions he has made, the least he can do is to state those facts clearly in the proper place; but until I have been taught very much more than I have yet been able to learn on the subject, I shall believe that Dr. Pusey is quite mistaken in the view he takes, and that the remedy he advises will increase the evil it is intended to mitigate, and cause other evils to spring up which will be worse than the first.

These letters of Dr. Pusey's are, I think, calculated to do much harm. They will excite an indefinite terror in the minds of sensitive, imaginative persons, already sufficiently alarmed by indefinite and continually recurring dread of an improbable possible horror, which they have seen vaguely hinted at in some quack advertisement or filthy book.

I am, &c. Lionel S. Beale.

61, Grosvenor-street, December 17.

THE LATE DEBATE AT THE OBSTETRICAL SOCIETY.

Letter from Mr. I. Baker Brown.

[To the Editor of the Medical Times and Gazette.]

Sir,—Allow me to claim your indulgence for a few remarks with reference to the report of the discussion at the Obstetrical Society, which is given in your impression of the 15th inst.

As far as the remarks of Dr. Tyler Smith and Dr. Greenhalgh are concerned, my answer appears inconsequent and ridiculous, because the first speaker has not put in print the very unjustifiable language against which I protested, and because the speech of the second speaker is, as written, entirely different from the one spoken at the meeting.

The first eight lines were, to my knowledge, never uttered. The first case given was brought to me, to undergo clitoridectomy, by Dr. Greenhalgh, and was operated upon in his presence, and afterwards attended by us conjointly for a month. This he admitted at the meeting, but suppresses in the report. In my answer, which, I regret to say, I abridged for the journals, but which will, I am promised, be given in full in the Society's *Transactions*, I drew attention to the fact that Dr. Greenhalgh's asking me to perform "this useless, pernicious, and most unjustifiable operation," was the result of his diligent and oft-repeated personal attendance on my practice at the Surgical Home, in his visits to which he was frequently accompanied by pupils of his own from St. Bartholomew's Hospital. I also mentioned that in the letter from the patient to Dr. Greenhalgh she had asked him to consult with me about her, but that, instead of doing so, he had shown the note to almost every one of his Medical acquaintance except me; and that, indignant at not hearing from him, the lady afterwards came to me, was under my care, became convalescent, and the day before the meeting I received a letter from her containing the following words:—"For the last two months my nights are decidedly better. I am truly thankful for present relief, and trust it will continue, and that the last operation may prove effectual."

The second case given by Dr. Greenhalgh was on a lady, aged 72, a private patient, at the time under the care of Dr. Harling, Dr. Hawksley, and myself, which he most unwarrantably brought before the Society, and on hearsay stated to have been no better, but rather worse. My answer makes me say that the case of S. W., Dr. Greenhalgh's *second written one*, had only that day been left by me as recovered from an operation which had taken place more than four years previously.

Next Dr. Greenhalgh mentioned two cases in St. Bartholomew's Hospital, but he at the meeting gave no details of initials, dates, patients' account, clinical clerks' notes, etc., as reported in your journal; nor did he venture to state before a learned Society that the operation of clitoridectomy "was followed by an abscess in the bowel;" nor did he state in another case that the patient "expressed great alarm when informed that the parts had been mutilated;" nor did he regret "that he had not taken notes of many other cases, about which he had been informed by trustworthy Practitioners, operated upon by the same Surgeon, and alike unsuccessful and pernicious in their results." Nor, lastly, did Dr. Greenhalgh give an exposition of the conclusions he had formed with reference to the value of the operation, in words bearing any similarity to those used in the report—viz., "as a useless, pernicious, and most unjustifiable operation for the purposes for which it had been recommended by me."

I call upon the secretaries to say whether the report of Dr. Greenhalgh's remarks is correct, and I have also asked a few gentlemen who were present at the discussion to state their opinion on this point.

In conclusion, in a communication to the *Lancet*, November 3, 1866, I offered "to nominate *jointly with* that journal a commission to report on the subject."

On December 4, the day following the Obstetrical Society's discussion, I wrote to Dr. Tanner offering him twelve or twenty cases to examine which had been operated upon at least three months, on condition that he should report on them to the Society or to the Medical journals. That offer he has frankly accepted, and is prepared to commence the investigation at once; but instead of availing myself of it I now intend, at the next meeting of the Society, to move for a committee, under certain conditions, for the same purpose.

Meantime, in deference to the opinion of many members of the Profession, I shall not perform the operation without the sanction of the patient and her friends, nor without consultation with another independent Medical Practitioner.

It is extremely painful to me to carry on a paper warfare of a purely personal character. I must therefore decline any further correspondence until the result of the investigation is known, and it would be well if this line of conduct on so delicate a subject were pursued by others.

I am, &c.

136, Harley-street, Dec. 17. I. Baker Brown.

Letter from Dr. T. Ballard, Dr. J. Locking, W. B. Owen, and Dr. T. R. Pooly.

[To the Editor of the Medical Times and Gazette.]

Sir,—At the request of Mr. Baker Brown, we the undersigned have no hesitation in stating our conviction that the report which has appeared in your journal of Dr. Greenhalgh's speech at the Obstetrical Society, December 3, differs materially from that which we heard actually delivered at the Society.

Thomas Ballard, M.D., Fellow.
John Locking, M.D., Visitor.
William B. Owen, Fellow.
Thomas R. Pooley, M.D., Visitor.

DR. JOHNSON'S THEORY OF CHOLERA.

Letter from Dr. George Johnson.

[To the Editor of the Medical Times and Gazette.]

Sir,—I find that Dr. Moxon has been severely critical on what he takes to be my theory of cholera, but what I look upon as a caricature of my theory. It is somewhat surprising that he should feel called upon to kill the slain—to attack a theory which has already been demolished. Dr. Moxon must have overlooked or forgotten the announcement which you made some weeks ago, that Dr. Chapman, in that remarkable book upon which your reviewer has since bestowed unqualified approbation, had so severely handled my theory that he had left me "not a leg to stand upon." Mutilated as I am, with my means of progression taken from me, it is not now my intention to reply to my new assailant. To do so would, in my opinion, be a waste of my time and of your space. I am preparing a paper on cholera for the Medico-Chirurgical Society. If, when that paper comes on for discussion, Dr. Moxon will attend and repeat his objections, prudently omitting his misrepresentations and his syllogisms, I will endeavour to give him such an answer as shall satisfy him. I am, &c.

December 17. George Johnson.

ON THE ACTION OF ACETIC ACID ON OVARIAN CYSTS.

Letter from Dr. F. E. Junker.

[To the Editor of the Medical Times and Gazette.]

Sir,—The only reply I need make to Dr. Broadbent's courteous note in your impression of December 15 is, that I will do my best to find the *corpus vile*, and shall be delighted to assist him in his experiment. As ovarian disease is by no means uncommon in mares, cows, sheep, sows, and bitches, I trust that some of your readers, or some of their veterinary acquaintances, may assist us in procuring a subject for operation.

I am, &c. F. E. Junker, M.D.

36, Mount-street, Grosvenor-square, W., Dec. 17.

A VOICE FROM THE NAVY.

[To the Editor of the Medical Times and Gazette.]

Sir,—The promotion of Dr. Armstrong to Inspector-General, and appointment of Dr. Davidson to Greenwich, are looked upon as such flagrant acts of injustice to officers senior to them on the list (who naturally feel slighted, if not degraded, thereby in public opinion) that a great feeling of disgust and alarm is created amongst naval Medical men. The former benefits obtained for us by Sir John Pakington led us to believe that his selections would have been guided by reference to antecedents rather than interest, but it has proved otherwise. The Admiralty are very much in want of Medical men, but so long as favouritism is carried on and justice disregarded they are not likely to join a service in which they are not well treated. Forty or fifty Assistant-Surgeons are required, and the paucity of entries is quite ridiculous, not even filling up the gaps caused by death in our ranks! So much for Admiralty parsimony. Medical men are at a premium, and their lordships must pay the price if they want men, and even then they will not join if they are to be shabbily and unjustly treated. I am, &c.

December 12. R. N.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, November 27, 1866.

Dr. James Alderson, F.R.S., President.

Mr. Samuel Solly read a paper describing a case of

FRACTURE OF THE RIBS ON THE LEFT SIDE OF THE CHEST, FOLLOWED BY A PECULIAR TYMPANITIC RESONANCE AT THE LOWER PART OF THE THORAX, ACCOMPANIED WITH GRAVE SYMPTOMS, BUT ULTIMATE RECOVERY.

A. C., aged 29, had fracture of two ribs on the left side from direct violence. Great difficulty of breathing, with almost fatal syncope, followed, and for more than a week he was in great jeopardy. The heart was driven over to the right side of the chest, and its normal situation occupied by the stomach. He slowly recovered, and is now quite well. Both heart and stomach, at the end of two months from the date of injury, had returned to their proper positions. Query: Did these symptoms arise from rupture of the diaphragm, or paralysis of the diaphragm, or inordinate distension of the stomach?

The President thought the case was one of pneumothorax.

Dr. Pavy had been in attendance upon the interesting case to which attention had been directed by Mr. Solly, and he would like to make a few observations to the Society regarding it. He had been called in the first evening after the accident had occurred. From the difficulty that the patient experienced in swallowing and the burning sensation and pain in the epigastrium, he was apprehensive that some serious injury of the œsophagus or stomach had occurred, and was doubtful whether the patient would live through the night. The following morning, however, he was better, but in the evening symptoms of collapse came on, and led Mr. Clapton and himself to fear that internal abdominal hæmorrhage was going on. This opinion was confirmed by Mr. Solly, who now saw the case, and the administration of the acetate of lead, with the external application of ice, was resorted to. The patient rallied somewhat, but still continued in a most critical state. The strictest quietude of body was enjoined, and a couch had been provided which dispensed with the necessity of movement being made for any purpose. One morning, about a week after the occurrence of the accident, Dr. Pavy was hurriedly summoned to the patient, and found him in the greatest state of distress, with a sense of oppression at the chest, which had been brought on by his exerting himself and being raised a little for the purpose of changing his apparel. The apex of the heart was tilted up to the left and seen beating above the nipple. Below this, percussion gave a tympanitic resonant sound, and auscultation an absence of all respiratory murmur. With what examination Dr. Pavy had been able at the commencement to make, there had been nothing abnormal discoverable about the viscera of the chest. Neither had any symptoms previous to this time been witnessed that would point to the existence of internal thoracic mischief. It was evident, however, that a circumscribed collection of air now existed at the lower part of the left chest, which had pushed the heart upwards, and was lying in front of the lung. The circumstances of the case would not allow of Dr. Pavy's making a complete physical examination; but as soon as the patient could be raised it was found that at the lower part of the chest on the left side there was dulness on percussion, bronchial breathing, and bronchophony. It was to be inferred that a compressed state of the lung, produced by the circumscribed collection of gas recognisable anteriorly, existed. The sounds in the upper part of the chest were natural both anteriorly and posteriorly. The line of tympanitic resonance descended, and in the course of a month from the occurrence of the accident the patient was about. He now left town for his father's seat in the country, and was lost sight of for some time. When Dr. Pavy next had the opportunity of examining him, the condition of the chest was in every respect natural, and the patient was in the enjoyment of ordinary health. The opinion that had existed in Dr. Pavy's mind whilst in attendance on the case was that the condition of the chest was due to a rupture of the diaphragm and a partial displacement of the stomach. He knew that such an accident was rare, and usually proved fatal; but still, cases had been placed on record which, he thought, justified him in taking that view. Devergie, in his Medical Jurisprudence, had narrated the case of a carpenter who had fallen on to some scaffolding from the dome of the Invalides, at Paris. This man resumed his work at the end of six months, although still suffering from a frequent cough, difficulty of breathing, and pain in the left side of the chest. A fortnight afterwards he sustained a second fall from a height of about twenty feet, and was taken to the Hôtel-Dieu, where it was ascertained that he had fractured seven ribs. Spitting of blood followed, and the respiration was labouring and short. Three days later, when he had become better, he fell out of bed and died in the course of a few hours. At the inspection of his body a rent in the aponeurotic centre of the diaphragm was discovered, which had permitted the stomach and a portion of the arch of the colon to pass into the chest. There was nothing to show positively at which accident this rupture had occurred; but as the edges of the opening were found in a wasted state, it was inferred that it was most probably at the first. In the *Guy's Hospital Reports* for 1838 a case had been recorded by Dr. Taylor in which a ruptured diaphragm must have existed for nine months, and had escaped discovery during life. The patient had fallen from a great height on to the deck of a vessel; one ankle was injured and some ribs fractured. The ankle gave him most concern, and prevented his getting about. Six months after the accident he was admitted into Guy's Hospital, under Mr. Morgan's care, on account of the ankle, from which a portion of bone had come away. Amputation was subsequently performed, but the patient died three months after admission into the Hospital, or nine months after the occurrence of the accident. The post-mortem examination unexpectedly displayed a rent in the diaphragm, which had allowed of a protrusion of the stomach and some of the colon, covered by omentum, into the cavity of the chest. The omentum was here and there firmly adherent to the margins of the opening. Difficult as it was to reconcile such an accident as rupture of the diaphragm and hernia of the stomach with subsequent complete restoration to a normal condition, yet Dr. Pavy must own that he did not see his way to any other explanation of the phenomena of the case under consideration attended with less objection; and Dr. Walshe, he said, who had seen the patient whilst the unnatural condition existed, had expressed himself of opinion that this formed the most plausible hypothesis that could be offered. Dr. Pavy did not conceive it to be impossible that when the patient began to move about the weight of the stomach might drag a protruded portion of it back into the abdomen, and so the natural sounds on auscultation and percussion would be restored. He had carefully weighed the possibility of the tympanitic resonance being due to pneumothorax; but for this it would have to be assumed, first, that adhesions existed to confine the air to the lower part of the chest; and next, that the inferior part of the lung was glued to the thoracic parietes posteriorly. The patient was a remarkably healthy young man, and no history existed that would justify such an assumption. In opposition to Mr. Solly's suggestion there was no distension of the abdomen anteriorly, such as would have been looked for to account for such a displacement of the heart and compression of the lung as had existed by a simply flatulent stomach acting upon a paralysed diaphragm.

Mr. **Curling** stated that the paper would have proved more interesting if the author could have arrived at some definite conclusion as to the cause of the metallic resonance in the chest. He did not think that the explanation advocated by Dr. Pavy or that of the author of the paper would be considered satisfactory. Patients sometimes recovered after rupture of the diaphragm, and Dr. Pavy had adduced cases of the kind from the old writers, but these occurred before the practice of auscultation, and we have no evidence that in a patient who had recovered from this injury the stomach and colon had descended into the abdomen, allowing the lung to return to its natural position. This was very unlikely to take place. Mr. Solly's explanation was also unsatisfactory. It was impossible to understand how the phrenic nerve could be wounded by a fracture of two of the lower ribs. There was no nerve in the body better protected from injury than the phrenic, and a broken rib forced in so as to reach it would almost certainly wound some other important part, as the pericardium or the heart. Then the rapid recovery was incompatible with the idea of rupture of the phrenic nerve. Mr. Solly must know that complete nerve power could not be regained in so short a period as three months—the period from the time when metallic resonance existed, at which he was reported to be breathing well and to be restored to health.

Dr. **Greenhow** said he thought with the President that the case had probably been one of pneumothorax, and not of either paralysis or rupture of the diaphragm. There were, indeed, some difficulties in the way of that supposition, for the apex of the heart was said, in this case, to have been beating on a level with the third rib, outside the line of the left nipple; whereas, in all the cases of pneumothorax on the left side which had come under his observation, the heart had been pushed over to the right. But although it was not easy to reconcile the position of the heart with the idea of pneumothorax, he nevertheless considered that this supposition met the general circumstances of the case better than either of the other theories which had been put forward. As regarded rupture of the diaphragm, they had the high authority of Mr. Guthrie for the opinion that perforations of that organ never entirely healed up; and he (Dr. Greenhow) certainly did not believe that a rupture so considerable as must have taken place in the present case, in order to admit sufficient protrusion of the stomach into the thorax to cause displacement of the heart, compression of the lung, and tympanitic percussion resonance up to the fourth rib, could ever have so completely closed as to allow of the return of the thoracic organs to their normal position.

Dr. **Salter** remarked that the case belonged to an interesting class—a class in which some unusual physical condition demanded some exceptional hypothesis for its explanation. For the satisfactory elucidation of such cases, there is one thing which is a *sine quâ non*—a careful, full, and consecutive record of the physical signs. The want of this was the one fatal deficiency in the history of the present case, the narrative being in this respect so imperfect that it could not be said to contain the data for the formation of an exact opinion. The chest was not examined until the fifth day after the accident. On the sixth and seventh, the rise and fall of the resonance alone were mentioned. Four weeks after the accident, the chest is described as being *in statu quo*, and there is no further record for seven months, when the state of the parts was found to be that of perfect health. At those two points of the case, its commencement and termination, when the physical signs would probably have conclusively entertained the nature of the lesion, there was no information. Three opinions appeared to have been entertained at different times—one, that the spleen was ruptured; another, that the diaphragm was ruptured, and that the stomach had escaped through it into the chest; and a third, that the phrenic nerve was injured, and the left half of the diaphragm paralysed. Against the idea of rupture of the diaphragm and the transference of the stomach to the thoracic cavity, there appear to be two strong objections—one, that the respiration on the patient being first seen was stated to be abdominal, and the other, the issue of the case. It would be impossible to imagine a condition more incapable of giving rise to abdominal respiration than rupture of the diaphragm; in fact, with a ruptured diaphragm, abdominal respiration would be impossible, because abdominal breathing is diaphragmatic breathing; but on the hypothesis that the pleura was injured by the broken rib, and a certain amount of pleurisy produced, the abdominal breathing immediately became intelligible. The issue of the case, too, appeared perfectly incompatible with the tympanitic resonance of the chest being due to the stomach having entered it through the diaphragm; for if that was the case, and if the state of the parts was unchanged at the end of four weeks, how could it be conceived that things could ever be so right that at the end of three months the patient should declare himself in every respect well, and at the end of seven months the state of parts be perfectly natural? It was impossible to imagine but that so serious a displacement of parts must have been attended with graver disturbance of the stomach than was the case. It was easy to understand, on the hypothesis of the existence of pneumothorax, why the patient could only take small quantities of food at a time, and why food oppressed him, because the air in the left pleura would depress the diaphragm on the stomach. The supposition that the physical condition depended on paralysis of the left half of the diaphragm appeared equally untenable, as it would not explain the great and sudden difference of the level of tympanitic percussion on the two sides of the middle line. In the face of these difficulties, he (Dr. Salter) could not but believe that the case was one of pneumothorax.

Mr. C. H. Moore missed one symptom from those which he would expect in rupture of the diaphragm. Instead of the smooth equal inspiration, there would be a falling in of the thorax on the side of the laceration, and in expiration a sudden collapse. Mr. Moore confessed that the natural explanation of the case was that the symptoms were due to a limited pneumothorax.

A Fellow said he thought the only proper explanation was that the diaphragm was ruptured, and this view was strengthened by the fact that it was the one taken by those who had seen the patient, including Dr. Walshe.

Mr. Solly said the probability of pneumothorax had been carefully considered by Dr. Walshe, Dr. Pavy, and himself, but it had been decided against. As regards the phenomena of the breathing—*i.e.*, as to its being abdominal or not—there was possibly some error. Mr. Solly referred to the difficulties attending an examination of the case. For some days only the front of the chest could be examined, and when it could be done the evidence was against pneumothorax. Then he had failed to procure any history of the patient's case since he ceased to be under his care. Mr. Solly then gave particulars of a case of rupture of the diaphragm. The patient died of typhus fever, and the rupture was due to an accident some time before. The stomach was protruded into the thorax. Mr. Solly had mentioned the injury to the phrenic nerve as a possible and not as a certain explanation of the difficulties of an obscure case.

Mr. Wood said that one important point in the diagnosis between paralysis of the diaphragm on the one hand, and rupture of that muscle or pneumothorax on the other, would be the position of the apex of the heart. In paralysis of one side of the diaphragm from injury to the phrenic nerve, the heart would be simply elevated by the pressure of the abdominal viscera, but would remain still on the same side of the chest. But, on the other hand, if air or any of the abdominal viscera had obtained ingress into the left thoracic cavity, the heart must inevitably be pushed over to the right side of the median line. Now, he understood Dr. Pavy to say that the heart was felt beating above the left nipple. If so, then it would favour the theory put forward by the author of the paper—viz., paralysis of one side of the diaphragm. If this were the case, it would not necessarily be accompanied by a similar elevation of the right side of the diaphragm, which might, under the conditions, be depressed by spasmodic action of its fibres so as to destroy the symmetry of the dome-curve.

Mr. Curling said, as the discussion on the paper appeared to have ceased, and as the subject of fracture of the ribs was not likely soon to occupy the attention of the Society, he might be permitted to mention some interesting facts showing the results of improvements in the treatment of these injuries. He had obtained from the books of the London Hospital a report of all the cases of fracture of the ribs treated in the years 1830 and 1860. In 1830 it was the practice, even in slight cases of this injury, to give antimony, and, if the patient complained of pain in the side, to bleed and to give calomel and opium. Now, in that year the average period of a patient's stay in the Hospital was twenty-eight days, whereas in 1860, when the treatment had become very simple, the patient being kept at rest in bed with a bandage round his chest, small doses of opium being given to allay pain, the average time that a patient remained in Hospital was reduced to sixteen days, being a gain of twelve days. The active treatment formerly adopted, by weakening the patient, prolonged the period of convalescence.

Dr. Wynn Williams, remarking on Mr. Solly's patient's case, said he thought it physically impossible for the heart to be raised by a paralysed diaphragm.

Dr. Marcet spoke on rupture of the diaphragm, and illustrated his remarks by allusion to artificial gastric fistulæ in dogs.

Mr. Barwell said the question seemed to him to turn on the sort of breathing the patient had, and he asked if there was no one present who could supply the information as to its nature.

ARTIFICIAL VELUM AND PALATE.

Dr. Wynn Williams introduced Mr. Ramsay to the Fellows of the Society, he being desirous of exhibiting to them a patient in whom he had fitted an artificial velum and palate. The patient was suffering from congenital cleft palate, both soft and hard. He had been operated on for hare-lip in infancy. The apparatus adapted to supply this deficiency consisted of a piece of hard vulcanite with two teeth attached to the anterior portion. This supplied most accurately the deficiency in the hard palate. The fissure in the soft palate is closed by means of a piece of soft vulcanite attached to the hard, which is capable of being pressed slightly upwards and downwards by the muscles of the fauces, thus effectually closing the passage to the nares during speech and deglutition. The patient has worn the instrument for about twelve months with the greatest comfort to himself, and was now able to articulate and converse very plainly. He was asked to repeat the alphabet, which he did most distinctly, stating also that he could now articulate much more plainly even without the palate than he was able to do previous to wearing it. He removed and reintroduced the instrument to show with what facility he could do so.

Mr. Ramsay showed models of several other congenital cases of cleft palate which he had treated in the same way—one of a young lady, the fissure having previously been attempted to be closed by operation, but without success; also another of an enormous cleft measuring an inch and a-half across, in which he had also successfully supplied an artificial palate and velum.

Poisoning by Corrosive Sublimate.—One Martin Réau, a wealthy farmer, has been tried at the Court of Assizes of the Deux Sèvres (Niort) for poisoning his first wife, his second wife, and his son by the latter. It is also believed that he murdered his brother. By chemical analysis corrosive sublimate was found in large quantities in the exhumed bodies. It is said that the salt had even saturated the earth surrounding the coffins. Réau administered the poison under the pretence of giving medicine to his wives to prevent conception. The facts were clearly proved, yet the Court found that there were extenuating circumstances, and he was sentenced to hard labour for life.

NEW BOOKS, WITH SHORT CRITIQUES.

Everything about them: for the Information of Medical Students, especially of the Scottish Universities, and of the Parents of Young Gentlemen intended for the Medical Profession generally. Anon. Edinburgh: Edmonston and Douglas. Pp. 60.

, An account of the position of the British Naval Surgeon rather highly coloured; in fact, according to it the Navy is a little Paradise. It appears at a very suspicious period, the Navy being excessively deficient in Surgeons, there being also great hopes that a new warrant will shortly make its appearance which will put some things on a better footing, especially the period of service. There are still, however, some very unpleasant things in connexion with this service in contradistinction to the Army. Why should there be a special Medical curriculum for the Navy? If a man be properly qualified, is not that sufficient? Why should graduates in arts from Universities of the highest standing be subjected to the indignity (shall we call it?) of being compelled to pass in the Latin of Gregory's Conspectus? Why should Assistant-Surgeons have to pass a double or treble examination on comparatively useless subjects before promotion? And, finally, why should Naval Medical officers be compelled to purchase a variety of instruments, including even splints, before they can go on service? These questions are *not* answered in "Everything about them." *Punch's* advice to people intending to marry—viz., "Don't" —is very applicable to the Profession and the Navy just now. Our advice is, in Scottish phrase, "Bide a wee."

The Morningside Mirror. Printed at the Royal Asylum Press, Morningside, Edinburgh.

, Many are the schemes now employed for relieving the tedium of confinement, and turning the morbid minds of the insane from a consideration of themselves and their fancied wrongs to a more healthy condition as regards the outer world, and none appears to succeed better than the establishment of little journals in connexion with the various lunatic asylums. Their coming is anxiously looked for, and their discussion gives rise to a wholesome excitement very different from the morbid state in which many of the patients usually exist. Were it only for these considerations, we should gladly receive such papers as those referred to, but really many of the sketches possess considerable literary merit. It would be invidious to select any of the articles contained in the "Mirror" for special remark, but we can safely say that the conductors and contributors have no cause to be ashamed of their offspring.

On Recent Improvements in Surgery. A Paper read before the South-Western Branch of the British Medical Association. By William Paul Swain, Esq., Surgeon to the Royal Albert Hospital, Devonport. Pamphlet.

, Contains a short but very good account of the advances made in practical Surgery in recent times, such as the use of Teale's suction curette, Holt's and Heath's operations for fixation of the jaws, Holt's and Thompson's stricture dilators, and the endoscope. The notices selected are further illustrated by woodcuts.

On Melanosis of the Lungs and other Lung Diseases arising from the Inhalation of Dust. By F. Oppert, M.D., Physician to the City Dispensary. London: Churchill and Sons. Pamphlet.

, Well worth reading. Contains more matter boiled down into the space of a pamphlet than would enable some to write a folio. Contains a vast deal of information on the nature, situation, and consequences of the black colouring matter sometimes found in the lungs. The treatment chiefly consists in leaving off the deleterious employment, and taking plenty of exercise in the open air.

Journal da Sociedade das Sciencias Medicas de Lisbōa. 1866, No. 9. Lisbōa: Imprensa Nacional.

, We have not often to speak of anything in the way of advance in Medicine coming from the Peninsula, but it must not therefore be concluded that the Spanish and Portuguese Physicians and Surgeons are unenlightened men. The number of the above journal contains three very able original articles—one on Alcohol in Pneumonia by Motta, another on Local Anæsthesia by Da Silva Amudo, and a third on Ovariotomy by Maria Barbosa. We are glad to observe that the Lisbon School of Medicine is getting on well, not less than 92 having matriculated this year.

Consumption and Bronchitis. By James Copland, M.D., F.R.S., etc. New edition. London: Longmans. Pp. 440.

, A new edition of this well-known work, which, however, does not differ materially from the last, but which we are glad to see were it only to show that one who has done so much for the advancement of Medical knowledge, and who is so much respected by all, is still able to keep not only himself, but all of us, *au fait* in what is doing for the improvement of practical Medicine.

On Uncontrollable Drunkenness, considered as a Form of Mental Disorder. By Forbes Winslow, M.D., D.C.L. London: Hardwicke. Pp. 54.

, The greater portion of this pamplet appeared as a series of letters in a daily contemporary; the subject is worth consideration, and we need not say that, coming from such a well-known authority, the remarks are to the point, neat, and well put. The question of sanatoria for dipsomaniacs is discussed, and their institution strongly advocated.

A Treatise on the Practice of Medicine. By George B. Wood, M.D., LL.D., Emeritus Professor of the Theory and Practice of Medicine in the University of Pennsylvania, etc., etc. 6th edition. 2 vols. Philadelphia: Lippincott and Co. Pp. 1002+982.

, This work is too highly appreciated both in England and America to require us to say a single word of commendation in its favour. The new edition contains many subjects not treated of before, and will, we doubt not, be gladly welcomed by all.

Treatment of Typhus Fever by Tea; with Cases. By T. Wrigley Grimshaw, M.B., Physician to the Cork-street Hospital. Reprint.

, Founded on the registered results of 33 cases, some of which were also treated with wine or whisky. The tea was generally given in two-ounce doses of a preparation made by infusing two ounces of tea in one pint of cold water for 24 hours. Twenty-one cases were treated by tea alone; but although most or all of the patients came round, we fear that we are quite as far as ever from a specific for typhus. Let Dr. Grimshaw try again.

On the Treatment of Tedious Labour in the Second Stage. By J. Thorburn, M.D., Lecturer on Midwifery, Manchester School of Medicine. London: Simpkin and Marshall. Pamphlet.

, Read before the British Medical Association at Chester—now furnished with an appendix. Is a strong appeal to the Medical public to use the forceps more frequently than they are wont, as being safer both for mother and child. Opposed to the majority of systematic writers.

On Diseases of the Stomach; the Varieties of Dyspepsia. By S. O. Habershon, M.D., Physician to Guy's Hospital. London: Hardwicke. Pp. 255.

, Dr. Habershon has been long before the Profession as an author on the alimentary organs; he now presents his experiences on the special subject of dyspepsia. Seeing how much has yet to be learnt of this most troublesome malady, we doubt not that the work of such a well-known observer as Dr. Habershon will be greedily read.

The Glasgow Medical Journal. Glasgow: Maclehose.

, The *Glasgow Medical Journal*, under its new management, is rapidly improving. The December number contains, along with other matter, the excellent "introductory," by Professor Gairdner, and a paper on alcohol by Dr. Pride.

Letts's Medical Diary for the Year 1867. Letts, Son, and Co., London, E.C.

, Christmas advice to our readers. Many lets to making a fortune will disappear by using Letts. Let's try it.

MEDICAL NEWS.

Royal College of Physicians of London.—At a general meeting of the Fellows held on Monday, December 17, the following gentlemen, having undergone the necessary examination, and satisfied the College of their proficiency in the Science and Practice of Medicine, Surgery, and Midwifery, were duly admitted to practise Physic as Licentiates of the College:—

John Arnold, St. Bartholomew's Hospital; George Bainbridge, Harrogate; Benjamin Browning, H.M.S. *Victory*, Portsmouth; Daniel Dougal, Strathaven; George Eastes, M.B. Lond., 43, Trinity-square, Southwark; Thomas Frampton, Gloucester House, Gloucester-gardens; Joseph Collings Grigg, School Infirmary, Greenwich; Richard Bottomley Nowell, Guy's Hospital; John Frederick Plomley, Maidstone; Lestock Holland Reid, Toronto, Canada West; Francis Manley Boldero Sims, 14, York-place, Portman-square; William Stewart, Diss, Norfolk; Henry Shinglewood Taylor, 2, Merrick-square; James Taylor, General Infirmary, Chester; Joseph Thomson, Nottingham; John Roberts Thomson, M.D. Edin., Royal Infirmary, Edinburgh; Arthur Cromack Turner, General Infirmary, Sheffield.

At the same meeting, the following gentlemen were reported by the Examiners to have passed the Primary Examination for the Licence:—

William Ashley Cox, Arthur Francis Greenhill, and Francis Charles Brett, St. George's Hospital; Ernest Richard Evans and Edward Henry McClean, St. Bartholomew's Hospital; Walter William Inglis, Nelson Congreve Dobson, Alfred Pern, and Frederick Pollard, St. Thomas's Hospital; John Adolphus Sharp, Richard Mount Cole, James Baynard Saundry, Frederick Wallace, and Charles William Chapman, Guy's Hospital; Evans Buchanan Baxter, King's College Hospital; Edward Collett Shoppee, University College Hospital; William Edward Richardson, Leeds; Frederick Morrish Pierce, Manchester.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, Dec. 13, 1866:—

Charles Goate Gurdon (Guy's Hospital) Boxford, Suffolk; Edward Noble Edwards (Guy's Hospital), 5, Kennington-terrace, S.; William Barnett Burn (St. Bartholomew's Hospital), 72, Fore-street, Limehouse; John Burges Welch (King's College Hospital), Anglesea-place, Southampton; William Smith (Birmingham Medical School), Spilsby, Lincolnshire.

The following gentlemen also on the same day passed their First Examination:—

William Webster, King's College Hospital; Edward Reginald Johnson, St. Bartholomew's Hospital; Edward Henry McClean, St. Bartholomew's Hospital; Ernest Richard Evans, St. Bartholomew's Hospital; Richard Mount Cole, Guy's Hospital; Charles William Chapman, Guy's Hospital; Francis Charles Brett, St. George's Hospital.

APPOINTMENTS.

, The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Atwell, G. H., L.R.C.P.L., has been appointed Surgeon to Lloyd's Hospital and Provident Dispensary, Altrincham, Cheshire.

Gervis, H., M.D., has been appointed Physician to the Deaf and Dumb Asylum, Old Kent-road.

Glaister, H., L.R.C.P.E., etc., has been appointed Resident Medical Officer to the Isle of Man Hospital and Dispensary, Douglas.

Thornton, W. H., M.R.C.S.E., has been elected Medical Officer to the Branch Establishment of the Deaf and Dumb Asylum at Margate.

BIRTHS.

Brown.—On November 30, at 63, Trinity-square, Borough, the wife of A. G. Brown, M.R.C.S.E., F.C.S., of a son.

Daniel.—On December 6, at Fleetwood-on-Wyre, the wife of E. M. Daniel, L.R C.S.I., of a son.

Shea.—On December 13, at 16, Dorset-terrace, Clapham-road, the wife of J. Shea, M D., B.A., of a daughter, stillborn.

Williamson —On December 15, at 1, Clarendon-villas, Mildmay-park, N., the wife of J. Williamson, M.D., of a son.

MARRIAGES.

Colbeck—Beeby.—On December 18, at St. George's, Campden-hill, Kensington, T. W. Colbeck, L.R.C.P. Lond., M.R.C.S.E., of Dover, to Eliza Elvira, eldest daughter of J. Beeby, Esq., of the Argyll-road, Kensington.

Hawkes—Punt.—On December 11, at All Saints, Hockerill, Herts, S. C. Hawkes, M.R.C.S.E., to Marianne, widow of the late J. Punt, Esq , London.

Lewer—Shaw.—On December 13, at St. Margaret's Church, Lee, A. Lewer, M.D., Royal Horse Artillery, to Bessie, eldest daughter of Colonel H. J. Shaw, Governor of the Herbert Hospital, Woolwich. No cards.

Mudd—Bridgman.—On December 18, at the Parish Church, Chilton, F. C. Mudd, M.R.C.S., to Agnes Jane, younger daughter of J. Bridgman, Esq., of Chilton, Suffolk.

Squire—Marshall.—On December 15, at Southampton, A. B. Squire, M B. Lond., to Ann Margaret, youngest daughter of John Marshall, Esq., of Ashdown House, Tunbridge Wells.

DEATHS.

Arnott, J. W., M.R.C.S , at the Royal Naval Hospital, Malta, on November 30.

Neilson, T., M.D , of Mountjoy-square, Dublin, on December 10, aged 77.

Smeathman, L., at Great Messenden, Bucks, on December 14, in his 90th year.

VACANCIES.

German Hospital, Dalston.—Honorary Assistant-Physician.

Infirmary for Consumption and Diseases of the Chest, Margaret-street.—Visiting Physician.

King's College.—Surgical Registrar, etc.

Middlesex Hospital.—Resident Obstetric Assistant.

St. Luke's Hospital.—Surgeon.

Stroud General Hospital.—House-Surgeon and Secretary.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Huntingdon Union.—Dr. Foster has resigned the Godmanchester District; area 5031; population 4362; salary £50 per annum.

Macclesfield Union.—Mr. N. C. Wood has resigned the Macclesfield District; area 2210; population 27,472; salary £120 per annum; no fees.

Whitechapel Union.—Mr. James T. Vallance has resigned the Industrial Schools, Forest-gate; salary £110 per annum.

APPOINTMENTS.

Ampthill Union.—William W. Milligan, L.R.C.P. Edin., L.R.C.S. Edin., to the Cranfield District.

Eton Union.—Frederick J. Wadd, M.R.C.S.E., L.S.A., M.B. and M.C. Aberdeen, to the Hedgerley District.

Henley Union.—John Johnstone, L.F.P. and S. Glas., L.R.C.P. Edin , to the Nettlebed District.

Howden Union.—James W. Caley, L.R.C.P. Edin., M.R.C.S.E., to the Bubwith District.

Market Harborough Union.—Charles A. Crane, M.D. Edin., L.R.C.P. Edin , L.R.C.S. Edin., L.M , to the Sixth District.

Newport (Mon.) Union.—David Lewis, M.R.C.S.E., L.S.A., to the Western District.

Shepton Mallet Union.—John O'Hanlon, L.R C.S. Ire., L.K. and Q. Coll. Ire., to the Fourth District.

Weardale Union.—Charles Arnison, L.S.A , L.R.C.P. Edin., M.R.C.S.E., to the Stanhope District and the Workhouse.

The Prince of Wales.—The Medical man called in to attend H. R. H. the Prince of Wales, during his recent indisposition whilst visiting Sir E. C. Kerrison, was Dr. W. W. Miller, of Eye.

Royal College of Surgeons.—During the last few days, no less than 133 gentlemen have been undergoing their preliminary examinations in Arts, etc., for the Fellowship and Membership of the College. The result of the examinations will not be known for a fortnight.

Medical Coroner for the University of Oxford.—At a Convocation holden on Thursday, December 6, Charles Mayo, M.A. and B.M., Fellow of New College, was elected University Coroner without opposition.

Dr. Livingstone.—A letter of Dr. Kirk, Vice-Consul at Zanzibar, dated October 23, gives favourable news of Dr. Livingstone's progress towards the head of the Lake Nyassa.

An Invitation to Quacks.—The following advertisement appears in the *Times* of Wednesday:—"Medical Advice wanted.—A gentleman, having a child, 12 years old, who has for some years suffered from extreme weakness in the limbs (without deformity), which renders walking extremely difficult, is most anxious to procure the best Medical advice, and would be very thankful to any lady or gentleman who, having received benefit in a similar case, would kindly communicate with him on the subject. Address, C.D., post-office, Alnwick."

University of Dublin.—At the winter commencements, held in the Examination Hall of Trinity College, on Wednesday, the 19th inst., the following degrees in Medicine and Surgery were conferred by Right Hon. the Earl of Rosse, K.St.P., Chancellor of the University:—*Baccalaurei in Medicinâ:* Carolus Mayo, Henricus Fitzgibbon, Jacobus H. Usher, Gulielmus D. Wilson, Thomas Jacobus P. Holmes, Robertus Edvardus Bredon, Johannes Orton, and Fredericus Orton. *Magistri in Chirurgiâ:* Thomas Waugh Belcher (*stip. cond.*), and Robertus Edvardus Bredon. *Doctor in Medicinâ:* Carolus Mayo.

Charing-cross Hospital Medical Society.—The last meeting of this Society was held at Charing-cross Hospital on December 6, when the President, Mr. Christopher W. Calthrop, read a paper "On the Comparative Anatomy and Physiology of the Eye." He commenced by explaining the primary laws of optics, as far as they related to the passage of light through the eye and the formation of images on the retina. He then gave a minute account of the general and microscopic anatomy of the tissues of the eyeball, and concluded a lengthy address by tracing the organ of vision as far as it existed through the whole scale of the animal kingdom. The proceedings terminated with a vote of thanks to the author of the paper.

Testimonial to Dr. Aldis.—On Wednesday, the 19th inst , a testimonial consisting of a handsome silver goblet and salver, with a purse of 100 sovereigns, was presented to Dr. Aldis, by Frederick J. Farre, M.D., Censor of the Royal College of Physicians, and Senior Physician to St. Bartholomew's Hospital, on behalf of Dr. Aldis's Professional friends and neighbours, as well as of several philanthropic noblemen and gentlemen. Dr. Farre, in presenting the testimonial, recapitulated Dr. Aldis's services as a sanitary officer, no less than as Physician to a long string of public charitable institutions, and congratulated him on the high and deserved estimation in which these services were held by the Profession and the public. Dr. Aldis, with scarcely concealed emotion, thanked the donors, and gave a touching picture of his early career. Amongst various incidents he related the wonder and amazement with which well-to-do clergymen and merchants regarded him when at the outset of his Professional life he, a young M.D. from Cambridge, solicited the unpaid office of Physician to the repulsive and degraded *habitués* of East London Dispensaries. Since that time his life had been passed in these appointments, of which a long list was read, and which, it seems to us, constitute a fairer claim to a pension from the Crown than some that we hear of. An elegant cold refection followed the presentation, at which we hear that Dr. Synnot, of Eaton-square, at whose original suggestion the testimonial subscription was set on foot, and by whose exertions it was successfully carried out, together with the venerable Mr. Furnivall, Dr. Day Goss, and many others, were present. We learn that the silver goblet was appropriately "inaugurated" with a "bumper of Burgundy," which the estimable Doctor passed round as a "loving cup," and which brought the proceedings to an agreeable and hilarious conclusion.

Testimonial to the Medical Officer of Health of the Charlton District.—We are very happy to receive a copy of the following resolution from the Charlton Committee:—"Plumstead Board of Works, December 17, 1866. Resolved—That in consideration of the efficient services rendered by the Medical Officer of Health during the recent visitation of cholera, the great demand made on his time during its continuance, and the great personal danger incurred in his daily visitations, this Committee recommend that a gratuity of 75 guineas be presented to Dr. Finch. At the same time it desires to express its high opinion of those services, and its entire concurrence in the measures which from time to time have by him been recommended."

Attempt to Murder a Surgeon.—Mr. C. le V. Godfray, Surgeon to the General Hospital at Jersey, was fired at in the middle of the day, in Gloucester-street, by a man named Thomas Roberts. The contents entered Mr. Godfray's left shoulder, and he fell on his knees, but rose instantly, seized the would-be murderer, and secured him with assistance. The prisoner, two or three years ago, was an inmate of the General Hospital, suffering from a bad leg, which was attended to by Mr. Godfray. Eventually Roberts went to England, where, his leg getting worse, he had it amputated. He returned to Jersey about six months ago, and made no secret of his antipathy to the Doctor, whom he blamed as the cause of his losing his leg.

Subdivisions of our Profession.—Specialism has been often complained of in this country, but in America things would seem to be much worse. The Bellevue Hospital, New York, has recently started an out-patient department. The following are the various appointments:—Diseases of the Chest—Drs. Delafield and Humphreys. Digestive Organs—Dr. Ludlum. Nerves—Drs. Hammond and Gillette. Male Genital Organs—Drs. Southack and Quinby. Skin—Drs. Lee and Piffard. Women—Drs. Lusk and Winston. Eye and Ear—Dr. Corey. Children—Drs. Done and Healis. Orthopædic Surgery—Dr. Yale. General Surgery—Drs. Moseley, Demainville, White, and Pinckney. How do patients find their way to the right department? Do they go through a preliminary sorting, and, if so, do the porters take charge of the process?

The Cattle Plague.—The number of attacks of cattle plague reported as having occurred in Great Britain during the week ending December 8, was 14; this is a decrease of 18 on the previous return. Fresh outbreaks took place in 2 farms or places where cattle are kept; the number in the week preceding was 6. Thirty-five healthy cattle were slaughtered during the week from having been in contact with diseased animals. The attacks reported are for the following 2 petty sessional divisions of England; viz—(Yorkshire, East Riding) South Holderness, 2 bullocks, 2 steers, 2 heifers, and 7 calves; and (Yorkshire, North Riding) West Bulmer, 1 cow. The number of animals attacked since the commencement is 253,785, and 52,485 healthy cattle have been slaughtered to prevent the spread of the disease.

The cholera has made its appearance in the Union Workhouse at Hertford. On Tuesday in last week an inmate named Chalkley, aged 66 years, was attacked, and succumbed to the disease in twenty-four hours. The Medical officer reported the case to the Guardians on Saturday as one of choleraic diarrhœa, and said that, judging from the state of health of the inmates generally, he had no reason to suppose that the attack would be followed by others. Before, however, the Board rose, the master reported that another inmate, aged 60, had been suddenly attacked, and that bad symptoms had set in. The chairman, Mr. Abel Smith, M.P., recommended that no water should be taken for drinking purposes from the well which supplied the workhouse. It should be stated that the workhouse is healthily situated about half a mile from the town, but that it has no proper drainage.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Southsea.—The writer of those papers was the late lamented Mr. Fletcher, for many years our Medical Correspondent at Liverpool. Your request shall be complied with in another manner.

A Fellow.—It is generally expected that the choice of the Council will fall on the senior Councillor, Mr. Cock, of Guy's Hospital, as the successor of Mr. Hawkins.

The *North British Daily Mail* for December 13 contains a silly paragraph, entitled "Professional Trades Unionism," commenting on the newly established Glasgow Medical Association. From what we have heard of the rate of Professional remuneration in Glasgow, we think it high time that an alteration should be made by some united action on the part of the Practitioners of the town. We should be very glad to see the example of Glasgow followed in some other towns, both of Scotland and England.

Medical Advertising.—A correspondent has forwarded us the number of the *Shoreditch Observer* which contains two advertisements—one an address to the Shoreditch Vestry, by Dr. James Edmunds, "M.D., L.R.C.P., M.R.C.S., etc., Fellow of the Medical Society of London, Lecturer on Medical Science to the Female Medical Society," in which he offers himself as Medical Officer of Health to the parish. It occupies about one-third of the column of the paper. The other advertisement is the address of another candidate, Dr. Henry G. Sutton, who signs himself M.B. Lond., Member of the Royal College of Physicians, Pathologist to the London Hospital, Assistant-Physician to the Victoria-park Hospital for Diseases of the Chest, Physician to the Cholera Hospital. In addition to the publication of his address to the Vestry, this gentleman has filled nearly an entire column of the paper with testimonials as to his Medical capacity. Dr. Edmunds does not, it is true, publish his testimonials, but he asserts, through the advertising columns of the *Shoreditch Observer*, that his testimonials prove, amongst other things, "that as a student, *while distinguished by the highest honours in almost every branch of Medical science*, the senior professors also testified to *my practical skill* and *exemplary conduct.*" Our correspondent asks—Is this sort of thing Medical advertising? and if so, where is it to end?

Med. Chi.—There was an index of the first thirty-three volumes of the *Transactions* of the Society published in 1851.

A Country Surgeon.—Essays for the Jacksonian Prize must be sent in before Christmas-day next. The value of the prize when founded by Mr. Samuel Jackson, a Member of the College, was ten guineas, since increased by the College to twenty guineas.

Mr. Goodwin.—Mr. White, Surgeon to the Westminster Hospital, was, it is stated, the first to excise the head, neck, and trochanter of the femur. The patient survived twelve years, then dying consumptive.

Dr. Candolle, Jun.—Dr. Gibbons, an eminent Physician, was the first to introduce *mahogany.* It was brought to this country by his brother, a West Indian captain, as ballast, and the first article made of it was a candle-box.

A Metropolitan Reformer.—There is a rumour of great changes in the mode of conducting examinations for the Fellowship and Membership of the College of Surgeons, and several interviews between the heads of the two Colleges have taken place, which may, perhaps, prove beneficial to the Profession. You will find an editorial notice of the number of bodies entitled to grant diplomas to practise Medicine and Surgery in vol. xix., p. 184, of the *Medical Times and Gazette.*

Dr. Thompson.—The College acts with liberality in the matter. If the candidate fails in the preliminary examinations for the *Fellowship*, his good marks in other respects will probably get him through for the *Membership.*

W. T. Reynard, M.D.—The work alluded to was written by the late Mr. William Wadd, a Member of the Council of the College of Surgeons, with the quaint title "Nugæ Canoræ; or, Epitaphian Mementos (in stone-cutters' verse) of the Medici Family. By Unus Quorum." A gentleman suffering from hæmorrhoids sent the following lines a few days ago to his Medical attendant, a distinguished provincial Surgeon:—

"Dear Doctor,—Please send some more hinderpart lotion;
Of the good the last did me you have not a notion;
But I think I may venture to ask you for more,
For my anus at times is uncommonly sore.'

The reply from our country friend is equally good—

"I'm glad that the physic was just to your mind,
For I pity a fellow who suffers behind.
Use just what is needful—you need not do more;
And thank your kind stars you don't suffer before."

Testimonial to the "Pall-mall Gazette."

The following are the names of gentlemen who desire to contribute to this object:—Dr. Harling, £2 2s.; E. Hills, Esq., £2 2s.; G. Pollock, Esq., £2 2s.; G. Callender, Esq., £2 2s; Dr. Garrod, £2 2s.; C. De Morgan, Esq., £2 2s; T. H. Hills, Esq., £2 2s.; H. S. Savory, Esq., £2 2s; T. Laurence, Esq., £2 2s.; E. Hart, Esq., £2 2s.; J. H. Parkinson, Esq., £2 2s.; J. Soelberg Wells, Esq., £2 2s.; Dr. Druitt, £2 2s.

Ozæna.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In a lecture by Dr. Anderson, published in a late number (855) an allusion is made to an instrument by which the whole of the nasal tract may be efficiently washed out.

May I ask where such an instrument can be procured—its name and cost? I am, &c. L.

December 10.

_ Apply to Weiss, in the Strand.

Postural Treatment of Prolapse of the Funis.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In the *Medical Times and Gazette* of December 15 I noticed a letter, headed "Postural Treatment of Prolapse of the Funis," in which the writer, Mr. N. Adams, says he was called to a case where the funis was prolapsed, and, following the plan adopted by Dr Dyce, placed the patient on her elbows and knees, and during the pains pushed up the funis. He thus laboured, he says, for the best part of an hour, and eventually the cord was safely lodged above the head. This plan might be resorted to amongst poorer patients, but many ladies would object to being placed in this position. Why, in the first case related, did not Mr. Adams put on the forceps when he found he was unable to replace the prolapsed cord, and thereby probably save the child? He says the patient was the mother of several children. Had she not been, perhaps his treatment—viz., letting the case take its own course—was right; but, under the circumstances, I should certainly have had recourse to instruments.

December 17. I am, &c. W. G. K.

Coroners' Inquests.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Would you kindly inform me whether I am right in concluding that your answer No. 2, "No, if there was no supposition of foul play," to my question, "Was it a legitimate case for an inquest?" does not apply generally to the question, but to that part of it which assumes that the cause of death could not be diagnosed, there being at the same time no well-grounded reason for suspicion? since your answer No. 4 to my question, "Could such a death be called sudden?" is expressed by the affirmative "Yes."

Unless the answer No. 2 be qualified as I suggest, I can't see how that answer and No. 4 can be reconciled with the following passage from Blackstone:—"The Coroner's Court is a Court of record to inquire, when any one dies in prison or comes to a violent or sudden death, by what manner he came to his end." I am, &c.

London, December 16. An Old Subscriber.

_ We can only say that, as a matter of practice, a sudden death without suspicion is not made the subject of an inquest. If all such deaths were regularly inquired into without subjecting survivors to the pain of a Coroner's inquest, it would be well.

Dentistry and Medicine.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Mr. Coleman takes exception to your statement that there is a tolerably clear demarcation between the practice of Medicine, in the general acceptation of the term, and the practice of Dental Surgery, as a distinct speciality. Mr. Coleman always brings to bear an amount of ability in the consideration of any subject he takes part in, which must entitle his views to respect; but in the letter which he publishes in your last issue, I cannot but feel forcibly reminded of a lecture I listened to some time ago, wherein the speaker—a man of no mean attainments—contended that the earth was a plane, and not a sphere. He did not merely make the assertion, but he also brought lengthy arguments to bear upon the question, no doubt to his own perfect satisfaction, but, unfortunately, not to the satisfaction of the judgment of his audience.

I have no intention of going through Mr. Coleman's arguments, in which all is said that can be said in favour of the position he supports, and yet the question remains unaltered. According to "long usage," the Profession of Dental Surgery is regarded as a distinct speciality. Aurists and oculists were always supposed to possess a Medical qualification—not so with dentists; and the highest possible position has been attained by many of these latter without legal qualifications long before the reformatory movement of 1856.

Then as to Mr. Coleman's comparison between the adaptation of the oculist's lens of glass with the dentist's artificial teeth, can comment be necessary? In the oculist's case, the mechanician upon whom he depends confines his manipulations within a limited routine. The mechanical dentist, on the other hand, has an almost unlimited range wherein to exercise his dexterity, and I venture to say that a Dental Practitioner who has not made himself practically acquainted with the method of constructing for himself mechanical appliances for the mouth, is not the best man to adapt such appliances. I do not say the Dental Surgeon should of necessity execute his mechanical work, but I do say he ought to be able to do it.

With regard to the certificate in Dental Surgery having been accepted by the late College of Dentists as admitting an error in judgment, I beg to say for myself, as I believe I may say for many others, it was no such thing. Prior to the year 1856, the profession of Dental Surgery had no legal recognition whatever.

This state of things was considered unsatisfactory, and two courses were recommended to remedy it—one as an independent organisation, the other as a connexion with the College of Surgeons. The latter prevailed with the majority of the more influential members of the Profession. Now gentlemen who supported the former course fell in with the latter, not because it was the best, but because they considered it was far better than no legal recognition at all.

If Dental Surgeons had generally supported the College of Dentists, the Profession would have had an incorporated institution of their own at this moment, instead of being hangers-on (without privilege) to the College of Surgeons.

As matters stand, the policy of dental licentiates appears to me to be to hammer away at the College doors for their rightful privileges, and if these be not granted within a reasonable, not long extended, time, to set about regulating their own affairs. I am, &c.

Croydon, Dec. 5. Samuel Lee Rymer.

COMMUNICATIONS have been received from—

Mr. W. P. Adams; Dr. Puckle; R. N.; Mr. W. H. Thornton; Dr. Pirrie; Dr. Allbutt; An Old Subscriber; Dr. George Johnson; Mr. Furneaux Jordan; Dr. Miller; Mr. W. G. Kemp; Mr. E. Bellamy; Dr. Donkin; Dr. Finch; One who Loves Peace; Mr. Walter Coulson; Dr. Althaus; Dr. Lionel Beale; Mr. J. Chatto.

BOOKS RECEIVED—

Glasgow Medical Journal, No. 8—Wood's Practice of Medicine, Sixth Edition—Letts's Diaries—Winslow on Uncontrollable Drunkenness—Cooley's Pill Book—The Morningside Mirror, Nos. 1 to 12—Chemist and Druggist, No. 88—Bulletin de l'Académie Royale de Médecine—St. George's Hospital Reports, Vol 1.—Peacock on Malformations of the Human Heart, Second Edition—British Association Report for 1866—Report of the Metropolitan Board of Works.

NEWSPAPERS RECEIVED—

L'Union Médicale—Gazette des Hôpitaux—North British Daily Mail—Shoreditch Observer—Gazette Hebdomadaire—Gazette Médicale de Paris—Harrogate Advertiser.

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 15, 1866.

BIRTHS.

Births of Boys, 1029; Girls, 1045; Total, 2074.
Average of 10 corresponding weeks, 1856-65, ...

DEATHS.

	Males.	Females.	Total.
Deaths during the week	714	675	1389
Average of the ten years 1856-65	686·0	649·3	1335·3
Average corrected to increased population..	..	..	1469
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	3	3	4	1	6	2	3	..
North ..	618,210	15	4	12	1	9	9	5	..
Central	378,058	7	2	4	2	11	6	6	..
East ..	571,158	6	4	7	2	7	9	3	1
South ..	773,175	5	12	11	5	8	23	8	1
Total ..	2,803,989	36	25	38	11	41	49	25	2

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·678 in.
Mean temperature	43·4
Highest point of thermometer	55·0
Lowest point of thermometer	28·6
Mean dew-point temperature	40·6
General direction of wind	W.S.W.
Whole amount of rain in the week	0·60

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, December 15, 1866, in the following large Towns:—

Boroughs, etc.	Estimated Population in middle of the Year 1866.	Persons to an Acre. (1866.)	Births Registered during the week ending Dec. 15.	Deaths. Corrected Average Weekly Number.*	Deaths. Registered during the week ending Dec. 15.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of the Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Tons per Acre.
London (Metropolis)	3067536	39·3	2074	1400	1389	55·0	28·6	43·4	0·60	61
Bristol (City) . .	163680	34·9	111	73	‡162	55·2	30 9	45·4	1·66	168
Birmingham (Boro')	335798	42·9	255	163	134	55·7	27·2	42·8	0·38	38
Liverpool (Borough)	484337	94·8	355	281	298	52·5	33·1	44·5	0·29	29
Manchester (City) .	358855	80·0	291	203	‡195	52·5	30·0	40·0	1·25	126
Salford (Borough) .	112904	21·8	83	57	58	52 4	29·0	41·3	1·24	125
Sheffield (Borough) .	218257	9·6	204	115	123	51·0	28·5	41·2	0 82	83
Leeds (Borough) .	228187	10·6	206	116	106	53·5	28·0	42·2	0·95	96
Hull (Borough) .	105233	29·5	95	49	38	..	..	..	..	..
Nwcastl-on-Tyne, do.	122277	22·9	87	65	97	49·0	28·0	40 1	0·28	28
Edinburgh (City) .	175128	39·6	131	84	111	48·7	30·0	40·6	0 80	81
Glasgow (City). .	432265	85·4	345	252	256	47·7	29 0	40·1	2·28	230
Dublin (City and some suburbs) .	318437	32·7	142	†156	161	53·2	26·0	42·0	0·51	52
Total of 13 large Towns . . .	6122894	34·4	4379	3014	3028	55·7	26·0	41·8	0·92	93
					Week ending Dec. 1.	Week ending Dec. 1.				
Vienna (City) . .	(1863) 560000	..	..	..	299	..	..	§ 35·8	..	..

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·678 in. The barometrical reading decreased from 30 34 in. on Sunday to 29·19 in. on Saturday.

The general direction of the wind was W.S.W.

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* The average weekly numbers of births and deaths in each of the above towns have been corrected for increase of population from the middle of the ten years 1851-60 to the present time.

† Registration did not commence in Ireland till January 1, 1864; the average weekly number of births and deaths in Dublin are calculated therefore on the assumption that the birth-rate and death-rate in that city were the same as the averages of the rates in the other towns.

‡ The deaths in Manchester and Bristol include those of paupers belonging to these cities who died in Workhouses situated outside the municipal boundaries.

§ The mean temperature at Greenwich during the same week was 38 7°.

APPOINTMENTS FOR THE WEEK.

December 22. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 9½ a.m.; King's, 2 p.m.; Charing-cross, 1 p.m.; Royal Free Hospital, 1½ p m.

24. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

25. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.

26. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.

27. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.: Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.: West London Hospital, 2 p.m.

Royal Institution, 3 p.m. Professor Frankland, "On the Chemistry of Gases." (Juvenile Lectures.)

28. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.

ORIGINAL COMMUNICATIONS.

HOW SHOULD GUN-SHOT WOUNDS PERFORATING THE KNEE-JOINT BE TREATED?

By JULIAN J. CHISHOLM, M.D.,
Professor of Surgery in the Medical College of South Carolina, U.S.A.; formerly Surgeon in the Confederate Army.

As a rule, gun-shot wounds perforating the knee-joint are so fatal under the usual methods of treatment that military Surgeons are seriously embarrassed in selecting a course from which they might hope for a successful issue. In European army experience such cases do very badly, whether left to themselves or whether operated upon by amputation or excision. In by very far the majority of cases the patient dies, proving, as the result of experience, that gun-shot wounds perforating the knee-joint are among the most fatal wounds of the battle-field. In the large experience gathered from five years' war in the United States, it would appear as if the previous reports of European army Surgeons had been confirmed, and that amputation of the thigh in recent perforating wounds of the knee-joint offered the best means of saving life. In recent years resection or excision of the heads of bones crushed or injured by a ball has been urged as a substitute for amputation, and unfortunately in both the Federal and Confederate armies resections became too much the fashion, many lives being sacrificed to this modern operation. Every joint and nearly every long bone of the extremities were freely excised, often, as in the shoulder and elbow, with the best results; but in the shafts of long bones disastrously, and in the knee- and hip-joint with the most fatal consequences:—

Federal Army Reports to July, 1864.

	Mortality.
Primary excision in the shaft of the femur .	84 per cent.
Primary excision of the knee-joint . .	90 ,,

Confederate Army Reports to February, 1864.

	Mortality.
Primary excision of the knee-joint . .	75 per cent.(a)

Where amputation was resorted to as the remedy for gun-shot injuries perforating the knee-joint, the results were as follows:—

Federal Army Reports to July, 1864.

	No. of cases.	Mortality.	Per cent.
(b) Amputation through the lower third of femur . . .	243	112	46

Confederate Army Reports to February, 1864.

	No. of cases.	Mortality.	Per cent.
(b) Amputation through the lower third of femur . . .	269	126	46

These results of amputation in the lower third of the thigh for injuries of the knee-joint are so satisfactory that where the tissues about the articulation are much lacerated or the bones much crushed, amputation will always be resorted to. But there is a class of cases in which the perforating injury to the joint appears trivial, or in which the bones are to no great extent injured, and in which the Surgeon can with difficulty overcome the patient's abhorrence to an amputation. Under these conditions, the experience of Confederate Surgeons in attempting to save the limb gives so satisfactory a result that it becomes a question whether conservative Surgery may not be more extensively used for gun-shot wounds of the knee-joint than it now is.

The following table was compiled from Confederate Army Reports:—

	No. of cases treated.	Cures.	Deaths.	Per cent. of mortality.	Average duration of treatment in fatal cases. No. of days.	Longest period. No. of days.	Shortest period. No. of days.	Average duration of successful treatment. No. of days.	Greatest period. No. of days.	Least period for cure No. of days.
Knee-joint perforations treated without amputation(c) . .	103	50	53	52	40	163	15	166	285	96

It may be argued that the successes exhibited by this table must be partially attributed in many cases to the trivial character of the injury, which could not have implicated the cavity of the articulation. An examination into the duration of treatment of the successful cases gives an average of 166 days, the shortest period of successful treatment being in only one case 96 days, which of itself marks in the strongest terms the very serious character of the least dangerous case; clearly proving the suppuration and the too much to be dreaded suppurative synovitis. Simple flesh wounds in the neighbourhood of joints heal usually without difficulty in two or three weeks. It may be presumed that most, if not all, of the cases of knee-joint wounds, retained for conservative treatment, were perforations by balls, without crushing of bones being detected. The Surgical statistics of the Confederate Army would warrant us in treating all such cases without amputation or resection of the heads of the bones forming the joint. For the successful treatment, the patient should be kept as quiet as possible, in a well-ventilated ward or tent, with his nervous system kept at the least stage of irritation by the continued administration of opium. The general condition of the system is to be constantly watched, excretions promoted, and such tonic and supporting remedies administered as will control the circulation, increase the tone of blood-vessels, and moderate inflammatory action. The most conspicuous of these elements of medication are opium and iron. The limb should be kept at absolute rest, which can be best insured by securing it to a posterior splint, extending from the buttock to beyond the heel. To the surface about the joint are continuously applied cold evaporating lotions, of which iced water is the simplest and best. This, however, can be medicated so as to increase the evaporation and the refrigeration of the external articular surfaces. As soon as the swelling, redness, and pain in the superficial structures with systemic irritation indicate synovitis with suppuration, the joint should be freely laid open, the articulating cavity fully explored, and all fragments of bone or foreign bodies removed, and a free outlet given to the purulent discharge. It is from the apparently bold Surgery of opening freely the joint that the best results are obtained. During the entire treatment of the suppurative stage the best antiphlogistic remedies are found to be nutritious food and the free use of alcoholic stimuli.

In cases in which there was excessive engorgement of the limb, with a general suppurative disposition which when it occurred constantly foreboded evil, the most satisfactory results were obtained in a few cases in which the excessive circulation in the limb was suddenly checked by the ligation of the femoral artery. Surgeon Campbell, who introduced this practice into the Confederate military Hospitals, considers it a safe and powerful antiphlogistic remedy. The previous development of vessels under inflammatory progress insures the limb against mortification; whilst the control of the circulation from the ligature will in thirty-six hours so reduce the size of the limb and arrest profuse suppuration as to change competely the aspect of the member.

Should the ball in its passage through the knee have crushed the heads of the bones, and the case be deemed too serious to warrant treatment without an operation, the experience of both Confederate and Federal Army Surgeons unanimously condemns primary resection of the knee-joint. In every such instance the life of the patient can best be preserved by amputating through the lower third of the thigh, an operation which army experience proves to be preferable to disarticulating through the knee-joint.

Primary resection of the knee-joint is so disastrous as a field operation that it should be discarded from field practice by Army Surgeons.

(a) This percentage would have been larger had all the fatal cases been reported.

(b) Only such cases are engrossed in these Reports as had been traced to their termination at the date of the Report; the many cases not discharged from Hospital are not incorporated.

(c) A very much larger number of cases had been reported by Confederate Surgeons, but these reports had not been examined or their contents collated when the above tables were compiled. These only include such as had their termination satisfactorily traced in February, 1864.

Decline of Cholera in Dublin.—We are happy to be able to state that the epidemic seems to be rapidly disappearing from the Irish metropolis. The deaths from cholera registered there during each of the last four weeks have been respectively 65, 31, 12, and 9. The deaths from all causes in the Dublin district during the last week were 145 against 174 in the corresponding week of last year. The former number represents an annual ratio of 24 in every 1000 of the population by the census of 1861.

The President of the Harveian Society has issued cards for a *conversazione* on Thursday, January 3rd, at the Stafford Rooms, Titchbourne-street, Edgware-road.

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Medical Times and Gazette.

SATURDAY, DECEMBER 29.

ANNUS MEDICUS.

As the last days of the year of grace 1866 glide away, and the whole becomes a part of time past, we must, as is our wont at similar periods, attempt to present our readers with a short summary of what have been to us, as a Profession, its most notable events. It will probably in our memories be most remarkable for the victories won by preventive medicine, or sanitary science. In its course have been included the acme and decline of the cattle plague epidemic, and the rise, progress, and termination of a visitation of epidemic cholera. In neither epidemic did the science and art of healing achieve any triumphs or marked success; but in both the efforts to prevent the spread and progress of disease were signally successful.

In the first week of the year the number of fresh cases of cattle plague was 9120; and it continued steadily to increase till, in the week ending February 17, it amounted to 13,901. This was the highest point, and from this time the decrease was very rapid; in each of the two following weeks 3000 fewer fresh cases were reported; then the weekly decrease was about 2000; then there was a less rapid, though steady, diminution till the disease all but disappeared.

Parliament met on February 6, and the cattle plague was the very first subject which occupied its attention. The timidity and inaction of Government were commented on with great freedom and severity on all sides of the House, and the absolute necessity of measures more or less closely approaching those recommended by the Royal Commission was insisted on with pertinacity and resolution; and with success. Government, yielding to the pressure put upon it, brought in an Act stopping all movement of stock and of things likely to be vehicles of infection, requiring the isolation and slaughter of all infected cattle, and imposing measures of disinfection. This—the Cattle Diseases Act—was rapidly passed through both Houses of Parliament, and became law on February 20, and was supplemented and strengthened by an Order in Council on March 24.

The rapid decrease in the number of attacks of the disease after February 17 converted the great majority of people to an implicit belief in the efficacy and wisdom of these measures; violent opponents of them became as strong supporters, and even the Great Thunderer of the press remarked, early in November, that, "tried by its results, it must be admitted that very seldom has any piece of legislation proved more entirely and triumphantly successful. Till the passing of the Act the disease steadily increased; from the passing of the Act it has steadily diminished, until now it is almost entirely extinguished." It is to be observed, however, that not every one is disposed to admit this. Some authorities hold that the cessation of the rinderpest is by no means entirely, or chiefly, due to what have been called the "stamping-out" measures, but is owing to the natural action of the "law of increase and decrease of epidemics;" and it cannot be denied that the progress of the epidemic did at times so closely approximate to the rates of increase and decrease calculated by Dr. Farr according to this so-called law, as to give very considerable support to this theory. But there were also large variations from it. It is difficult to find any explanation of the sudden decrease of 3000 in the number of fresh attacks of the disease in the week ending February 24. Perhaps it may be thought that, owing to an increased conviction of the necessity for "stamping-out" measures, and to the tone of Parliament, all required and recommended means of prevention were carried out with greater energy and rigour, and that so the effect of the stamping-out Act was somewhat anticipated: be that as it may, the credit of the decrease cannot at any rate be given to the law of epidemics, for this knows no such great and sudden decrements, and the "calculated" decrease in that week was only about 200. In the following weeks also, when the Cattle Diseases Act was in full force, the actual rate of decrease was very greatly beyond the "calculated rate." Thus for the month of February the "calculated series of weekly attacks" gave 10,382, 10,327, 10,098, and 9705, while the attacks actually reported for those weeks were 11,590, 13,901, 10,167, and 7310. It is, of course, impossible to find what would be the effect of the stamping-out system alone, for it is impossible to eliminate the action of the "Epidemic Law," granting, which we do not for a moment deny, the existence of this. And we are not aware that any Government has been bold enough, or has had sufficient faith in science, to trust to the action of the epidemic law alone, without the adoption of any measures of repression and prevention, except perhaps in the vast and unmanageable Russian steppe, and there it is said the disease never does die out. We believe that both the epidemic law and the stamping-out measures have been active causes in extinguishing the rinderpest, and we are not Quixotic enough to attempt to strike the balance of credit between them, or to prove that either would have been sufficient by itself. It may at any rate be said that their concurrence was a very happy concurrence, and we will leave to the partisans of each the task of determining which has gained most in credit by the fortunate concurrent action of the other—of settling which was the true efficient cause of decrease, and which only a lucky coincident adjuvant.

Several more or less rational and irrational methods of treating rinderpest were proposed and tried, but not one obtained any encouraging degree of success. An old theory of the identity of the disease with small-pox was again put forth, and some eminent authorities strongly supported and urged the hypothesis that the two diseases are at least so closely allied that vaccination might prove to be as effectual a preventive against the one as it is against the other. It accordingly was tried most extensively and carefully, and at a great expense to the country, but the experiment resulted in total failure, and the idea ought never again to be entertained.

The Cattle Plague Commissioners issued altogether three reports and an appendix. The Commission performed its task most admirably, and very seldom, if ever, has any disease received such a thorough, elaborate, and scientific investigation. Its work constitutes a model of the manner and spirit in which similar inquiries ought to be carried out. The appendix consisted of invaluable reports from gentlemen appointed by the Commissioners to investigate the disease "from special points of view," and the whole Medical history of the malady, its etiology and pathology, its relation to human diseases, its microscopical anatomy, chemistry, and treatment, and the subject of disinfection, were most minutely and ably examined into and treated of by Drs. Angus Smith, Beale, Bristowe, Marcet, Murchison, and Sanderson, and Messrs. Crookes, Pritchard, and Varnell. And their work is not for a day, but for all time. Its value will not cease or diminish with the diminution or cessation of the cattle plague, but would remain the same were that disease to disappear for ever; for the knowledge and the conclusions arrived at in these investigations apply to the causation, prevention, and cure of all epidemic and epizootic diseases. Indeed, the lessons taught the Government and the nation by the rinderpest have already borne good fruit. Without their teaching we very much doubt whether we should have got the "Sanitary Act of 1866," and unquestionably they greatly strengthened the hands of the Officers of Health in their contest with the late outbreak of cholera. The legislation of the year with regard to rinderpest has been very remarkable for the most unusual boldness with which it has recognised that, even in sanitary matters, the good of the nation at large must override what seem to be individual rights; it ventured to restrict the sacred liberty of the British subject to do what he likes with himself and all that is his, regardless of his neighbour; and it interfered with the still more sacred liberty of free trade—in disease. Not only were the appointed authorities empowered to deal peremptorily and arbitrarily with the disease wherever they found it, but every fresh outbreak of it was required, under pain of penalties, to be instantly made known to those authorities. And, further, the last Order in Council prohibits the importation of foreign cattle except through certain selected ports, and enacts that all imported beasts not meant for immediate slaughter shall be subjected to strict quarantine.

It seems incredible that the principles thus recognised in legislating for the preservation of our cattle from rinderpest should not be also applied with all the power of the law to the management and prevention of those cognate diseases—typhus and typhoid fever, variola, diphtheria, cholera, &c.—which yearly carry off thousands of the human race.

The Cattle Plague Commission warned us that we might expect a more or less serious return of the disease in the winter; the particles capable of communicating it are exceedingly minute, and extremely retentive of their infectious properties, and as cattle came to be again gathered together in their winter quarters, there would be great danger of a recrudescence of the disease. It has, as was feared, broken out again in some of its old haunts, and unless great and prompt caution is exercised it may again spread rapidly. The recognition of this danger has led the agricultural societies to call for permanent instead of temporary legislation on the subject, and the *Times*, supporting them, recommends "a complete review, simplification, and permanent establishment of the law relating to the cattle plague and diseases of cattle generally," and remarks: "The whole subject admits of being reduced into the form of a code. . . . We should rejoice to see it removed from the temporary, intermittent, verbose, revocable regulations of the Privy Council to the permanence, simplicity, and precision of an Act of Parliament." Supposing a simple and precise Act of Parliament to be a possible creation, we would adopt the language of our contemporary and apply it to the state of the sanitary laws; these might surely now be reduced to one simple act or code, and with incalculable advantage; and, *pace* all Reformers, we can hardly conceive of a more useful occupation for Parliament than these two labours.

It will be remembered that, in September and October last year, a few cases of cholera occurred in Southampton, and at Epping, near London. Though the disease had hitherto always invaded our country through one of the eastern ports, yet it was feared that these cases would prove to be the autumnal mutterings which always precede a cholera storm in the year following, and every effort was made to rouse the authorities and the nation to a sense of the threatening danger.

About the middle of June these fears were verified by the occurrence of cases of cholera again in Southampton, though the disease did not spread much there till the beginning of July. On July 1 the disease also appeared in Liverpool, and on the 6th at Llanelly. In the first and second week of the same month three fatal cases occurred at Bromley in the London district. On the 10th a case was admitted into the London Hospital, the patient being a woman who had come from Holland, where the disease was rife, on the 6th. On the 12th a rapidly fatal case was taken in from Stepney, on the 13th a third, on the 14th four cases from the neighbourhood of the Ratcliffe-highway and the Commercial-road, and six on the 18th. On the 17th and 18th there were also two cases taken in at Guy's Hospital, one at St. Bartholomew's, one at the Westminster, and fatal cases were reported in private practice in the East and South of London. The Registrar-General's weekly returns for the metropolitan districts reported thirty-two deaths from cholera in the week ending July 14; in the next week they had risen to 346, of which 308 occurred in the "East districts," and in the week ending July 28 they amounted to 904, 811 of which were in the same Eastern districts, and in the same week there were 349 deaths from diarrhœa. We quote from the Registrar-General's notes of that week a well-deserved tribute to the Medical men, and the inhabitants in general. He remarks—

> "The Medical men have no rest, and with the Health Officers are nobly doing their duty; brave men ready to lay their lives down for their patients. The people themselves are most patient, most willing to help each other, the women always in front, and none shrinking from danger. There is no desertion of children, husbands, wives, fathers, or mothers from fear."

And he draws, from personal inspection, a graphic sketch of the scene presented in this "cholera field"—a scene which might well have appalled stout-hearted men. In Poplar alone 145 died of cholera in that week, and 188 in Bow. In the ensuing week, that ending August 4, 1053 deaths were registered from cholera, and 354 from diarrhœa; and of the deaths from cholera, 916 were in the East districts, while in the West there were only 12, in the North 46, 31 in the Central, and 47 in the South districts. The mortality was thus seen to be rapidly increasing and to be spreading rather more over the metropolis, while it had already attained a height that was not reached till two weeks later in 1849, and till four weeks later in 1854. It might then well have been feared that in this epidemic cholera would prove a more terrible destroyer than it had ever yet been with us. But sanitary science fought against it as it had never fought before. In every parish the Health Officers were supported much better than in former epidemics, and the most active measures were taken to repel the invader. House-to-house visitation was energetically and efficiently carried out; cholera patients were removed to special hospitals, or special wards in the general hospitals; disinfection of all drains and sewers, and of infected houses, bedding, and clothing, was rigorously insisted on; the still healthy were removed from infected houses; the water supply was looked to, and private charity came forward nobly to take care of the suffering, the destitute, and the convalescent. The Health Officers were indefatigable in their labours, and the battle with the disease was well and gallantly fought, and with remarkable success. In the next week, the week ending August 11, the deaths from cholera had fallen from 1053 to 781, those from diarrhœa from 354 to 264, and the decrease continued to be rapid and steady till in the first week in September, the most fatal week in the two previous epidemics, the deaths from cholera were only 157, from diarrhœa 132—in the same week in 1849 they had been 2026, and in 1854, 2050. From this time the decrease was never rapid, and in some weeks there was a slight increase, but in the return for the week ending December 1 the Registrar-General was able to say "only three deaths from cholera were registered during the week, and the epidemic is now virtually extinct." In the same return we are told that "in the year 1849, when the population of London was about two millions and a quarter, cholera slew 14,137 people of all ages; in 1854 not less than 10,738 out of two millions and a half; and in the present year, when the population exceeds three millions, the deaths have been 5548, of which 3909 occurred in the East London districts, and 1639 in the rest of the metropolis. The deaths to every 10,000 of the population were 62, 43, and 18, in the three epidemics, all over London." And this result has not been owing to any decrease in the fatality of the epidemic, for in other countries its ravages have been fearful. Thus, in Holland and Belgium, up to a recent date the mortality has been 141 in every 10,000 of the inhabitants. In Brussels the deaths have been in the proportion of 164, Utrecht 271, and in Amsterdam 42, in 10,000 inhabitants. Had the same proportion of inhabitants perished in London as in Holland and Belgium, "the deaths, instead of about 5000, would have exceeded 42,000." Surely we have a right to rejoice with gratitude in this result as a triumph of hygienic science, "before which the destroyer retreated step by step." A very valuable report of the various measures taken by the Health Officers will be found in the appendix to the Registrar-General's Returns dated October 20 and 27. Dr. Ballard's report is particularly valuable and noteworthy from its fulness and exactness of detail; and no one can, without studying these accounts, fully appreciate either the immense amount of labour, and labour of a very disagreeable kind, performed by these officers, or the debt of gratitude we owe them. It would be very pleasant to be able to record that their exertions have been adequately and properly acknowledged by their respective vestries; but though some have shown their appreciation of their officers' services by handsome deeds as well as handsome words, as the St. Pancras Vestry, which presented £200 to the Health Officer of that parish, others have thought that words alone, or almost alone, were sufficient. The "resolution" of the Islington Vestry (it will be found on page 615 of the present volume) reminds one of the Frenchman's eulogy on St. Paul's Cathedral: he began with, "Ah! it is grand, it is magnifique," but he ended with, "Goddam, it is *pretty* good." So the resolution passed by the Islington Vestry begins by acknowledging Dr. Ballard's "extra arduous duties," his "ability, untiring energy, and attention, . . by which means the epidemic has been greatly kept in check," but ends by voting him fifty guineas! Some vestries distinguished themselves still more, and even refused to pass a vote of thanks to the Health Officer of the parish. Happily for mankind, treatment like this never has prevented, and never will prevent, Medical men from obeying the highest and purest instincts of their noble Profession. Undaunted by any degree of toil and danger, shrinking from no amount of self-denial and self-sacrifice, wheresoever and whensoever duty seems to call them, there they work on, unflinchingly and untiringly, let their material reward be as petty and as small as it will.

One of the most prominent and remarkable facts of the recent cholera epidemic was the severity with which it attacked the Eastern districts of the metropolis. In the West districts the deaths were only 4 in every 10,000 of the inhabitants, in the North 6, in the South 8, in the Central 9, while in the East they were 64. Beginning in these East districts, it was in them alone that the ravages of the disease at all recalled the violence of former epidemics. An explanation of this has, of course, been anxiously sought for, and has apparently been found in the character of the water supply. Poverty and destitution, filthiness of every kind, drunkenness, and overcrowding exist to at least as great a degree in other parts of the metropolis, especially on the south side of the Thames, as in these unhappy East districts. One thing alone was found peculiar to them, and common to them all; they were all supplied by one water company—the East London—and those parts that suffered most severely were supplied from particular reservoirs of that Company. Dr. Rygate, the Medical Officer of St. George's-in-the-East, has pointed out that on no day, except August 1, did the tale of deaths from cholera reach two figures in any other district than that supplied by the East London Water Works, while for seventeen consecutive days, in the district supplied by that Company, the cholera death-roll reached three figures, the number varying from 106 to 171 daily. It would make much too great a demand on our space to show here how the evidence against the water accumulated and strengthened, and all the facts connected with the epidemic must be too fresh in our readers' memories to make such a recapitulation necessary; but the matter is one of such vast importance that we must give an outline of the proofs, gathered from the careful and pithy reports of the Registrar-General.

The New River Company and the East London Company both draw their water supply from the River Lea, for the quantity of water taken by the New River Company from springs forms so small a proportion—18 per cent.—of their whole supply, that it may be left out of consideration. The New River Company supplies nine North and Central districts, and in these the deaths from cholera and diarrhœa were nearly 8 in every 10,000 of the inhabitants. The East London Company supplies six districts, and in these the deaths were 79 per 10,000. Hackney, Shoreditch, and the East London Union are jointly supplied by the two companies, and here the deaths were 10 per 10,000; but the East London Company's supply to those parts is drawn chiefly from its filtering beds at Lea-bridge, while only its waters from its Old Ford reservoirs, two miles lower down, were sent to the fatal districts. "Every district to which these waters have gone has suffered in an extraordinary degree; the other districts have not suffered to a tenth of the extent." At Old Ford is a small covered underground reservoir, from which only, it is said, water is distributed; but Dr. Frankland has shown that even the water of this can possibly become contaminated, and there are also at Old Ford two large open reservoirs formerly used; "one of these was recently emptied, and was filled again, perhaps by springs or soakage. These old reservoirs are not, it is said, used, the covered reservoir containing the only water fit for use; but the old reservoirs retain their old channels of communication with the pumping wells, and the Company has the power in an emergency to distribute the water from the old reservoirs all over the region of the cholera field. But this it professes not to do, and it could scarcely be the result of accident; otherwise the diffusion of the waters of the old reservoirs over the area would afford a probable explanation of the sudden outbreak in the East of London." In further illustration, we give a paragraph from the "Return" for the week ending August 18. After noticing the cholera death-rate in the East districts, the Registrar-General observes:—"The whole of these districts, where the mortality from cholera was from thirty- to forty-fold higher than it was either in the West or the Central, in the North or the South of London, were supplied with water from the Old Ford reservoirs. London is divided into 37 districts; 6 are supplied from Old Ford, and every one has been ravaged by the epidemic; the other 31 districts have for six weeks in succession suffered slightly. The 37 districts are subdivided into 135 subdistricts; 21 are supplied with the same water, and have all suffered six weeks in succession; 115 have suffered inconsiderably, except in St. Botolph's and a few other districts, where the same water has crept in, and the mortality is partially swollen. By the doctrine of chances it is impossible that the coincidence between this particular water and the high mortality should be fortuitous, in 135 cases, during six weeks in succession." To this we will only add that on Tuesday, July 31, the deaths from cholera in these districts amounted to 171. On August 1 the chief engineer of the Company (who had been absent from town) called at Somerset House, and engaged to take every possible means to secure a pure water supply, and on August 2 the deaths were 155; on August 3, 114. The present epidemic has afforded other instances of the cholera-conveying power of water—though, happily, nowhere else has the experiment been made on anything like so gigantic a scale—and the evidence on the same point afforded by former epidemics is well known. As the President of the Epidemiological Society remarked, "It is now placed beyond question by the labours of Dr. Snow, confirmed as they have been by experience, that water is one of the great agents in diffusing cholera;" or, to quote Dr. Farre once more, "unclean water cannot be consumed with impunity; its consumption is the sin of which cholera is the punishment."(a)

We omitted to mention, in its proper place, that ship-to-ship visitation was established in the Port of London, and energetically carried out for three months, with the greatest advantage, by the Seaman's Hospital Society. There is no Medical Officer of Health for the Port of London, and it is said that the Conservators of the Thames decline, in opposition to the wishes of the Privy Council, to appoint one, though, as their annual balance amounts to £15,000, the expense of such an officer can be no excuse for their foolish obstinacy.

While sanitary science won such a triumph in its battle with cholera, it cannot be said that any marked advance was made in the treatment of the disease. The most diverse and opposite opinions and modes of practice were to be heard and seen. Former experience really seemed to avail nothing: old methods of treatment which had been tried in former epidemics and had failed, were again tried, and with a like result: and unless we have learned to remember the teachings of this epidemic as to treatment, longer and more exactly than the lessons of previous ones, we shall have learned very little. Two theories of the pathology and treatment of the disease have been promulgated with special persistence and assurance. One, that of Dr. George Johnson, argued out and supported with great ability and zealousness, is, briefly, that the malady is due to a peculiar poison, which, entering the blood, first and most especially affects the minute pulmonic arteries, causing a state of spasmodic contraction and closure of them, and consequently an arrest of the oxidation of the blood; that the vomiting and purging are natural efforts for the elimination of the poison; and that therefore the proper and rational treatment is to favour and assist this effort of nature. The other, Dr. Chapman's, put forth with equal zeal, attributes the disease to hyperæmia of the spinal cord and the sympathetic system, and treats it by ice applied to the spine. Each theory is based on assumptions rather than on proved facts, and each has been insisted on with equal positiveness and conviction of its truth; but neither can be said to have been at all generally accepted or to have met with any marked success. The general result of treatment is, perhaps, a belief that in the earliest stage of the disease, and in the prodromic diarrhœa, astringents and opiates are most to be relied on, with rest and warmth, and, in the stages of collapse and reaction, careful nursing and support.

We cannot quit the subject of cholera in London without a tribute of grateful acknowledgment and admiration to the numerous ladies—very many, but, we believe, not all of them members of the All Saints', the Clewer, or other sisterhoods, or of the North London Deaconesses' Institution—who came forward to share in the toil and danger of nursing and visiting the sick during the epidemic. In the cholera wards of the London and other general Hospitals, in the special Cholera Hospitals, and in the cholera-stricken districts—everywhere where their services were accepted—the encouragement of their presence and their intelligence and skill were of the highest value, and their quiet, unassuming, fearless devotion to their work beyond praise.

The regular and continuous services of these nurses in the King's College, University, and Great Northern Hospitals are of incalculable advantage, and are fully appreciated by the staffs and managing committees of those institutions; but John Bull has such a dread of anything in the shape of a "religious sisterhood" that offers from some of these bodies to nurse in the Middlesex and St. George's Hospitals, and some Workhouse Infirmaries, have this year been rejected. As the value of such assistance, however, becomes more widely and truly known, the really groundless prejudice against it must fade away.

The risk encountered in undertaking this labour of love has been sadly illustrated this year by the deaths from diphtheria of Miss Lucy Neville and Mrs. Whitehead, who successively took charge of the nursing in the Lincoln Hospital.

The full extent and degree to which the epidemic has prevailed in England is not yet known, as the official information on the subject, conveyed only by the Registrar-General's Quarterly Returns, does not at present go beyond the end of September. Up to that time the total deaths from cholera registered amounted to 10,365, very nearly half of which had happened in the London districts. The disease prevailed, as usual, in particular districts or "fields." The most fatal field, after London, was the "Liverpool field." In the north-western counties of Cheshire and Lancashire, there were 2022 deaths from cholera; and of these 1603 were registered in the Liverpool and West Derby districts. The next largest mortality—1514 deaths—occurred in the "Monmouthshire and Wales division," or the "Swansea field," the greatest number of deaths happening in Swansea, Neath, and Llanelly. The south, north, and west midland counties almost escaped the disease, and in Herefordshire and Rutlandshire no death from cholera had been registered. The south-eastern counties suffered rather severely. Ramsgate was included, "by extension down the Thames, in the London cholera field;" and into other parts of Kent the hop-pickers from London imported the disease. The summary of the Registrar-General's analysis of the course the epidemic had taken so far was thus expressed:—"The epidemic has been most fatal on the seacoast in the chief ports of the kingdom. It is by no means capricious, but obeys definite laws. It never destroys the people to any extent where the water supply is pure, or where the hygienic conditions are good, when the authorities adopt judicious and well-organised measures of early treatment and systematic disinfection."

Neither of the sister kingdoms has suffered very severely or extensively during this epidemic. In Scotland the disease appeared at the end of July in some seaboard towns and villages, and then spread to some extent over the country, selecting places in a bad sanitary condition and with an impure water supply. But, up to the end of September, the increased mortality registered in the quarter was due to scarlatina and whooping-cough more than to cholera. After that date, the disease attacked some places, as Leith, more severely, but has now nearly disappeared.

In Dublin the disease first appeared on July 27, and by September 29 had caused 346 deaths in the Dublin district (population over 314,000). In the weeks ending October 20 and 27, the mortality rose for each week to 118; since then it has declined, and has now nearly ceased.

Early in November the *Atrato*, one of the steamers of the Royal Mail Company, arrived off Southampton from St. Thomas's with yellow fever on board. Thirty-four cases of the disease, fourteen of them fatal, had occurred during the passage home. The sick and healthy on board were removed to other vessels and subjected to a rigorous quarantine, and the vessel and cargo were ordered to be properly disinfected. Since then three other steamships, belonging to the same

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(a) Since this was written it is stated that Mr. Greaves, the Chief Engineer of the East London Company, has been examined by the Commissioners appointed to inquire into the cause and prevention of the pollution of rivers, and has admitted that in or about June water from the open reservoirs at Old Ford, containing unfiltered water from the River Lea, was admitted into the Company's mains.

Company, have arrived in succession in the Southampton waters with their crews suffering from yellow fever, and in each instance similar precautions have been taken. The disease had been most prevalent on board the vessel which arrived last, the *Tasmanian;* in a crew of from 130 to 140, she had had 71 cases, of which 21 had proved fatal. In her, as in the other three vessels, the fever had been almost entirely confined to the crew; the Surgeon of the *Atrato* was, we believe, attacked, and the Surgeon of the *Tasmanian*, Dr. Hudson, fell a victim to his devotion to his duties. His labours were then undertaken by three Medical men who were on board as passengers, and in this good work two of them were attacked by the fever, but happily recovered. Great fault has been found with the quarantine arrangements and the length of quarantine required, and, indeed, with the healthy having been subjected to quarantine at all. It is, indeed, much to be regretted that more perfect preparations were not made in the case of the *Atrato*, and that a quarantine of ten days was inflicted on the passengers by that vessel and the healthy among the crew; while the fully ample period of five days' detention only was required in the other instances; but so long as competent authorities believe that yellow fever, in one of its forms at any rate, is undoubtedly contagious, it is unquestionably the duty of Government to require a real and efficient quarantine. Infected *localities*, such as infected ships, are indisputably dangerous, and, according to Dr. Murchison, "there are numberless instances in which the disease has been imported into fresh localities by the persons or clothes of infected persons." It may be questioned also whether the impossibility of the propagation of any form of yellow fever in a low temperature can yet be regarded as quite a settled fact. At present, then, and so long as any reasonable doubts remain on these points, a quarantine for yellow fever is more than justifiable. From a purely commercial point of view, moreover, it is at present requisite to prevent other countries from declaring Southampton an infected port. Remembering the yellow-fever cases at Swansea last year, it must be held to be very fortunate for us that the yellow-fever epidemics in the West Indies almost invariably coincide with the cold season at home.

The frightful instances of workhouse mismanagement made public last year, and the reports of the "Commission on Workhouse Infirmaries" instituted by our contemporary, the *Lancet*, roused great public indignation, and have led to the formation of a large and influential association for the improvement and reformation of Workhouses and Workhouse Infirmaries. Government has also taken up the subject with great apparent earnestness, and the President of the Poor-law Board has appointed a Committee consisting of Sir Thomas Watson, Drs. Acland, Sibson, and Randall, and Messrs. Charles Hawkins and T. Holmes, with Drs. Markham and E. Smith, Mr. Corbett, and Capt. Galton, to consider the subject of cubic space and Hospital accommodation in the metropolitan Workhouses. No one can deny that there is a crying necessity of large and thorough changes in the management and arrangements of these institutions, but it is to be remembered that it is much more easy to denounce the evils that exist than to find a satisfactory and really practical remedy for them; and so long as the educated classes of society shirk parish work, and leave the offices of guardian and vestryman to be filled only by petty and struggling tradesmen, no legislation and no efforts of parochial Medical officers will be able to prevent scandalous mismanagement and oppression.

The General Medical Council met on May 17, sat eleven days, and got through a considerable amount of speaking and some business. They finally settled a "Medical Acts Amendment Bill," which we may hope to see passed next year, if Reform does not again stop the way. They agreed on a "minimum of subjects to be required of candidates for preliminary examination." And the Executive Committee of the Council was enlarged by the addition of one Scottish and one Irish member, and it was instructed to consider whether it is not possible to devise some alterations in the method of conducting the business of the Council by which the transaction of business might be expedited. If innumerable good wishes can insure success, this object of the Committee will certainly be achieved. The chairman of the Pharmacopœia Committee, Dr. Quain, presented the new and revised edition of the British Pharmacopœia, "the whole of which, with the exception of the appendix, was already in type," and it was ordered to be completed and issued without any unnecessary delay; but it is still a thing of the future, and the old edition is still advertised for sale. The direction of the Council that chemical formulæ should be given in double, according to the old and new systems of notation, may have caused some delay, but cannot possibly be charged with all this wearisome disappointment of expectation.

But the acts of the Council, and all that they did, are written in the first volume of our journal for the year, and to that record we must refer the reader, as we really have not the heart to go more into detail here. We have so much respect for the individual members of the Council, and so little for the results of their collective wisdom, that we will be content to note thus shortly what they actually did, and to cherish still, as best we may, the hope that they may in time overcome the difficulties inherent in their constitution as a body, and justify more satisfactorily their costly existence, and their liberal expenditure of time and labour.

The Imperial Parliament expended the greatest part of its time and energies over an abortive Reform Bill; but it passed two Acts of great importance to the nation, and of special interest to us as a Profession. The "Sanitary Act, 1866," if it works well, will prove decidedly valuable in giving increased powers for the prevention of disease. By its provisions, it becomes the duty of the "nuisance authorities" to inspect their whole districts, in order to ascertain and remove nuisances without waiting for complaints. Houses, clothes, and carriages may be ordered to be disinfected on the certificate of any legally qualified Practitioner. Sick persons may, in certain cases, be removed to Hospitals, and dead bodies be ordered to be buried. All houses let in lodgings, or occupied by more than one family, may be required to be registered, and their permissible number of inmates be fixed. Any householder, lodging-housekeeper, or landlord of an inn is made liable to a penalty for putting any guest or lodger into a room lately tenanted by any one suffering from "any dangerous infectious disorder," and not since "disinfected to the satisfaction of a qualified Medical Practitioner;" and any persons suffering with any such disorders may be fined for "exposing" themselves or entering any public vehicle without due notice, while the owner of any vehicle used by such people is required to have it properly disinfected. Any person "exposing" or sending anywhere infectious clothing will also be liable to a penalty. The chief police officer of a district is empowered to act if the "nuisance authority" is supine, or the Secretary of State may be appealed to. By steady and watchful care in working all these provisions, and we have only mentioned the newest points, some real advance in hygienic control will be made, and Medical men should particularly notice that they can appeal to the police or to the Secretary of State to compel the "nuisance authorities" to do their duty if they neglect it. Any private individuals, indeed, can do so; but it must be specially the work of the Profession to be well acquainted with the "Act," and to see that it is made of full and constant service. We recommend to our readers the article on the lodging-house clauses of the Act printed at pages 653 and following of our present volume. They will see that the powers given for the prevention of overcrowding are large and valuable; but we confess that we do not see how they can be at all fully exercised while railway companies and other bodies are permitted to destroy houses by hundreds at a time without a single new dwelling-place being provided for the thousands of poor thus evicted. Shelter they must have, and at present can only get it by the most dangerous and abominable overcrowding, and no Act or Acts of Parliament can prevent it, till in some way or other house-room is provided for them. Laws requiring 450, 300, or even 200 cubic feet of space for every inmate of a house can only be a mockery and a farce.

The "Contagious Diseases Act" passed this year is an extension and expansion of the Act of 1864, and is founded on the report of the Venereal Commission. It provides, as did the former Act, for the reception of women affected with venereal disease in certified Hospitals, but makes it lawful to detain a patient for six months if necessary, instead of only three as formerly; and if any woman leaves the Hospital still uncured, and, having had due warning in writing, is found carrying on prostitution she is liable to imprisonment. The first Act gave power to deal only with women known to be diseased, but this Act embraces all prostitutes within five miles of any of the seaports and military stations mentioned in the schedule, and empowers *periodical Medical examinations* of women engaged in prostitution. A woman may agree in writing to such periodical examinations as the visiting Surgeon may think necessary, or a justice can order such examinations to be made, and issue his warrant to the police. The liberty of the subject and the improvement of the women are also duly cared for; any woman already subjected to Medical examinations can be relieved from them by order of a justice if she can show to his satisfaction that she has ceased to be a prostitute, or entered into recognisances to be of good behaviour for three months; the certified Hospitals must show that adequate provision is made for the moral and religious instruction of the women detained in them; any woman may appeal to a justice to investigate the evidence upon which she is detained; and every woman desirous of returning to a virtuous course of life may, on discharge from Hospital, be sent to her place of residence free of expense to herself. It is affirmed that where the former Act has been in operation great good has resulted, so that still greater benefit may be expected from this Act. It applies to thirteen ports, garrison towns, and camps in England and Ireland, but the soldier in London and Dublin, and in Scotland, is left fully exposed to all the evils from which he is thus carefully protected in the places named in the schedule of the Act.

We feel very unwilling to say anything about the Medical services of the Army and Navy, for the most that can be said is, that there is really good reason for hoping that the most important of the improvements and changes so long demanded will be very shortly granted, and the status of the services greatly raised; but hope has been so long deferred and so frequently disappointed, that to speak of it still sounds almost like mockery. Evaded promises, broken warrants, hardships and injustice, acts like the Medical promotion in the Guards scandal, and court-martials like those on Dr. Elliot, Surgeon Cross, and Dr. Woodward, have nearly ruined the services; and indeed, if report speaks truly, the whole Army and Navy have, of late years, been incredibly mismanaged. But there are good grounds for expecting better things now. Sir John Pakington's former administration was active and energetic, and he showed an appreciation of the needs of the Medical service. General Peel is respected and popular among the working bees of the War Office and Horse Guards for administrative talent, and as having a real comprehension of all the requirements of the Army, and he has evinced a generous regard for its Medical Officers; and lastly, Sir James Gibson's term of service as Director-General expires next year. The "Army and Navy Committee" gave a valuable report, which it is for the present Government to utilise; the last both shirked and misused it.

At the Royal College of Physicians, Sir Thomas Watson was again, and for the fifth time, unanimously elected President. But in addressing the Fellows, with his usual graceful and happy eloquence, on the occasion, he observed, "Should I survive the coming year, and—which I have the presumption to suppose to be even more likely — should your kindness towards me also survive it, it will be my plain duty to make way for some younger and abler (?) President. . . . Five years' occupancy of this chair is, in my opinion, quite as much as is good either for the College or the President himself."

At the Royal College of Surgeons, the determination shown of late by the Fellows to resist the system of continued re-election into the Council, and to insist on the infusion of new and younger blood into it, led to the rejection of Mr. Luke, who stood for re-election, in favour of Mr. Charles Hawkins. In the Council, after a hard fight, a resolution has been carried that no examiner ought to hold that office longer than ten years, and Mr. Cæsar Hawkins, who had been examiner for seventeen years, has since sent in his resignation. It is rumoured that the Council of the College intend to institute examinations in Medicine, and have sought the advice of the sister College of Physicians on the best method of carrying out their wishes. It is also believed that the Fellows at large propose to assist the nascent progressive tendencies of the Council by electing some younger men into that body.

We should be guilty of omitting one of the greatest and most remarkable Medical events of the year did we not refer to Dr. Richardson's method of producing local anæthesia; a mere reference to it is sufficient, for its value as an aid to the Surgeon and a priceless boon to suffering humanity is well and widely recognised, though its use and its capacities for good are still in their infancy. As an easy, ready, and reliable means of procuring local anæsthesia, without any of the danger to life never quite absent from the inhalation of anæsthetics, it is a worthy complement to the great discoveries of the pain-abolishing properties of ether and chloroform. In recognition of this and Dr. Richardson's other services to scientific and practical Medicine, it is proposed to present him with an acknowledgment of such value as shall materially assist him in pursuing his scientific researches; and for this object so influential and weighty a committee has been formed, that the mere constitution of it is a testimonial any man might be proud of.

The new method proposed by Dr. Broadbent for the treatment of cancerous tumours also deserves mention here. Reflecting on the effect produced by the addition of dilute acetic acid to cancer-cells under the microscope, it struck Dr. Broadbent that the injection of this reagent into cancerous tumours might cause such degradation and destruction of the living elements of the mass as would lead to their absorption and the disappearance of the tumour. This has now been tried in many cases, not a few of which have been reported in our pages, and in some instances with great and very gratifying success. In 1857 Sir J. Y. Simpson proposed and tried the injection of malignant and other abnormal growths with powerful caustics, with the idea of thus causing their destruction and death, but the practice did not obtain any marked or lasting success. The employment, however, of the less powerful and more slowly acting reagent, dilute acetic acid, seems at present to promise better. The practice is yet only on its trial, but should it maintain its promise, a great advance will have been made in the treatment of at least some forms of malignant growths.

There were during the year two actions against Medical men for malpraxis which are worthy of notice. In one—Rudman *v.* Armstrong—the plaintiff charged the defendants—gentlemen of well-known reputation and skill, practising in Gravesend—with having so wrongly and neglectfully treated a diseased knee-joint that she was unable to walk, and had so suffered in general health that she could not earn her living. The charge broke down utterly, and the jury returned a verdict for the defendants, without requiring to hear all their witnesses. The presiding judge, Mr. Baron Channell, observed that he "had thought at one time that he ought to stop the case, but that, considering how important it was to the defendants that such a charge should be fully inquired into, he had let it go on; he entirely concurred in the verdict of the jury, and would add that there had not been the slightest evidence of want of skill or care on the part of either of the defendants." The Profession warmly sympathised with the Messrs. Armstrong in the painful and trying position in which they had been placed, and practically expressed that feeling by paying all their expenses for them.

In the other—Absolon *v.* Statham—the plaintiff, an out-patient at the Great Northern Hospital, charged against the defendant, one of the dentists to that charity, that he had, nearly two years ago, administered chloroform to her against her will, and had then, with great and brutal violence, extracted six of her teeth; and that, from the effects of his behaviour and of the chloroform, her health had been destroyed, so that she had never since been able to work, and is now partially paralysed. The only foundation for the action was that the patient, a highly hysterical and nervous woman, had had six stumps of teeth extracted while she was under the influence of chloroform. Even the evidence of the Medical Practitioners whom she was able to call into the witness-box, as having seen her shortly before and since the operation, entirely disproved her story. But Mr. Statham had behaved to the woman with so much and continued kindness and consideration, that some of the jury apparently could not believe that he had done so out of charity only, and they were obliged to be discharged without agreeing to a verdict. The Profession and the dentists showed their feeling in the matter by presenting Mr. Statham with a strongly-worded expression of sympathy and confidence; and they would also have taken on themselves the expenses of his defence, but Mr. Statham, thinking that he had erred in judgment in showing the plaintiff so much forbearance and kindness, gratefully declined all pecuniary assistance. He may be sure that a refusal so honourable to himself will be fully appreciated by the Profession.

Dr. Part, a well-known and respected Practitioner in Camden-town, had to suffer very grievous annoyance and vexation through "crowners' quest law." An old gentleman, an engraver, 80 years of age, of eccentric character and penurious habits, had, when in the last stage of bronchitis, called in Dr. Part, whom he had known for some twenty years as Surgeon to the Artists' Benevolent Fund. Besides Medical care, the poor old gentleman wanted food, a nurse, and a lawyer to make his will for him. Dr. Part acted the good Samaritan, and did all he could for his patient, who, dying two days after first sending for Medical advice, left the bulk of his property—about a thousand pounds, with some valuable pictures and engravings—to Dr. Part. Nine months afterwards, the coroner, moved by the importunities, suggestions, mysterious hints, or what not, of a disappointed female legatee, thought it right to order that the body should be exhumed, searched for poison, and "sat upon" by a jury. Their verdict was that the deceased died from the mortal effects of bronchitis, and Dr. Part left the court without the shadow of stain on his reputation and honour. The inquest was certainly "frivolous and vexatious;" but the toxicological evidence was remarkable. Professor Rodgers swore that the stomach contained "traces" of morphia and arsenic, but that there was none in the liver, spleen, or other organs; that none, therefore, had been absorbed into the body, and that the "trace" of arsenic was so small that even one medicinal dose of Fowler's solution would account for it. The patient had taken scarcely any medicine of any kind, and had not had any symptoms whatever of poisoning by arsenic or morphia. We venture to think that such a degree of toxicological refinement as this, in the examination of a body which had been buried nine months, tends to make toxicology ridiculous, or the practice of Medicine incalculably dangerous.

We will only allude to the horrible prostitution of Medical science to the basest and most criminal purpose by Dr. Warder. Suspicion having been roused by the illness and death of his third wife, an inquest was ordered, but the wretched man dared not wait the result, and committed suicide. The scientific evidence of poisoning adduced at the inquest on Mrs. Warder was only of a negative character, but the clinical and moral evidence unhappily left but little room for doubt as to the fate of all the three wives of the miserable suicide.

The trial of "Hunter *v.* Sharpe" deserves mention here, as, though not directly affecting Medical men, it had so much to do with the conduct and honour of the Profession, and was of such importance in defining the legal limits of criticism, that we are all deeply interested in it. It was an action for libel brought by Dr. Hunter against the *Pall-mall Gazette*, on account of a very severe and trenchant criticism on that person's pretensions, conduct, and practice as a Physician. The courage and downrightness of our able and spirited contemporary, in defence as well as in attack, were most admirable, and the result was that the jury considered the article complained of had so far overstepped legal bounds that they gave Dr. Hunter a verdict, with one farthing damages. The Medical evidence adduced for the defence was remarkable for its clearness, ability, and unanimity, and the Chief Justice's summing-up, a magnificent display of talent and eloquence; it merits the study of every one for the clear and lucid way in which it points out the differences between the conduct and mode of practice of the quack and the honourable Practitioner of Medicine.

It may be remembered that last year a considerable sum of money was subscribed for the purpose of affording to poor consumptive patients the benefit of a winter residence in Madeira, and the management of it was entrusted to the Medical Committee of the Brompton Hospital. Twenty patients were sent out in November last year, five of whom were in the first stage of phthisis, four in the second, and eleven in the third. Two returned much improved in general health, and seven slightly improved; four were not so well, and one had died suddenly of hæmoptysis in April; in two the physical signs had improved, in twelve they were stationary, and in five they had advanced. The Committee do not think the results would warrant any repetition of the experiment. It seems a pity that one of the health resorts on the Riviera is not tried instead of Madeira.

In the year 1852 a Mr. Brown, pitying the sorrows and sufferings of the brute creation, left £20,000 Three per Cents to accumulate for fifteen years for the purpose of founding a Hospital for sick animals. A committee has now been appointed by the Senate of the University of London to devise a scheme for carrying into effect the wishes of the testator. The sum available for the purpose amounts to about £30,000.

The British Medical Association held its usual annual meeting, and a highly successful one, at Chester. Excellent addresses in Medicine and Surgery were delivered by Professor Hughes Bennett and Mr. Bowman. That of the latter gentleman was particularly admirable for its eloquence, its large, broad, and liberal views, and its religious tone. It should be generally read and studied.

The International Sanitary Conference of Constantinople for preventing the diffusion of epidemic cholera and for the preservation of Europe from future invasion of the disease has made its report. It considers that the disease originates only in India, never in Europe; that it is a transmissible disease, following in the wake of man, and not carried by the atmosphere to any distance; that it is spread chiefly by the evacuations of cholera patients, and that it rages most in places in a bad sanitary condition; it believes that the cholera poison may adhere to the surface of clothes, the walls of houses, the interior of ships, etc., and that by these means it may be communicated. On these principles it bases its proposed measures of preservation, and asserts that the disease is to be met by measures of restriction of intercourse, of purification and disinfection, and of public and private hygiene. We have nothing to say of the measures of purification and disinfection recommended except that they seem to be very full and perfect and quite practicable; but of the measures of restriction and of hygiene we must remark that, however perfect they may be theoretically and scientifically, many of them appear to be so impracticable as to be useless. For instance, the Conference objects to the system of drains and sewers in communication with houses, and it calls for the abolition of all privies with cesspools or wells, and their replacement by moveable receptacles, such as earth closets or "fosses mobiles," to be frequently emptied and cleansed, and so constructed that the contents cannot sink into the soil; the contents to be carried out of the towns; water-closets, when used, never to be within the houses. However desirable all this may be theoretically, is it not quite impracticable in cities of any size? while to recommend such a scheme for cities of one, two, or three million inhabitants appears, with all due respect be it said, simply ridiculous. And supposing that all excreta could thus be removed "out of the town," what is to be done with them? where are they to be buried so as not to contaminate the soil? Again, the quarantine measures recommended are such as never can be carried out. They are "neither practicable nor rational," as Dr. Farr said in the discussion which followed Dr. Goodeve's valuable and lucid statement of the results of the Conference at a meeting of the Epidemiological Society. The quarantine recommendations were, we believe, carried in opposition to the advice of the able and experienced English representatives at the Conference, Drs. Goodeve and Dickson; but a full analysis of the report of the Conference will be found in our pages during the month of October.

Some of the London Hospitals were visited during the year by a female Physician from America, who, not content with private practice, had also served as a Surgeon in the Federal Army during the late war. Dr. Mary Walker wore a hybrid, or rather hermaphroditic, kind of dress, which, according to her own description, "was constructed on physiological principles with moral bearings;" and she gave a public lecture in St. James's Hall, but probably only the enemies of the order of female Physicians would venture to call the performance a success. We are not ourselves believers in the need for, or probable success of, a class of woman-doctors, and we are very sure that if such an institution ever is to live, it must be modelled after the modest, feminine, unobtrusive type so favourably shown in Miss Garrett, at present the sole English example, and not after the somewhat aggressive one imaged forth by our Transatlantic sister.

A calumnious charge against the students of St. Mary's Hospital, started by a discharged engineer of the establishment, and entirely disproved on investigation, and a very foolish and unjustifiable escapade of some students excited into freedom and rowdyism by Dr. Mary Walker's public performance, furnished occasion for a violent attack on the character and habits of Medical students in general, Medical teaching and teachers, by some one calling himself a "Medical Tutor." The gross ignorance of Medical students and Medical schools of the present generation, and the bad taste displayed by the writer, were so glaring that his letter would not be worthy of mention but for the fact that the "leading journal" saw fit to publish it; the real "Medical Tutors" of the London Schools indignantly repudiated the production, and it led to very honourable testimony being borne by several of our daily contemporaries to the general character and bearing of our Medical students.

Among the pleasing events of the year, we were glad to record that Dr. Burrows, on the resignation of his appointments at St. Bartholomew's, received a very handsome and gratifying testimonial of affection and esteem from his colleagues and pupils, old and young; that Mr. Henry Thompson had been appointed Surgeon Extraordinary to the King of the Belgians; that Dr. W. Mackenzie, C.B., of the Madras Army, had been made a "Companion of the Most Exalted Order of the Star of India," and Sir James Clarke made a K.C.B.; that Dr. Markham, as well as Dr. Edward Smith, had been appointed Poor-law Inspectors; and that Drs. J. Y. Simpson, Dominic Corrigan, and Watson have, like Sir William Fergusson last year, received the honour of the Baronetcy, the highest dignity ever bestowed by the Crown on members of our Profession. All well deserved the distinction, but the recognition of Sir Thomas Watson's eminence gave special satisfaction to the Profession at large, as it has seldom been the lot of any Physician to command such universal confidence and respect by his intellectual powers, and to win such affectionate regard by his character, as has the popular President of the College of Physicans. Sir James Simpson had but just received this high mark of his Sovereign's approbation when he had to mourn the loss of his eldest son. Dr. David J. Simpson was only 24 years of age, but he had shown talents and qualities of no common value. He had already proved himself worthy to be the son of a most worthy father, and capable of earning for himself a name in Medical history. He was one of a sadly long list of young men, of more than usual promise and powers, whose early death we have had to regret during the year. Mr. Arthur Richard Becket, after being House-Surgeon at the Lock and at the Royal Free Hospitals, was appointed Medical officer to the Fever House of the Liverpool Infirmary, and died there of typhus fever in the 28th year of his age. Dr. John Wyber, who had passed with great distinction and honour through the High School and the University of Glasgow, was one of the resident Medical officers at the London Fever Hospital, and there fell a victim to typhus at the age of 26. Mr. W. H. Griffin, of Banbury, after a career of remarkable success as a student at the University College Hospital, became House-Surgeon to the Western General Dispensary, but ill-health soon obliged him to resign that office, and he joined his father in practice at Banbury, where he died of phthisis in the 27th year of his age. Mr. F. H. Kempster, M.B. Lond., gained high honours in the University of London, and took away almost every scholarship and prize at the University College Hospital, during his student career there. His health giving way from overwork, he went out to Melbourne, and, after but a very brief career there, died of phthisis. Mr. W. A. Patrick Stuart, at the early age of 21, died of typhoid fever while working in the wards of the same Hospital, where he also had highly distinguished himself as a student. Mr. J. W Melson, who was a most distinguished student of Queen's College, Birmingham, and had graduated as B.A. of the University of London, with high honours in physiology, died at the age of 23, of diphtheria, at the General Hospital, Birmingham. Of Dr. Southey Warter, who died of typhus at the age of 26, we have very lately given an obituary; and of our late valued correspondent at Liverpool, Mr. F. D. Fletcher, we shall give an obituary notice shortly. It would be but too easy to lengthen this sad list, but our space forbids even this short tribute, which, however, though a melancholy gratification to ourselves, is not needed to keep the memories of men like these fresh and green in the hearts of all who knew them. This must also be our excuse and consolation in mentioning very briefly the older and more proved soldiers of the Profession who have fallen during the year, and whose names crowd in on us as we write. Dr. G. H. Barlow (of Guy's), Dr. H. Jeaffreson (of St. Bartholomew's) — as generous, large-hearted, and loveable as a man as he was successful as a Physician—Dr. Hodgkin, Dr. Babington, Sir

Charles Hastings, Dr. Connolly, and Dr. Spurgin, Messrs. MacWhinnie, N. Ward, John Scott, Hulke (of Deal), Sankey (of Dover), and Alexander Ure—to what a length might we not draw out the long list! Joseph Toynbee fell a victim to too eager and ardent a love of experimental research, as Dr. Christison and Sir J. Y. Simpson so nearly have done before him. Dr. Ansell (of Bow), Dr. T. F. Ross (on board the *Helvetia*), and Dr. Neil A. Kennedy (of Seven), fell victims to cholera. But to all these, as to many others, we have endeavoured to do some justice in the obituaries we have given of them. Mr. J. C. Agnis, M.B., Assistant-Surgeon Royal Horse Guards, died of rheumatic meningitis at the age of 37. He was distinguished as a student on the arts side, and in the Medical School of University College, and, during his army career, showed such abilities as a Surgeon that all who knew him desired that he should seek a wider field for his talents. Dr. C. M. Burnett had devoted his talents and energies with remarkable success to the study and treatment of mental diseases, and had, in spite of many obstacles, made his residence famous among our provincial private asylums. He was known also as an able and successful author. He died at the age of 59. Many veterans and retired celebrities of the Profession have also passed away—Dr. Conquest, of whom it is sufficient to remind our readers that he was the worthy successor to Dr. Gooch in the Midwifery Chair at St. Bartholomew's, Sir John Macgregor, Sir John Hall, Sir Alexander Morrison, Dr. E. J. Seymour, Mr. Fuller (of Piccadilly), and others, whose lives and labours were an honour to the Profession, and whose memories remain to guide and encourage the student.

To speak of ourselves, we have the gratification of believing that we have been able to maintain the high character and position of the *Medical Times and Gazette* as a scientific Medical journal and record of the life of the Profession. We have earnestly endeavoured to give the fullest information of every advance made in the science and art of Medicine, and to further and foster the progress of these to the best of our powers; to record everything that seemed likely to be of use to our readers or to have any interest for them; to comment with justice and candour on all events affecting the policy, status, and interests of our Profession, and to uphold in every way its dignity and honour. We have been anxious to give encouragement, praise, and honour to all, whether young or old, who have seemed in any degree to merit them, while we have not shrunk from condemning and reproving offences and shortcomings, though endeavouring at the same time to remember that the offenders were brethren of our common Profession. And, with gratitude to our many able coadjutors and contributors, we refer to the volumes of this year in proof of the success and worth of our labours. We have been enabled to give valuable lectures by Drs. Bence Jones, Handfield Jones, and Blandford, and by Messrs. Skey, Soelberg Wells, Haynes Walton, Hulke, J. Adams, and Jonathan Hutchinson, and very important lectures and papers by Dr. Lionel Beale. Instructive articles have appeared on the use of the thermometer and the sphygmoscope in the diagnosis of disease. The practical "Notes on Syphilis" have been continued, and the Medical History of England. In the Reports of Hospital Practice has been included a special report of the "Treatment of Fractures and Dislocations;" and in the able notices of "Cholera Literature" a full *résumé* of the labours of the International Sanitary Conference. Valuable contributions have been published from Drs. W. D. Moore, Pavy, Kennion, J. S. Warter, G. H. Barlow, Symonds, J. H. Jackson, G. Johnson, Moxon, E. Fleming, J. W. Ogle, Fearnside, B. W. Richardson, Walter Rickards, T. Laycock, Sidney Ringer, and Fraser; and Messrs. Spencer Wells, Campbell De Morgan, John Wood, and Lawson Tait. And among other able articles—such as those on the "Philosophy of Food," "Modern Chemistry," and the "Cholera Epidemic,"—it seems only common justice to mention specially the graphic and instructive account of a visit to Amiens during the cholera epidemic there, and the admirable and gracefully written notice of the Hospital and Medical School of University College.

With the new year we shall begin a new series of illustrated papers by Professor Lionel Beale, which will include the completion of his Microscopical Researches on Cholera, and introduce to our readers some of the latest researches into the minute structure and function of nerves. After the completion of Mr. Soelberg Wells's Lectures on Operative Opthalmic Surgery, we shall have the pleasure of giving a series of Lectures on Operative Midwifery by Dr. Robert Barnes, President of the Obstetrical Society. Several other communications of interest by some of the ablest men in our Profession will follow; but it must be remembered that a weekly journal is bound to give the events of the day, and that these, as illustrated by the cholera and cattle plague, may be of so overwhelming an importance as to cause all previous arrangements to be set aside. The only grief we have, as journalists, is the inability to lay before our readers numerous communications most worthy of their notice with the speed and punctuality desired.

SINGLE LUNATICS IN PRIVATE HOUSES.

The case in which Mr. George Naylor, Surgeon, of 8, George-street, Hanover-square (reported at page 703), was defendant, at Bow-street police-court, on the 21st instant, is one of a kind which must occasionally crop up so long as Medical men fail to make themselves acquainted with the Lunacy Acts. The summons charged the defendant with having undertaken the care of a person of unsound mind, without a proper order or Medical certificate. We can readily believe the statement of counsel that if Mr. Naylor had committed any infringement of the Act, it was rather an error of judgment than a wilful offence; and as he has been committed for trial, it would be obviously unfair to make any pre-judicial remarks on this individual case. It will at present suffice if we endeavour to aid those who may be liable unintentionally to violate the law, by a brief statement of the legislation in regard to the reception of single lunatic patients into unlicensed houses.

The great point to be remembered is that (by 8 and 9 Vict., cap. 100, s. 90, and 16 and 17 Vict. cap. 96, ss. 4, 8) no person deriving profit from the charge, can receive into any house, or take care or charge of, a patient as a lunatic, or alleged lunatic, without an order and two Medical certificates. The order and certificates to be those prescribed by Schedule A (Nos. 1 and 2) of 16 and 17 Vict., cap. 96. One exception to this rule is provided by the 25 and 26 Vict., cap. 3, s. 22, which enacts that in the case of a person found lunatic by inquisition, an order signed by the committee appointed by the Lord Chancellor shall be a sufficient authority for the reception of such person.

Next, within one clear day after the reception of a patient, true copies of the order and certificates, together with a statement of the date of the reception, and a description of the house, as well as the christian name and surname of the owner or occupier, must be forwarded to the Commissioners in Lunacy. Further, between two and seven clear days from the date of reception, a statement of the condition of the patient must be sent to the same Commissioners. Notice of the death, discharge, removal, escape, or recapture of a patient must also be sent, as must notice of removal. The consent of the Commissioners must be obtained before liberty of absence can be given to a patient. Notice of death must also be forwarded to the coroner.

Another point of importance is that neither the order or certificates must be signed by any person receiving a percentage on, or otherwise interested in, the payments for the patient, nor by the Medical attendant,(a) nor must the certificates be signed by the father, brother, son, partner, or assistant of the person having the care or charge of the patient.

THE WEEK.

THE PATHOLOGICAL SOCIETY.

We are glad to find that the Council have recommended Mr. Simon as the President of this Society. It is needless to say that a better man could not be found, and his election is a matter of course. It is pleasant to see an able Surgeon succeed to the chair an able Physician has vacated. St. Thomas's may feel a complacent satisfaction in giving two Presidents in succession to the most useful of our Medical Societies. Of the Presidency of Dr. Peacock we cannot speak in too high terms of praise. The best praise, however, is that during his term of office the Society has prospered more rapidly than ever. And now, too, it is fitting to recall attention to the fact that this Society owes very much of its present vitality and influence to the help it received from Dr. Peacock when it was not much known and had a reputation to make.

THE CONTROVERSY AT ST. MARY'S HOSPITAL.

As we observed last week, two quite distinct questions are involved in the controversy between Mr. Walter Coulson and a section of his colleagues at St. Mary's Hospital. One is a question of breach of faith. Did Mr. Walter Coulson deliberately promise to resign all connexion with St. Peter's Hospital; or did he give his colleagues reason to believe, however informally, that he would do so? We must say, on a reconsideration of the correspondence laid before us, that no evidence of such an arrangement is visible. Throughout that correspondence there is a want of official positive documentary evidence; and if we fully believe, as we do, that Mr. Spencer Smith "understood" one thing whilst Mr. Coulson all the while "understood" another, it is not a case of breach of faith, but of lack of that formal, precise, business-like mode of settling a question which is incumbent on all public functionaries. It reminds us of a lawyer's joke, that "understandings" are always feminine, and ought to be called "*mis*understandings." Whilst, then, the "breach of faith" seems to outsiders a mistake, and one that may be handsomely withdrawn by that portion of the Surgical staff of St. Mary's which has signed the round-robin to Mr. W. Coulson, the argument against a Stone Hospital as a parasitic rival to General Hospitals and Medical Schools, may be brought to bear with double force; and Mr. Coulson may fairly, as a loyal member of St. Mary's staff, give up voluntarily an appointment which he might otherwise be tempted to hold, if only to rebut an unfounded accusation against his honour. The staff of the Middlesex and Westminster Medical Schools are quite justified in protesting against the holding office at St. Peter's by any of their members.

SPECIAL WARDS AT GENERAL HOSPITALS.

We are glad to hear that one among the many alterations recently made at the London Hospital, consequent on the increase of space which the opening of the Alexandra Wing places at the disposal of the Committee, is the establishment of wards for patients suffering from diseases of the eye. An Ophthalmic Surgeon and an Aural Surgeon will shortly be appointed. By thus following the example set by Guy's and St. Mary's, this large Hospital will be doing its share to get rid, or at least to diminish the evil, of Special Hospitals. If there is to be a differentiation of Medical practice, the grouping of the differentiated parts in one Hospital under professors of one school will lead to a higher unity of Medical science. However, separation is not always differentiation in the scientific sense of the latter word, and we should be sorry to find Medical practice splintered into many fragments in order to counterbalance the attractions of the multitude of Special Hospitals, even if the splinters were kept together under one roof.

PRIVATE TELEGRAPH FROM THE LONDON HOSPITAL TO BROOK-STREET.

One of the rules of the London Hospital is that the Assistant-Surgeons shall reside within a distance of a mile and a half from the Hospital. This is, of course, in order that they may quickly be brought to the Hospital when the resident staff require immediate help in the treatment of urgent cases. They are frequently sent for. No such complimentary restrictions keep the Assistant-Physicians in the city. Two of the Assistant-Surgeons, Messrs. Couper and Little, have induced the Committee to break this tethering rule on the understanding that these two gentlemen will establish at their own cost a private telegraph, connecting the London Hospital with their houses at the West-end. At the cost of about £60 a year the Universal Private Telegraph Company have carried, and will maintain, one wire from the receiving room of the Hospital to the two houses in Brook-street. The apparatus is that known as Wheatstone's alphabet telegraph, an apparatus which any one can easily work. Brook-street is about three miles from the Hospital, and as a message can now be sent to Mr. Little or Mr. Couper in "no time," the result is practically the same, as regards distance to be travelled, as it was under the rule. They are summoned by electric fluid, instead of by a porter in a fourwheeled cab. The contrast between the speed of an East-end cab and the electric fluid is vast, but the cab is an Ariel to the London District Telegraph Company.

PROFESSOR JOHN GAMGEE.

Before taking leave of 1866 and its events, common fairness compels us to notice one man to whom justice has, we think, been barely done, and that is Professor John Gamgee. When we recall the fact that he proposed the International Veterinary Congress which assembled at Hamburg in 1863, on purpose to raise public attention, and devise measures beforehand against the epizootic which has robbed us of thousands of our cattle, and millions of our monies—nay, that in 1862 he had urged precautionary measures; that in September, 1865, he first proclaimed the fact of the rise in temperature as the first symptom of the disease, and the thermometer as a kind of veterinary weather-glass; and that all his measures for giving compensation, for quarantining foreign cattle, and for establishing special markets and means of slaughtering foreign beasts, were first of all pooh-poohed as "visionary," "enthusiastic," "impracticable," but at last accepted as part of our public policy—we shall not be wrong in saying that the country owes him something; and that if a government cannot or will not give reward or office, at least scientific men may gratefully accord him a due recognition of his merits.

Case of supposed Ovariotomy.—A patient, aged 38, and apparently robust, was operated upon a few days since by M. Maisonneuve under the idea that she was the subject of unilocular ovarian disease. On opening the abdomen, however, a multilocular cyst was found to be present on the right side, and adherent over a very extensive surface. Another multilocular cyst, but much less adherent, was also found on the left side and removed. About 20 litres of fluid were discharged from the various sacculi on the right side, but it was found impossible to separate all the attachments, and a large portion of the cyst was left in the abdomen. The woman died next day of hæmorrhage, and at the autopsy the ovaries and tubes were found healthy, the cyst arising apparently from the peritoneum itself.—*Gaz. des Hôp.*

*

(a) By 8 and 9 Vict., c. 100, s. 114, the term "Medical attendant" comprises every Physician, Surgeon, and Apothecary who shall keep any licensed house, or shall in his Medical capacity attend any licensed house, or any Asylum, Hospital, or other place where any lunatic shall be confined.

THE MEDICAL DIRECTOR OF THE ARMY.

(*From a Correspondent.*)

In a few months the term for which the present Director-General was appointed will have expired, and, in all probability, on General Peel will devolve the duty of naming his successor. The members of the department have every confidence in the honesty and good feeling of the present War Minister, and they were somewhat astonished to see the claims of one officer advocated in your contemporary in such a way as to suggest that General Peel could only fulfil his duty satisfactorily to the interests of the Army by donning that officer with the mantle of the present Director-General the moment it has fallen from his shoulders. As to the good taste of this proceeding I need not say a word. It is certainly premature to discuss the matter at all at present; but it was unjust to have done it in such fashion. If Dr. Muir be the man we take him to be, he must have viewed the indelicacy of such advocacy with dislike. He is universally respected as an able honourable man; but his claims are not so paramount as to throw those of everybody else into the shade. Let his merits and qualifications receive the consideration they deserve, by all means. It is no disparagement, however, to those qualifications to say that there is at least one officer whose claims are equal in all respects, and superior in many. The outside Profession must not mistake the opinion expressed by your contemporary for the voice of the Medical department. Dr. Logan has the advantage of being thoroughly acquainted with the working of the department which he is now, in fact, conducting. He was the principal Medical Officer of a division in the Crimea in which Dr. Muir was a regimental Surgeon. As far as the requirements of the service in the East and West Indies are concerned, Dr. Logan possesses the advantages arising from a personal experience during a campaign in the one and two epidemics of yellow fever in the other. He is, moreover, greatly senior to Dr. Muir, his equal as an administrator, and as to his courtesy and urbanity towards Medical officers there has always been but one opinion. I know that it is very disagreeable to draw these comparisons between two able and popular men; but those who sought to reap any advantages which might accrue from a premature and indelicate advocacy have themselves to thank for it.

THE MEDICAL HISTORY OF ENGLAND.

By B. W. RICHARDSON, M.A., M.D., F.R.C.P.,
Senior Physician to the Royal Infirmary for Diseases of the Chest.

THE MEDICAL HISTORY OF NOTTINGHAM.

(Concluded.)

Sanitary and Social Position—(*Continued*).

In another part of his report, Mr. Tarbotton describes a novel means of sanitary improvement that has been carried out at Nottingham. I refer to the introduction of what are called subways in the streets. As this improvement cannot but be usefully told to Medical Officers of Health and other sanitary authorities, I subjoin Mr. Tarbotton's own description:—

"*Nottingham Subways.*—In the whole of the streets lately formed in Nottingham under the head of Town Improvement, a novel and peculiar system of construction has been adopted with a view of rendering the surfaces more permanent than they usually are, and avoiding the necessity of breaking up the street every time a drain, water or gas pipe requires attention or renewal.

Subways have been built under and along the centre of the roadways, and connexions have been made between the same and the vaults of the houses (which are situated under the causeways or footpaths), by sideways or lateral galleries. Subways are simply underground passages or tunnels, and below the floors of them the main sewer is laid. Over the sewer a surface of concrete and other materials is made, on which the water, gas, telegraph, and other main pipes are fixed. The communications with the sewers from the different properties are formed along the sideways or galleries and beneath their floors, and the services of gas and water, etc., are secured to the aforesaid galleries, and run direct and uncovered to and into the vaults, and thence into the buildings as required. Access to the subways is obtained from a convenient part of the street, and the entrances to the sewers are from the interior of the subway. Thus, in case of any obstruction in the sewer, or any repair being needed, or any junction therewith being applied for, or in case of any leakage taking place to a gas or water pipe, or any new or altered service pipe being necessary, all the operations and labour incident thereto can be conducted and completed in the interior of the subway, and without displacing or injuring the street or causing interruption of traffic. A plan somewhat similar has been for many years carried out in Paris, the difference being principally that the sewage flowed openly and exposed at the bottom of the subway, causing unpleasant smell and creating greater danger to the workmen. In the late street improvements in London subways have been constructed, the first being in Garrick-street, Covent Garden, wherein the water and gas mains are placed.

In the new long street in the Borough of Southwark, and throughout the whole of the Thames Embankment, subways are built, and it is to be hoped that the gas and water companies will not persist in offering the same factious opposition to them that they did on a late parliamentary occasion.

The objection raised by these companies to the use of subways was on the ground of 'danger of explosion,' but as this does not apply to water the water companies have no *locus standi*, and should not refuse to use them. In reply to the allegation of the gas companies, it has been very properly urged that there is less danger of accident in a well-regulated subway than in the ordinary way of laying and using gas pipes, for the following reasons:—1st. The mains and services are not subjected to the vibrative and destructive influence of the street traffic. 2nd. That they are not liable to be constantly interfered with and loosened by excavations in and around them for drainage and other purposes. 3rd. That the mains and services are under regular inspection, and can be repaired and the joints re-caulked and bituminised, if necessary, from time to time. 4th. That oxidation in subways is less rapid. In Victoria-street subway the drains, gas and water mains, and services, have been laid since the completion of the street. In Lister-gate the sewers and telegraph wires alone are laid.

It is only just and fair that an experiment of this kind should be thoroughly tested, for the good order of our streets is not only a matter of public economy, but of personal comfort.

The expenditure on public works must not always be viewed in reference to pounds, shillings, and pence, but rather to results—not altogether in relation to what things cost, but to their value when gained.

The expenses of sanitary works and public improvements in Nottingham have not been excessive compared with other towns, but conversely are much lower than in many places of smaller size and importance. The total amount of general district rate annually levied upon the occupants of houses within the borough (which provides for all highway purposes, sewering, scavenging, and street-watering, sanitary and town improvement works, fire brigade and establishment expenses) is 1s. 6d. in the pound; the rateable value of the borough being about £270,000."

The diseases peculiar to the town of Nottingham, with one exception, are scarcely special to the district. According to the Dispensary and Hospital Reports, and as Mr. White has calculated, diseases affecting the organs of respiration figure in the proportion of 16 per cent., and diseases of the abdominal viscera yield a similar proportion. Hernia is exceedingly common, and its frequency, according to Mr. White, is largely attributable to the wearing of broad belts across the body. Scrofula is also common, and rheumatism renders an account of from 5 to 6 per cent. Ophthalmic affections are very rife, owing, as the authority I have just quoted explains, to the great stress put upon the retina by the lace and hosiery work, in which so many of the artisan classes are engaged.

The mortality of the town for several years past has been carefully recorded by the Sanitary Committee, and I herewith subjoin from the reports two tables bearing on this subject, and elucidating all the facts with great clearness.

The first table shows the population in each ward at the census 1851, with the decennial proportion of increase, as shown by the census 1861, added to each year, together with the mortality of each year, parallel with the increased population :—

	Census 1851.	1852.		1853.		1854.		1855.		1856.		1857.		1858.		1859.		1860.		1861.	
	Population.	Population.	Deaths.	Population.	Deaths.	Population.	Deaths.	Population.	Deaths.	Population.	Deaths.	Population.	Deaths.	Population.	Deaths.	Population.	Deaths.	Population.	Deaths.	Population.	Deaths.
Sherwood Ward ..	6187	6825	99	7463	143	8101	158	8739	142	9377	158	10015	189	10653	200	11290	266	11931	224	12572	217
St. Mary's ,, ..	7669	7568	196	7467	282	7366	218	7265	164	7164	168	7063	187	6962	220	6861	258	6760	154	6659	176
St. Ann's ,, ..	12640	13383	427	14126	464	14869	484	15612	457	16355	487	17099	470	17843	567	18587	621	19331	542	20075	577
Byron ,, ..	11664	11964	289	12264	379	12565	369	12866	312	13167	350	13468	360	13769	454	14070	493	14371	354	14672	373
Exchange ,, ..	6508	6834	173	7070	202	7306	232	7542	172	7779	174	8016	177	8253	211	8490	266	8727	189	8964	212
Castle ,, ..	7682	7408	160	7334	184	7260	169	7185	124	7110	129	7035	120	6960	144	6885	215	6810	152	6735	155
Park ,, ..	6179	6171	162	6163	192	6155	183	6147	178	6139	182	6131	164	6122	168	6113	234	6104	157	6095	130
	58419	60153	1515	61887	1846	63622	1813	65356	1549	67091	1628	68827	1607	70562	1964	72296	2353*	74034	1772	75770	1840

* The Report of the Sanitary Committee for the year ending September 30, 1859, observes that "the total number of deaths of children under five years of age, from all causes, has been 1264, being more than one-half the total number of deaths;" and that "the following diseases have caused the deaths of children under five years of age, viz. :—Measles, 171; Diarrhœa, 119; Marasmus, 52; Convulsions, 155; Scarlatina, 150; altogether, 647." This extract from a former report is given to account for the excessive mortality in 1859.

Average mortality of ten years, from 1852 to 1861 inclusive, 1788.

The second table shows the mortality in each quarter of the year from 1855 to 1865 :—

Years from Oct. 1 to Sept. 30.	Summary of all the Wards. 1st Quartr.	2nd Quartr.	3rd Quartr.	4th Quartr.	Yearly Total.	Population. Actual.
1855 to 1856	336	411	410	441	1628	67091
1856 ,, 1857	399	396	367	445	1607	68827
1857 ,, 1858	493	454	500	517	1964	70562
1858 ,, 1859	764	709	441	479	2383	72296
1859 ,, 1860	525	429	444	372	1770	74034
1860 ,, 1861	407	502	457	479	1845	75770
						Estimated.
1861 ,, 1862	384	513	419	382	1698	76827
1862 ,, 1863	461	493	430	448	1832	77885
1863 ,, 1864	551	580	426	522	2079	78942
1864 ,, 1865	597	578	436	477	1998	80000
Average for 10 years	482	586	436	456	1880	74223

There are many *social* facts connected with the town of Nottingham on which, if this were not a Medical history, I might properly dwell. I can do no more than refer to one subject—I mean the number of illegitimate births. In the fourth report of the Medical Officer of the Privy Council a table is given which shows the number of illegitimate births in the town and district to be remarkably high. The facts stand thus :—

Number and Proportion of Births and Illegitimate Births during the Ten Years, 1850—59, in each of the subjoined Districts.

Name of District.	Total Number of Births.	Number of Illegitimate Births.	Proportion of Illegitimate Births in each 100 Births.
Nottingham . .	22612	2272	10·04
Basford . . .	26413	2396	9·07
Radford . . .	10936	873	7·98
Coventry . . .	15225	1073	7·04
Blackburn . .	41387	2539	6·13
Wolverhampton .	49061	2776	5·65
Birmingham . .	76893	3887	5·05
Abergavenny . .	24385	1168	4·79
Merthyr Tydfil . .	38393	1709	4·45
Aston . . .	31621	1242	3·92

The only explanation of this peculiar and unsatisfactory condition of matters social is the numerous illicit alliances between the sexes of the lower class in early life. Prostitution in its open guise and as an occupation is not, by comparison with other towns, common in Nottingham; but there has crept into the social system of factory life a feeling that there is little shame in young, very young girls and boys assuming the responsibilities of marriage, without the legal tie, during the first years of their nominal union. Thus great numbers of children are born illegitimate of parents who afterwards become man and wife, and in many other cases of parents who ultimately, without any necessary quarrel or disagreement, separate and marry others without calling down upon themselves those disgraces which in districts where there is open prostitution would be considered inevitable.

It remains for education to remove this condition; the legislator here, in the absence of the teacher, is the stock-piece of the play, necessary but powerless. So far, however, from considering this condition of affairs hopeless, I should be inclined to look upon it as full of hope. Give to the boys and girls of Nottingham—for I can call them nothing better—some useful information, restrain them from sensual gratification by the diversion of knowledge, and let them learn simply and logically that early marriages are the best moral safeguards of the State, and there is no reason why the vices of to-day in Nottingham may not become the virtues of to-morrow. Certain it is that now, in the presence of a bad system, the physical evils of open prostitution, the physical diseases of prostitution, are far less marked than in other towns, where there is less illegitimacy, and, by inference from that one fact, more immorality.

ADDENDA TO THE HISTORY OF THE GENERAL HOSPITAL.

By an accident in the press, the following facts in respect to the General Hospital were omitted in last week's number :—

HOSPITAL MORTALITY.

I regret it is not in my power to specify the mortality of the General Hospital in respect to the Medical and Surgical practice; neither can I state the mortality after operations. There are, in fact, no returns except of the most general kind. My friend, Mr. Littlewood, until lately House-Surgeon, and now one of the Surgeons to the institution, has been good enough to endeavour to make out the facts, but finds the data inadequate. According to a general estimate, the mortality of in-patients is at the average of sixty-five deaths in eleven hundred and fifty patients, or say 5·47 per cent. The following table shows the number of patients admitted and discharged from the first opening, Sept. 19, 1782, to March 1, 1865 :—

	In.	Out.	Total.
Patients admitted and discharged since the first opening, September 19, 1782, to March 1, 1865	51,695	181,194	232,889
Out-patients made in-patients .	4,410	—	4,410
In-patients made out-patients .	—	23,043	23,043
	56,105	204,237	260,342
Cured	23,873	128,406	152,279
Relieved	3,512	9,708	13,220
Non-attendance (most of whom were cured)	—	59,006	59,006
Irregularity	1,891	—	1,891
Without relief	768	482	1,250
Dead	2,784	896	3,680
Remaining on books March 1, 1865	143	1,274	1,417
	32,971	199,772	232,743
Out-patients made in-patients .	—	4,465	4,465
In-patients made out-patients .	23,134	—	23,134
	56,105	204,237	260,342

ADMINISTRATION OF CHLOROFORM.

It is estimated that chloroform, since its introduction into practice, has been administered in the General Hospital at least one hundred times a year. This would give a total of from seventeen to eighteen hundred of administrations. Up to this time no fatal case of inhalation has occurred in the institution. Sibson's inhaler has always been used for the administration.

THE NURSING SYSTEM.

The trained nurse system has not been introduced into this Hospital, nor has it been a necessity, good nurses being procurable in the neighbourhood, and promotion from under nurse to upper nurse being attended with satisfactory results. There are four night nurses, who are also partly employed in the washhouses and in cleaning the wards.

The Medical Staff.

The Medical staff of the General Hospital consists of four Physicians, four Surgeons, a Resident Surgeon and Apothecary, an Assistant, and a Dispenser. At my visit the staff was composed of the following gentlemen:—*Physicians:* Charles Storer, M.D. Cantab.; W. H. Ransom, M.D. London; W. T. Robertson, M.D. Edin., M.R.C.P. London. *Surgeons:* W. Wright, Esq., F.R.C.P.; Thomas Wright, Esq., M.R.C.P.; Joseph Thompson, Esq., M.R.C.P.; Joseph White, Esq., M.R.C.P. *Resident Surgeon Apothecary:* Joseph Littlewood, Esq., M.R.C.P. *Assistant:* F. L. Milburn, Esq., M.R.C.S. *Dispenser of Medicine:* Mr. Henry Crackle. Recently Mr. Littlewood has been promoted to the rank of Surgeon, and Mr. William Wright has resigned. Mr. Wright's connexion with the Hospital has been very remarkable, having extended over the long period of forty-eight years. What reward can the world offer to a man for such untiring and laboured, and skilful and loving service to his race?

John Wesley and the General Hospital at Nottingham.

Before concluding the history of the Nottingham General Hospital, I would give a curious quotation from the journal of the famous John Wesley. When Wesley visited the institution, it was in its new attire, and the great preacher had full reason to be satisfied with what he saw. But the most singular part of the narrative relates to Wesley's speculation as to the reason why the human body should be charged with pins. I am indebted to Dr. Sykes, of Doncaster, for the extract.

"1784, Feb. 4.—I went down to Nottingham and preached a charity sermon for the General Hospital."

"1786, July 8.—I walked through the General Hospital. I never saw one so well ordered. Neatness, decency, and common sense shine through the whole. I do not wonder that many of the patients recover. I prayed with two of them; one of them, a notorious sinner, seemed to be cut to the heart. The case of the other was quite peculiar: both her breasts had been cut off, and many pins taken out of them, as well as out of her flesh in various parts. 'Twelve,' the apothecary said, 'were taken out of her yesterday, and five more to-day.' And the Physicians potently believe she swallowed them all, though nobody can tell when or how. Which is the greater credulity—to believe this is purely natural, or to ascribe it to preternatural agency?"

MEDICAL MEMORANDA.

Nottingham and Vaccination.

It deserves to be recorded, to its scientific credit, that in Nottingham one of the first attempts was publicly made to introduce on an extended scale the practical blessings of vaccination. In the year 1805, a vaccine institution was established with the view of exterminating the contagion of small-pox by promoting a general vaccine inoculation, and more particularly by offering the advantages of that valuable discovery without expense to such of the poorer orders of the community as were disposed to accept them.

To this institution Dr. James Clarke was Physician, and Mr. Calton was Surgeon. They commenced the practice of vaccination in it on December 11, 1805, and on June 10 they had vaccinated 1175 persons, "of which 967 were regarded as complete and satisfactory cases." In their first report on the results of their operations, the directors were enabled to state that "vaccination has in this town been carried to an extent in six months which does not appear to have been equalled in any town of considerably greater population, the report of whose public practice for the last year has reached us."

This report of the Nottingham Institute, published in the then leading Medical periodical, the admirable *Medical and Physical Journal*, was received with great satisfaction by the Profession, and proved of immense service. When the Vaccine Institution lapsed into the past I cannot discover. Mr. G. Coldham was the Secretary.

Biographical.

Before I close this history, which, indeed, I have had great pleasure to write, there stand before me three Nottinghamshire worthies, of whom a word, however short, must be said.

First there standeth William Holder, D.D., F.R.S. He was the man who conceived the idea that the deaf and dumb could be taught, by the better use of their remaining senses, to hold converse with the world. Our present schools for the deaf and dumb and blind are the great, the crowning triumphs of Holder's life. It is full 200 years since he lived and laboured, for he died in 1697; at his death he had completed what it has taken two long centuries to turn into useful practice. Holder's claims to priority were disputed warmly by Dr. Wallis; but I think they remain honest claims.

Secondly there standeth one whom many of us have seen—Marshall Hall, M.D. A strange mystical man, having vast dreamy genius, combined with a sublime egotism and a weakness that can in no way be fathomed. He (Marshall Hall) will not live like William Holder, for he hath done nothing so directly practical for his race nor so abiding. His *has been* was great at its moment, and perhaps true, but it projected little and left no more.

Lastly there standeth a fine example and character of thorough chirurgical handicraft—J. Orton, Surgeon, late of the Manor-house, Beeston, near Nottingham. The first Surgeon this Surgeon to cut away a full sixth of the body of a living man, lopping off all the lower limb at the hipjoint, and leaving the man to live on from June 10 of the year 1824 to this day. Great operating Surgeons are, as a rule, too much men of the hour to remain great men when the sleight of their hand is withdrawn from the wondering crowd. But chirurgeon J. Orton will live because he not merely achieved a success in operative art never before achieved, but left the record of his work with the word-painter—whose devil is so merciless — in language so simple, descriptive, and honest, that it must be read by all Surgeons now and to come who are scholarly enough to read.

And so for Nottingham.

GENERAL CORRESPONDENCE.

◆

DR. GREENHALGH'S REPLY TO MR. BAKER BROWN.

Letter from Dr. Robert Greenhalgh.

[To the Editor of the Medical Times and Gazette.]

Sir,—I also "must claim your indulgence" for a small space in reply to Mr. Isaac B. Brown's virulent attack upon me in the last number of your journal.

With regard to my report of my observations at the meeting of the Obstetrical Society, I think it will be generally agreed that neither the interests of societies nor of the Profession at large would be promoted by the publication of the *ipsissima verba* uttered on the spur of the moment at any particular meeting. At the same time, I quite see the difficulty involved in the publication of a report which is not taken verbatim from the lips of the speaker. On the whole, however, I suppose the greatest advantage must accrue from that system of reporting in journals which best conveys what the writer really meant to say, and would actually have said if he had had more time to prepare his words, collect his thoughts, and curtail his observations within a moderate space. It was under the influence of these views that, some days after I spoke at the meeting, I endeavoured to put down on paper as well as I could the purport of what I had uttered impromptu. It seems to me it was my bounden duty to take all care that what appeared in print should be free from any of the inaccuracies incidental to an unpremeditated address unassisted by notes. I can honestly say that if I have erred in thus amplifying or correcting what escaped from me at the meeting, it was out of no sinister intention, but solely from a desire to be accurate.

Mr. Brown complains that, in the first case narrated at the meeting of the Obstetrical Society, I did not, at the patient's request, consult him about her. I submit that Mr. Brown's forgetfulness of Professional etiquette in this case seems to have blinded him to the consideration that it would have involved a loss of dignity and self-respect, to which I at least could with difficulty be reconciled, if I had consented, under the circumstances, to such a course. The patient, I may simply observe, had been taken out of my hands by the very man to whom I had introduced her. I deny that I ever recommended removal of the clitoris for self-abuse. The patient just referred to stated that she could not and would not discontinue the habit to which she was addicted, and that she would have the part cut out *coûte que coûte.* Such being her determination, I advised her to have Mr. Brown's opinion, who was at the time, as I believe, the only Surgeon who performed the operation on which she was so resolutely bent. Mr. Brown urged the excision, and promised it would effect a cure. Mr. Brown must know, as well as I do, that when I was appealed to I declined to express an opinion, stating that I had no experience, and could have no faith in the result thus confidently promised. The operation was performed in July, 1865, by Mr. Brown, and in January, 1866, she was worse than ever. In presence of this signal failure of clitoridectomy, it would be an inquiry of great interest to the Profession to know what treatment it is which has proved, as Mr. Brown alleges, successful.

Mr. Isaac B. Brown refers to my visits to the Surgical Home. They were paid on the following occasions:—March 24, April 14, May 19, June 2, December 1, 1864, and March 6, 1865. I have the greatest pleasure in recording these visits, and in adding that on every occasion I was received by Mr. Brown with the greatest courtesy and attention. The fact that I paid them at all, and that I paid them so frequently, is a proof that I was determined to judge for myself the merits of that institution; and that, if I now pen an adverse verdict upon it in one of its most important features, I do so "by mine own experience, not by others' talk."

I shall always do Mr. Brown the justice to admit that I there saw Surgical operations of considerable difficulty executed with conspicuous success. But I saw more than that; truth compels me to add that I there saw scenes and heard details which I will not further characterise than by saying that I thenceforth advised my class never again to visit that institution, and came to a like resolution as regards myself.

I desire to express my regret at having alluded, as it is alleged, prematurely, to Dr. Harling's case. It is, however, a satisfaction to me to find, from that gentleman's letter in the *British Medical Journal,* December 22, 1866, pp. 705-6, that the statement I made was correct. A relapse occurred within three weeks of the operation, and at the present time the wretched patient is in a pitiable and unmitigated plight of general nervous distress, and has sustained a return of the irritation which the excision of the clitoris was designed to eradicate.

To conclude this thoroughly nasty subject, I am of opinion that Mr. Isaac B. Brown's theories are founded on the most unwarrantable assumptions respecting practices to which it is calumniously pretended the women of England are largely addicted; and I am further of opinion, that the operation to which Mr. Brown gives such offensive publicity is not only utterly futile in effecting the alleged cure, but is further fraught with considerable danger to the morals of the public and the high tone of the Profession.

I am, &c.

Robert Greenhalgh.

77, Grosvenor-street, December 26, 1866.

LEGAL INTELLIGENCE.

CHARGE OF ILLEGALLY RECEIVING A LUNATIC PATIENT.

At Bow-street a summons was preferred at the instance of the Commissioners in Lunacy against Mr. George Naylor, Surgeon, of 8, George-street, Hanover-square, charging him with having taken the charge and care of a person of unsound mind, without the proper order or Medical certificate. The prosecution was conducted by Mr. Metcalfe, instructed by Messrs. Vandercombe, Law, and Co., solicitors to the Board of Commissioners in Lunacy; and Mr. Harrison, instructed by Messrs. Lewin and Co., defended. Mr. Metcalfe, in opening the case, said the proceedings were taken under the sections 90 and 91 of the Act 8th and 9th of Victoria, cap. 100. It appeared that in October last a young man, whose name he did not mention, being unwilling to make a family affliction unnecessarily public, was sent as a lunatic patient to Southall-park Asylum, with a certificate signed by the defendant. It appeared from it that the defendant had examined him at Deane's cottage, Hanwell, and had come to the conclusion that he was of unsound mind. It was not, however, stated that the defendant, who described himself as a Surgeon practising at 8, George-street, Hanover-square, was also residing at Deane's-cottage, Hanwell, and was the person in whose care and charge the patient had been for the preceding seven and a half months. The evidence would show that this was so, Mr. Naylor having signed an agreement by which he undertook the charge, board, and lodging of the patient, providing him with wine, etc., in fact everything but clothing, for £2 10s. per week. At that time the patient had been for twelve years in a state of imbecility, brought on by over-study. In the opinion of Dr. Allen, who had examined him prior to his removal from his father's house to Deane's-cottage, he was incurable. During the early part of his stay at Deane's cottage he appeared to improve, but in October, as he seemed to be getting worse again, he was removed by his father's suggestion to the asylum. Mr. Harrison cross-examined the witnesses, endeavouring to show that defendant was not aware that the patient's mind was affected until lately, and also that the prisoner was not under his charge (notwithstanding the agreement), but under that of a widow lady residing at Deane's-cottage. Counsel also suggested that he had witnesses to call, but, on Mr. Vaughan's intimation that unless their evidence was most stringent the case must go for trial, Mr. Harrison reserved the defence, observing, however, that if Mr. Naylor had committed any infringement of the Act it was rather an error of judgment than a wilful offence. The defendant was committed for trial, bail being taken in two sureties of £100 and himself in £200.

MEDICAL NEWS.

Royal College of Physicians of London.—At a general meeting of the Fellows, held on Saturday, Dec. 22, the following Member of the College was duly admitted a Fellow of the same:—

Nathaniel Allen Travis, Nice.

At the same meeting the following gentlemen, having undergone the necessary Examination, were duly admitted Members of the College:—

Thomas Tillyer Whipham, M.B. Oxon., St. George's Hospital; Christian Gottfried Heinrich Bäumler, M.D. Erlangen, 10, Finsbury-place North; Walter Balls Headley, M B. Cantab, 5, Tavistock-place; Francis Valentine Paxton, M.B. Oxon., West Dean, Chichester; Frederic Bateman, M.D. Aberdeen, Norwich; Robert James Lee, M.B. Cantab., 4, Savile-row.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, Dec. 20, 1866:—

Thomas Alphens Buck (Guy's Hospital), Kennington-park road; John Jenkins (Guy's Hospital), Castleton, near Cowbridge; James Brierley Hughes (St Bartholomew's Hospital), The Rectory, Congleton; William Frederick Knapp (St. Bartholomew's Hospital), St. Bartholomew's Hospital; George Fred. Sankey (St. Thomas's Hospital), Ashford, Kent; Augustus Constable Maybury (St. Thomas's Hospital), Frimley, Surrey; William Powell (Charing-cross Hospital), Shirley, Southampton; Edward James Pollock (King's College Hospital), Halton Hounslow, W.; Joseph Oakman (Westminster Hospital), Hillside, Wimbledon; William Askwith Rudd (Hull Medical School), Hull; Reginald Ratcliff Hoare (Birmingham General Hospital), Mount-street, Birmingham.

The following gentlemen also on the same day passed their First Examination:—

George Mason, Guy's Hospital; John Carr, Guy's Hospital; Robert Longuest Sheffield, London Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Barbour, Dr. J., L.R.C.S. Ed., has been appointed Resident Medical Officer to the London Fever Hospital.

Cullingworth, Charles James, M.R.C.S. Eng., etc., has been appointed Physician's Assistant at the Manchester Royal Infirmary.

Ellis, T. S., M.R.C.S.E, has been appointed Assistant-Surgeon to the Hospital for Sick Children, Gloucester.

Kelly, C., M.B, has been appointed Resident Medical Officer to the Public Dispensary, Carey-street, Lincoln's Inn.

Nash, W. L., M R.C.S.E., has been appointed Resident Surgeon and Apothecary to the Buckinghamshire General Infirmary, Aylesbury.

Teevan, Mr, F.R.C.S., B A., has been appointed Lecturer on Anatomy at the Westminster Hospital.

BIRTHS.

Blandford.—On December 18, at 3, Clarges-street, W., the wife of G. F. Blandford, M.B. Oxon., of a son.

Brenchley.—On December 19, at Denmark-hill, Camberwell, the wife of H. C. Brenchley, M.R C.S.E., of a daughter.

De Chaumont.—On December 16, at Oakland, Woolston, Hants, the wife of F. De Chanmont, M.D., Staff Surgeon, of a daughter.

Jones.—On December 24, at 174, Blackfriars-road, the wife of F. C. Jones, M.D, of a son.

Rose.—On December 11, at San Remo, Italy, the wife of Dr. F. Rose, of a son.

Salmon.—On December 14, at No. 3, Kempt-terrace, Woolwich-common, the wife of J. Salmon, M.D , Deputy-Inspector-General of the Royal Marine Infirmary, Woolwich, of a daughter.

MARRIAGES.

Booth—Hunt.—On December 18, at St. Lawrence's Church, Measham, Derbyshire, J. Webb Booth, M.R.C S.E., L.S.A , to Isabella, third daughter of the late G. Hunt, Esq., Measham.

Fleming—Mathers.—On December 20, at Partick, near Glasgow, J. M. Fleming, M D., her Majesty's Indian Army, to Catherine Rennie, eldest daughter of A. Mathers, Esq., Secretary Clydesdale Bank, Glasgow.

Miller—Phipps.—On December 10, at Galle Face Church, Colombo, Ceylon, Staff Surgeon C. M. Miller to Mary A., daughter of the late Mr. E. Phipps, of London.

Stanley—Robinson.—On November 3, at Trinity Church, Kurachee, Scinde, East Indies, by the Rev. H. W. Bagnell, M A., St. John Stanley, Staff-Surgeon Army, to Emily, youngest daughter of the late Rev. C. W. Robinson, M.A., formerly of Leominster, Herefordshire. No cards.

Wilson—Ducrow.—On December 24, at St. George's, Hanover-square, H. Wilson, M D. Bombay Army, to Louisa, only daughter of the late Mr. A. Ducrow.

DEATHS.

Dandy, C., M.R.C.S.E., at Rufford, near Ormskirk, on December 21, aged 74.

Haslewood, W., M.D. Edin , of Darlington, Durham, on December 9, aged 64.

Jackson, R , M.R.C.S.E., at 44, Upper Brook-street, Manchester, on December 14, aged 43.

Noel, V. E., M.R.C.S.E., of Westbury-terrace, Plymouth, on December 6.

Tait, R , Surgeon, at Enfield-highway, N., on December 20, aged 71.

VACANCIES.

Chorlton-on-Medlock and Rusholme Dispensary.—Surgeon.

Cumberland and Westmoreland County Lunatic Asylum.—Assistant Medical Officer.

POOR-LAW MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the last census.

RESIGNATIONS.

Cuckfield Union.—Mr. W. G. Tiley has resigned the Fifth District ; area 7484 ; population 2758 ; salary £50 per annum.

Darlington Union.—The Barton District is vacant ; area 12,935 ; population 2135 ; salary £28 per annum.

Nuneaton Union.—Mr Otho F. Wyer has resigned the Nuneaton District ; area 7520 ; population 7845 ; salary £55 per annum.

Selby Union.—Mr. G. Newstead has resigned the townships of North and Skipwith ; area 5058 ; population 769 ; salary £5 10s. per annum.

APPOINTMENT.

Caistor Union.—Richard Read, M.D. Ire., M.R.C.S. Edin., to the Tealby District.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Professor Taylor's letter on "Toxicological Discrepancies" is unavoidably postponed until next week.

The review of Dr. Beigel's work shall appear as soon as possible.

Modern Oncology is delayed for urgent reasons.

A Lover of Peace, Medicus Suburbanus, L.R.C.P, etc.—The subject of the *status* of the Consulting Practitioner shall not be dropped, but our columns are so full this week that it must be postponed.

Dr. Sutton is known to be an able man and genuine Professional worker, and is allowed on all hands to have conducted his canvass for the office he has just obtained without transgressing the rules of modesty and Professional decorum. His advertisement of his position and testimonials which appeared in the Shoreditch local paper was, we think, a wrong step, and is shown to have been so by the handle it has given to the malicious ; but it was a single mistake, done in the heat of electioneering, and offers no justification for the miserably malicious act of circulating that paper with disparaging comments, of which some one has been guilty. Such a proceeding can answer no good or honourable purpose now.

Erratum.—We have to correct an error of the press in our last number. It occurs in the paragraph in reference to Mr. Teevan's recent appointment. Westminster Hospital, and not Charing-cross Hospital, is the institution to which that gentleman is attached.

Coroners' Inquests.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I thank you for the information you have given, which I am satisfied is perfectly correct : but the practice to which you refer, and which seems to decide the matter, is certainly not in accordance with the highest legal authorities—viz., Blackstone, already quoted ; 4 Inst. 2 Hal. P. C. 2 Hawk. P. C.

Again, is such a practice safe? Assuredly in such doubtful cases there may be suspicion without guilt, and *vice versâ.*

London, December 23. I am, &c. An Old Subscriber.

Bromide of Potassium.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I have read with much interest Dr. Begbie's paper in the *Edinburgh Monthly Journal* on the Therapeutic Value of the Bromide of Potassium. Having largely used that salt lately in various convulsive diseases, I can endorse much that appears in Dr. Begbie's contribution. Might not the bromides prove of some service in hydrophobia and poisoning by strychnia if injected into the veins or the bowel?

I am, &c. George P. Rugg.

Stockwell-villa, Clapham-road, December.

COMMUNICATIONS have been received from—

Dr. Donkin ; Mr. Gaskoin ; Dr. Moriarty ; Dr. A. S. Taylor ; Dr. Meadows ; An Old Subscriber ; Mr. F. A. Bulley ; Mr. Walter J. Coulson ; Mr. William Carter ; Mr. R. S. Nunn ; Mr. J. H. James ; L.R.C.P. Lond. ; Dr. Orton ; Dr. Greenhalgh ; Dr. W. B. Herapath.

BOOKS RECEIVED—

Headland's Action of Medicines, fourth edition—Beaney's Vindication—Cox's Representative System—British Journal of Dental Science, No. 126—Chambers, On the Indigestions—Deane's Illustrated Almanac—MacNeill, On the Water Supply of London—Bulletin de l'Académie Royale de Médecine—Annual Report on the Health of the Parish of St. Marylebone—Jeaffreson, On Cholera Collapse.

NEWSPAPERS RECEIVED—

New Zealand Herald—L'Union Médicale—Harrogate Herald—Gazette des Hôpitaux—Medical Press and Circular.

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 22, 1866.

BIRTHS.

Births of Boys, 1055 ; Girls, 1079 ; Total, 2134.
Average of 10 corresponding weeks, 1856-65, 1785·8.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	709	668	1377
Average of the ten years 1856-65	666·5	653·6	1320·1
Average corrected to increased population..	..	..	1452
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhus.	Diarrhœa	Cholera.
West ..	463,388	3	2	4	1	4	..	5	..
North ..	618,210	7	5	6	..	15	26	3	1
Central	378,058	4	1	3	1	4	7	2	..
East ..	571,158	10	8	7	1	8	10	1	1
South ..	773,175	2	8	10	4	12	12	5	..
Total ..	2,803,989	26	24	30	7	43	55	16	2

APPOINTMENTS FOR THE WEEK.

December 29. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m. ; St. Thomas's, 9½ a.m. ; King's, 2 p.m. ; Charing-cross, 1 p.m. ; Royal Free Hospital, 1½ p m.

Royal Institution, 3 p.m. Professor Frankland, "On the Chemistry of Gases." (Juvenile Lectures.)

31. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m. ; St. Mark's Hospital for Diseases of the Rectum, 9 a.m. and 1.30 p.m.

January 1. *Tuesday.*

Operations at Guy's, 1 p.m. ; Westminster, 2 p.m. ; National Orthopædic, Great Portland-street, 2 p.m. ; St. Peter's Hospital for Stone, 3 p.m.

Anthropological Society of London, 3 p.m. Anniversary Meeting.

Pathological Society, 8 p.m. General Meeting for Election of Officers.

Royal Institution, 3 p.m. Professor Frankland, "On the Chemistry of Gases." (Juvenile Lectures.)

2. *Wednesday.*

Operations at University College Hospital, 2 p.m. ; St. Mary's, 1¼ p.m. ; Middlesex, 1 p.m. ; London, 2 p.m. ; St. Bartholomew's, 1½ p.m. ; Great Northern, 2 p.m. ; St. Thomas's, 1½ p.m.

Obstetrical Society of London. 7 p.m. : Special Council Meeting. 8 p.m. : Mr. W. A. Hunt, "Fœtal Peritonitis in Utero." 9 p.m. : President's Address.

Metropolitan Association of Medical Officers of Health, 4 p.m. Meeting.

3. *Thursday.*

Operations at St. George's, 1 p.m. ; Central London Ophthalmic, 1 p.m. ; Surgical Home, 2 p.m. ; Royal Orthopædic Hospital, 2 p.m. ; West London Hospital, 2 p.m.

Harveian Society of London, 8 p.m. The President, "Report of the Committee on Infanticide and Infant Mortality." Conversazione.

Royal Institution, 3 p.m. Professor Frankland, "On the Chemistry of Gases." (Juvenile Lectures.)

4. *Friday.*

Operations at Westminster Ophthalmic, 1½ p.m.

INDEX.

A

- Abdomen, cyst of the, specimen of, 182
  - rupture of the viscera of the, without external violence, cases of, 253
- Aberdeen University, rules and regulations of the, 284
    - professors of the, 302
    - pass-list of the, 184
- Abernethian Society, meeting of the, 435
- Abortion, management of retained placenta after, Dr. Suckling on the, 31
  - forced, Dr. Storer on, 479
  - criminal, charge against Dr. Beaney for, 223, 373
    - failure of a prosecution for, 669
- Absolon v. Statham, 530, 598, 656
- Absorption by wounds, M. Demarquay on, 562
- Acholic Diseases, Dr. Macleod on, review, 541
- Adams, Mr. William, Club-foot, review, 571
  - Mr. N. on the postural treatment of prolapse of the funis, 649
- Addison's disease, Dr. Wilks' observations on, 313
    - case of, 637
    - specimens of parts in, 19
- Advertising, Medical, specimens of, 687
- Aerozoids in times of epidemics, 228
- Africa, Gold Coast of, topography and diseases of the, Dr. Moriarty on the, 663
- Agley, Dr. John, death of, 630
- Agnis, Mr. John Crown, death of, 22
- Air, exclusion of, M. Guérin's apparatus for the, 548
- Albuminuria in Scarlatina, Prof. Harley on, review, 568
  - Dr. Weber on, 358
- Alcock, Assistant-Surgeon, on morphia injections in injuries of the head, case of, 5
- Alcohol, coma from, case of, 472
  - influence of, on temperature, Drs. Ringer and Rickards on the, 354
- Aldis, Dr. on the treatment of cholera and diarrhœa, 167
  - presentation of a testimonial to, 686
- Allbut, Dr. case of premature menstruation, 18
  - case of myeloid transformation of the lung, 18
  - observations on paracentesis pericardii, 474
- Althaus, Dr. Epilepsy, Hysteria, and Ataxy, review, 482
  - note on review of his book, 520
- Alvine concretions, oxalate of lime in, Dr. Moore on, 407
- Amaurosis in relation to tobacco-smokers, 220
  - in relation to sex, 221
  - complicating locomotor ataxy, 221
  - Mr. Hart on, 596
- American War, Circular concerning the, review, 99, 126
- Amiens, R. D.'s visit to, during the cholera, 39
- Amputation, myelitis after, Dr. Fayrer's case of, 33
  - at the hip-joint, Dr. Fayrer's case of, 3
    - Dr. Van Buren's cases of, 509
  - at the shoulder-joint, fatal case of, 394
  - Dr. Fayrer's case of, 581
- Anæsthesia, local, Dr. Richardson's demonstrations of, 349
    - employment of, in midwifery, 150
    - applied to Veterinary Medicine, 573
  - with mixed vapours, Mr. Ellis on, 183, 542
- Anderson, Dr. T. A. death of, 380
  - Dr. McCall, introductory lecture of, 536
- Andrew's, St. University of, rules and regulations of the, 284
- Anencephaloid fœtus, Mr. Clark's case of, 408
- Aneurism of the arch of the aorta, Mr Dixon on, 497
  - of the common carotid, laryngeal affection from the, Dr. Mackenzie on, 637
  - of the sinuses of Valsalva, specimen of, 19
  - diffused traumatic, of the femoral, case of, 610
  - inguinal, Dr. VanBuren's cases of, 509
  - of the innominata, ligature of the carotid and subclavian for, Mr. Fearn's case of, 628
  - of a branch of the pulmonary artery in phthisis, 420, 629
  - popliteal, cured by flexion, Dr. Jones' case of, 250
  - diffused traumatic, of the radial, case of, 610
- "Annus Medicus," 1866, 690
- Ansell, Dr. Thomas, of Bow, obituary notice of, 92
- Aorta, varieties in the great arteries arising from the, Dr. Gibb on the, 325
- Aphonia, from growth on the chordæ vocales, Dr. Mackenzie's case of, 445
- Apoplexy, Dr. Mushet on, review, 568
  - meningeal, with purpura, case of, 46
- Apothecaries' Society, pass-lists of the, 22, 47, 75, 104, 129, 158, 184, 240, 265, 328, 355, 379, 409, 434, 462, 486, 517, 546, 572, 600, 630, 657, 685, 703
    - rules and regulations of the, 278
    - report on the examinations of the, 423
- Apothecaries' Hall, Ireland, rules and regulations of, 290
- Army, mortality in the, in China, 588
  - Medical Department, rules and regulations of the, 280
    - successful candidates of the, 182, 237
    - Reports of the, review, 457
    - grievances of the "D. I. G." on the, 547
      - "One of the Above" on the, 26
      - "Unity" on the, 520
    - pay of, in the cavalry, 374
    - pay in the, compared with that of combatants, 549
    - and the Guards, 504
    - rank of the, in India, 357
    - and the re-appointment of Dr. Wills, 378, 614
    - new director of the, 700
    - School, rules and regulations of the, 280
      - unsatisfactory condition of the, 534
      - letter of the Professors of the, 560
  - Italian, pay of Medical officers in the, 65
- Armison, Mr. G. death of, 517
- Arnott, Mr. T. W. death of, 686
- Arsenic-eating, example of, 375
  - poisoning by, from magenta dust, Mr. Whalley's case of, 222
- Artery, popliteal rupture of the, case of, 6
  - subclavian, Dr. van Buren's statistics of ligature of the, 511
  - *vide* Aneurism
- Arthur, Mr. James, death of, 572
- Association, British, for the Advancement of Science, notices of meetings of the, 228, 262, 325, 349
  - British Medical, notice of meetings of the, 34, 151, 176, 199, 229
    - Provident Society of the, Mr. Clay on the, 211
  - for Promoting Social Science, notices of meetings of the, 377, 399
  - of Metropolitan Medical Officers of Health, report of the, 239
    - meeting of the, 599
  - of Metropolitan Poor-law Medical Officers, *vide* Poor law
  - Glasgow Medical, objects of the, 659
  - the Lothian's Medical, formation of, 49, 69
  - the Italian Medical, meeting of the, 562
- Astle, Mr. Ambrose, death of, 527
- Astragalus, Mr. Griffith's cases of compound dislocation of the, 231
- Ataxy, locomotive, Dr. Jackson, 220
- Atkinson, Dr. cases of hemiplegia, 610
  - Dr. A. R. death of, 380
- Australia, notes of a voyage to and from, 538, 592, 645
- Austria, statistics of the cholera of 1865 in, 630
- Ayton, Dr. J. death of, 434

B

- Baker, Mr. on the origin of pyæmia, 234
- Ball, Dr. *Du Rhumatisme Viscéral*, review, 567
- Ballard, Dr. on the prevention of cholera, 447
  - testimonial to, by the Islington Vestry, 615
- Banbury, Assistant-Surgeon R. death of, 409
- Barclay, Dr. Gout and Rheumatism, review, 516
- Bare feet, advantages of, 347
- Barker, Dr. introductory lecture at St. Thomas', 365
  - Dr. Walter, reply to review by, 105
  - Mr. D. death of, 76
- Barlow, Dr. on the pathology of cholera, 83, 113, 137
  - obituary notice of, 433
- Barnes, Dr. on leucorrhœa in relation to phthisis, 183
- Bartholomew's (St.) Hospital Medical School, scholarships and prizes at, 295
    - Mr. Savory's introductory lecture at, 359
  - *vide* Hospital
    - of Rochester, cases treated at, 610
- Barwell, Mr. introductory lecture of, 359
  - on the rational treatment of deformities, 523
- Bassett, Mr. John, death of, 546
- Bateman, Dr case of œdema of the glottis complicating phthisis, 442
- Beale, Dr. on the nature of vital force, 85
  - microscopical researches on cholera, 109, 122, 166, 310, 336, 366, 388
  - on his doctrine of contagion, 327
  - on desquamation of the epithelium in cholera, 310, 378
  - on elimination, 336, 366
  - on Dr. Pusey's statements, 681
- Beaney, Dr. trial of, for criminal abortion, 211, 323, 372
- Beatty, Dr. Contributions to Medicine and Midwifery, review, 489
- Beau, M. *Traité de la Dyspepsie*, review, 678
- Belfast, Queen's College at, professors and fees of the, 303
- Belgrave, Dr. on the treatment of cholera in Russia, 459
- Bell, Mr. Joseph, Manual of Operative Surgery, review, 541
- Belladonna and opium, poisoning by, case of, 473
- Bennett, Professor, address of, to the British Medical Association, 176
  - Dr. J. Henry, Treatment of Pulmonary Consumption, review, 542
  - Mr. F. death of, 328
- Bérard, M. death of, 185
- Beraud, M. Atlas of Anatomy, review, 456, 568
- Berlin registration returns, 427
- Bert, M. researches of, on animal ingrafting, 14
- Beyran, M. death of, 158
- Bigg, Mr. on an alleged improved leg, 549
- Billing, Dr. Treatment of Cholera, review, 259
- Bird, Mr. case of operation for a tumour of the upper jaw, 650
- Birmingham General Hospital, cases treated at the, 393
  - Queen's College, fees and scholarships, 299
    - Dr. Nelson's introductory lecture at, 403
  - Sydenham College, fees, 301
    - Dr. Foster's introductory lecture at, 404
- Bladder, rupture of the, from external violence, 253
  - cancer of the, specimen of, 544
  - foreign bodies in the, cases of, 8
- Blake, Mr. case of pulmonary cancer, 330
  - on the use of iron in phosphatic urine, 408
- Blandford, Dr. notes of lectures on insanity, 29, 81, 134, 217, 413, 467
- Bleeding in disease, Dr Markham on, 69
- Blegborough, Dr. Henry, death of, 298
- Blood, action of carbonic oxide on the, Dr. Gamgee on the, 325
- Blount, Dr. John Hillier, death of, 265
- Boars, how they kill, 410
- Boggs, Dr. *Phlegmasie de la Matrice*, review, 516
- Bond, Mr. H. H. death of, 556
- Bone-tissue, composition of, 519
- Bonus, Mr. offer of wine to Hospitals, 51
  - on cheap French wines, 575
- Books, reviews and notices of, 16, 44, 69, 99, 104, 126, 235, 242, 262, 326, 351, 406, 430, 455, 461, 481, 488, 507, 516, 541, 545, 571, 594, 600, 627, 647, 657, 678, 685
- Bouchut, M. diagnosis of affections of the nervous system by the ophthalmoscope, 594
- Boundon poison, account of the, 548
- Bowe, Mr. case of removal of the clavicle, 194
- Bowman, Mr. address on Surgery at the British Medical Association, 199
  - Mr. J. E. Introduction to Chemistry, review, 351
- Boys, Dr. Pusey's views on the besetting trial of, Dr. Beale on, 681
- Bradshawe, Dr. W. death of, 240
- Braidwood, Dr. on an improved splint, 352

Brain, peculiar deposit in an epileptic, specimen of, 46
diagnosis of diseases of the, by the ophthalmoscope, M. Bouchut on the, 594
Braiuard, Prof. Samuel, death of, 490
Breast, hysterical affections of the, Mr. Skey on the, 307
Bristol Medical School and Hospitals, 300
British Association and British Medical Association, *vide* Association
Broadbent, Dr. on a new method of treating cancer, 229, 456, 512
Mr. Moore on, 426, 433
on the injection of acetic acid into ovarian cysts, 568, 649
Bromide of potassium, Mr. Rugg on the, 704
Brown, Dr. F. on change of type in disease, 128, 210
Mr. Baker, on the treatment of the pedicle in ovariotomy, 229
on the debate on clitoridectomy, 681
Surgical Diseases of Women, review, 489
Bruee, Dr. on the Dresden Military Hospitals, review, 572
Brunjes, Mr. case of cholera, 337
Brussels registration returns, 228
cholera in, *vide* Cholera
derisive remuneration for cholera cases at, 589
Bryant, Mr. case of elephantiasis Arabum, 238
Mr. J. death of, 212
Bulley, Mr. on hot-water packing in cholera, 139
Bulmer, Mr. the Brain, review, 657
Barbury, Dr. S. W. death of, 265
Buruett, Dr. C. M. death of, 490
Barrell, Deputy-Inspector Dr. W. H. death of, 498
Bursa, enlarged sloughing, Dr. Cousins' case of, 498
Burton, Dr. on the Walsall Cottage Hospital, 628

C

Cæsarean section, cases of, under local anæsthesia, 92, 199
Calculus, biliary, discharged through the abdominal wall, 629
Calcutta Medical College Hospital, cases at the, 33
Callender, Mr. case of stricture with complications, 237
Calvert, Mr. G. death of, 462
Cambridge University, rules and regulations of the, 272
pass list of the, 657
Camps, Dr. Epidemic Cholera, review, 545
Cancer, pathology of, modern views on the, 501
Mr. Hulke on investigating the, 531
Dr. Broadbent's new mode of treating, 229, 456, 512
cases illustrating, 444
Mr. Moore on, 426, 433
Dr. Simpson's treatment of, by injection, 483
Dr. Skinner on, 648
Dr. Brandini's treatment of, by citric acid, 549
of the bladder, specimen of, 544
of the heart, specimen of, 544
Intra-thoracic, Dr. Cockle on, review, 647
of the larynx, specimen of, 545
of the lungs, Mr. Blake on, 330
secondary, Dr. Henry Day on, 230
of the orbit, specimen of, 432
of the uterus, Dr Routh on bromine in, 488
Canniff, Mr. Manual of Surgery, review, 262
Canton, Mr. presentation of a testimonial to, 76
Cape, Mr. H. death of, 658
Carbolic acid, properties of, 145
death from, 173
Carbonic oxide, action of, on the blood, Dr. Gamgee on, 325
acid, elimination of, in sleep and waking, Prof. Pettenkofer on the, 680
Carbuncle and carbuncular abscess, Mr. James on, 469
Carleton, Mrs. Choleraic Influence, review, 213
Carter, Inspector-General Dr. J. C. death of, 490
Cartilages, loose, Dr. Dick on the removal of, 230
Casein in the urine, Dr. Moore on, 525
Casey, Dr. case of heat-fever, 26
Cataract, Mr. Soelberg Wells' lectures on, 439, 495, 551, 605, 661
Dr. Taylor on the operation for, 673
Cattle, the ancient British, 603
plague, Dr. Sanderson's investigations of the, 13
review of the progress of the, 690
in Cheshire, Dr. Waters on the, 153
vaccine mania in the, Prof. Simonds on the, 510
returns, 25, 51, 78, 105, 133, 160, 187, 213, 242, 267, 330, 356, 382, 411, 436, 464, 492, 520, 687
Cavalry, pay of Medical officers in the, 374
Certificates of death, Dr. Farr's proposed alterations in, 63
Chancre, indurated, local treatment of, 558
Chandler, Mr. A. T. death of, 601
"Change of Doctor," 557, 589, 615
Chapman, Dr. on the treatment of cholera at Southampton, 101
Diarrhœa and Cholera, review, 349, 481
Charing-cross Medical school, distribution of prizes at the, 185
Charing-cross Medical School, scholarships and prizes at the, 297
Mr. Barwell's introductory lecture at the, 359
cases treated at, 89
Chemical diseases, *vide* Diseases
Chemical types, Gerhardt's theory of, 321
Chemistry, doctrines of modern, 320
Chemists, collusion of with Physicians, illegality of, in France, 38
Chester, account of, by Dr. Waters, 152
Childbirth, mortality from, under midwives, observations on the, 195
Dr. Edmunds on the, 207
Children, allowed to be uncovered at night, 133
insanity in, Dr. Blandford on, 136
vide Infants
China, mortality of troops in, 588
Chisholm, Dr. on wounds of the knee-joint, 689
Chloroform, question of accumulation of, in the system, 25
Dr. Sansom on, 52
Dr. Oshorn on, 79
death from, in a boy, 560
and ether, Dr. Ludlow on a case of death from, 378, 436
Cholera, pathology of the, Dr. Barlow on the, 83, 113, 137
Dr. Chapman on the, 349, 481
Dr. George Steele on the, 348
Dr. Sansom on the, 188
Mr. Hewett on the, 214
Mr. Sedgwick on the, 259
Dr. Kingsford on the, 259
Dr. Johnson's theory of the, Dr. Moxon on, 415, 578
note of Dr. Johnson concerning, 682
source of, Mrs. Carleton on the, 213
malaria as the cause of, Dr. Macgowan on, 259
origin, cause, and prevention of, Dr. Richardson on the, 102
primary cause of, Dr. Neale on the, 5
aerozoids during the prevalence of, 228
in relation to the composition and supply of water, 143, 254, 321, 329, 402, 602, 640, 692
danger of pump-water in, 131
microscopical researches on, Dr. Beale's, 109, 122, 166, 310, 336, 366, 388
detachment of intestinal epithelium in, Dr. Parkes on the, 210
Dr. Beale on the, 310, 378
Dr. Gairdner on the, 352
eliminative process in the, Dr. Beale on the, 366
morbid changes in the villi of the intestines in, 388
appearances of the stomach and intestines in, Drs. Fox and Ringer on the, 460
the urine in, Dr. Weber on, 172
the rash of, 143
uterine discharge in, Dr. Parkes on, 210
uterine epistaxis in, Mr. Wells on, 237
reaction in, Prof. Worms on, 61
temperature after death from, Dr. M'Cormac on the, 636
effects of charcoal on the evacuations in cholera, Dr. Frankland on the, 560
conclusions of the International Sanitary Conference on the prevention of, 375, 428, 454
production and prevention of, Dr. Fuller on the, 571
operations of the Medical Officers of Health against the, 447
preventive measures against, in France, 347
official regulations for vestries concerning the, 132
avoidance of panics in the, Mr. Middleton on the, 330
transport of patients suffering from the, 174
results of separating patients suffering from the, in Paris, 375
want of accommodation for patients suffering from, in the country, 175
literature of the, 17, 259, 348
jottings on the, 174
payments for the, Dr. Dicker on, 188
among dogs at Naples, 435
treatment of, Dr. Goodeve on the, 17
physiological formula of the, 110
Mr. Dyke on the, 128
Dr. Andrew Clark on the, 128
Dr. Weber on the, 141
Dr. Greenhow on the, 141
by stamping out, 147
Dr. Aldis on the, 167
Mr. Gabb on the, 188
Dr. Whitehead on the, 189
Mr. Jones on the, 209
Dr. Evanson on the, 214
Dr. Billing on the, 259
Dr. M'Loughlin on the, 331
Dr. Sansom on the, 554
on board the *Belleisle*, 590
preventive treatment of, Dr. Fergus on, 259
mechanical treatment of, 259
antidotal treatment of, Dr. Parkin on the, 127, 160
treatment of, in Russia, Dr. Belgrave on the, 459
Cholera, averting fatal collapse in, Dr. French on, 58
aloes as a prophylactic in, Dr. King on, 209
cases of, treated by camphor, 118
castor-oil treatment in cases of, 115, 141, 171
internal cold in, Dr. Nelson on, 535
dry-packing in, 435
hot-water packing in spasmodic, Mr. Bulley on, 139
collapse from, in a hot bath, 383
ice-treatment at Southampton, Dr. Chapman on the, 101
injection into the veins in, Dr. Richardson on, 112
cases of, 312
M. Lorain's case of, 615
Dr. Maysmor's query concerning, 161
nitric acid in, Dr. Warwick on, 102
nitrous acid in, Dr. Nicholas on, 193
opiate enemata in, Mr. Whalley on, 268
permanganates in, Mr. Muter on the, 189
podophyllin in, Dr. Wilmot on, 215
santonine in, Dr. Rowand on, 411
sulphuric acid as a prophylactic in, Dr. MacCormac on, 57
turpentine in, Dr. Mudge on, 181
wet-sheet packing in, Dr. Oppert on, 268
progress of, in England, 172, 475, 691
in London, 92, 119, 130, 172, 197, 225, 371, 395
cases of, treated at the London Hospitals, 37, 58, 86, 115, 140, 169, 194, 223, 251, 312, 391
the various epidemics of, in London, compared, 446, 529, 639
in Liverpool, progress of the, 66, 125
at Merthyr Tydvil, outbreak of, 329
at Pill, near Bristol, outbreak of, 559
at Southampton, progress of, 94, 124
at Woolwich, outbreak of, 529
at Camberwell, 586
in Scotland, progress of, 410, 431, 573, 653
in Dublin, 647
on the Continent, 13, 39, 76, 89, 131, 182, 185, 212, 241, 347, 398, 453
results and death rate, 666
at Amiens, 13, 39
at Paris, 453, 666, 672
in Belgium, 666, 672
at Brussels, 131, 185, 347, 398
derisive payments for the, at, 589
in Holland, 666
in Italy, 666
in Austria, 630
at Constantinople, 95
at Lucknow, Mr. Sanderson on the, 348
Chordæ vocales, aphonia from growth on the, 445
paralysis of the, in carotid aneurism, Dr. Mackenzie on, 637
tracheotomy in, 638
Christison, Prof. address to the Edinburgh Graduates, 148, 236
Clark, Mr. R. O. on an anencephaloid fœtus, 408
Clarke, Mr. A. death of, 546
Clavicle, comparison of right and left, 411
removal of the, Mr. Bowe's case of, 194
Clay, Dr. on the Medical Provident Society, 211
Climate, effects of drainage on, 517
Climates, warm, new works on, 502
Clitoridectomy, observations on, 641
discussion on, at the Obstetrical Society, 650
Mr. Brown on the, 681
Dr. Greenhalgh on the, 702
Clitoris, "restoration" of the, 465
Clubfoot, Mr. Adams on, review, 571
causes producing, Mr. Barwell on the, 523
Cobbold, Dr. on tapeworms, 146
on the entozoa of the dog, 324
Cockle, Dr. Intra-thoracic Cancer, review, 647
Codex, the new French, observations on, 585
Coleman, Mr. on dentistry and Medicine, 597
Collier, Inspector-General C. F. death of, 546
Coles, Mr. H. death of, 630
Colon, stricture of the sigmoid flexure of the, specimen of, 19
Compton, Dr. Temperature in Acute Diseases, review, 516
Condy's fluid and carbolic acid, 145
Congestion, stimulant treatment of, Mr. Skey on the, 1
Congress, International Medical, the proposed, 399, 501
Conquest, Dr. J. T. death of, 490
Consciousness, analysis of, 29
Consulting Practitioners, *status of*, 589, 615
Consumption Hospital, patients sent to Madeira from the, 132
cases treated at the, 420
Contagion, Sir H. Holland's views on, 256
Dr. Beale's doctrine of, 327
Contagious Diseases Act of 1866, 695
Contraction, hysterical, Mr. Skey on, 386
Cooke, Dr. on treating hæmorrhoids by nitric acid, 408
case of fracture of the patella, 484
Cooper, Mr. on atrophy of the muscles from disease of the spinal cord, 73
Copland, Dr. Consumption and Bronchitis, review, 685
Copper in animal tissues, 472

Copper, sulphate of, case of poisoning by, 435
Cork, Queen's College, Professors and fees at, 303
Coroners, necessity of Medical, 543
Dr. Gibbon on the, 690
inquests, queries concerning, 412, 687
Corpus callosum, deficiency of, Dr. Down's case of, 239
Cottage Hospital, Walsall, Messrs. Burton on the, 628
Corrigan, Sir D. cholera map of Ireland, 259
Cotton-wool, medicated, Dr. Greenhalgh on, 182
Coulson, Mr. Walter, and the staff at St. Mary's, 670, 699
Cousins, Dr. case of gangrenous erysipelas, 443
on gangrene of the skin in infants, 472
case of sloughing bursa patellæ, 498
Cox, Dr. reception of, by the British Medical Association, 234
Crab, British fossil, the earliest, 631
Cribb, Dr. H. death of, 355
Crisp, Dr. on the weight of the brain, 572
Crocker, Assistant-Surgeon Henry, death of, 490
Cronin, Dr. death of, 130
Croucher, Dr. case of abscess of the lung, 460
Curgenven, Mr. on the treatment of fractures, 419
Curling, Mr. Diseases of the Testis, review, 262
Cyanide of potassium, poisoning by, 187

D

Da Costa, Dr. Medical Diagnosis, review, 483
Dandy, Mr. C. death of, 704
Darwinian hypothesis, present state of the, 44
Davis, Mr. W. death of, 76
Davy, Dr. on the colour of man, 324
Day, Dr. (St. Andrews) prospects of, 452
Dr. Henry on secondary cancer of the lungs, 230
Clinical Histories, review, 657
Deaths, Dr. Farr on improved registration of, 62
vide Registration returns
Deformities, Mr. Barwell on the rational treatment of, 523
Demarquay, M. on absorption by wounds, 562
Dementia, Dr. Blandford on, 467
Dentistry and Medicine, Mr. Coleman on, 598
Mr. Rymer on, 688
Dew, Wells' Essays on, review of a reprint of, 571
Diamond, Dr. Francis Henry, death of, 265
Diarrhœa, choleraic, remedies for, 90
Mr. Sampson and Dr. Thorowgood on, 156
Dr. Watmough on, 161
Dr. Aldis on, 167
Dick, Dr. on the extraction of loose cartilages from joints, 230
Dicken, Dr. on payments for cholera cases, 188
Dietetics, philosophical, 449, 532
Diphtheria, giving rise to gangrenous erysipelas, Dr. Cousins on a case of, 443
Condy's fluid in, Dr. Evans on, 458
of a wound, followed by paralysis, Dr. Paterson on a case of, 608
Diplomas "to be disposed of," 214, 243
Diseases, change of type in, Dr. Markham on the question of, 69, 128, 157, 514
Dr. Brown on the, 128, 219
Dr. Symonds on, 368
registration of, observations on, 224
Dr. Farr's suggestions on, 62
depressing causes of, Mr. Skey on the, 55
relationship of chemical and mechanical, Dr. Bence Jones on the, 245, 333
treatment of chemical, Mr. Tatlocke on the, 356
Disinfection, Mr. Simpson on the mode of, 356
Dr. Muhlig on, 429
procedure for, 493
Disinfectant, quick-lime as a, query on, 643
Dislocation of the astragalus, Mr. Griffith's cases of, 231
of the femur on the ileum, Mr. Power's case of, 391
Dr. Van Buren's cases, 510
upwards and backwards, case of, 252
Dislocations, reduction of, by manipulation, Mr. Nunneley on, 232
Dispensaries and religious mendicancy, 121
Dixon, Mr. note on the review of his book, 133
Mr. E. case of aneurism of the arch of the aorta, 497
Dobell, Dr. Winter Cough and Tuberculosis, reviews, 489
Doctor, "change of," 557, 589, 615
Doctors, lady, Dr. Storer on failure of, 505
Donders, Prof. views of, on constituents of food, 532
Down, Dr. case of deficiency of the corpus callosum, 239
Drought, Dr. Frederick, death of, 158
Drugs, effects of, on the animal temperature, Dr. Warter on the, 417
Druitt, Dr. visit to Amiens during the cholera, 39
address to the Metropolitan Association of Medical Officers of Health, 599
Dublin, letters from, 457, 507, 511, 647
University, rules and regulations of the, 288
pass-list of the, 22
Professors and fees of the, 303
Medical schools of, professors and fees of the, 303, 304
Duchesne, Dr. R. death of, 462
Duncan, Dr. Fecundity and Sterility, review, 572
Dunn, Mr. on archæology in relation to ethnology, 325
case of concealed uterine hæmorrhage, 487
Inspector-General Thomas Russell, death of, 355
Durham University, rules and regulations of, 274
Dyce, Mr. on a new forceps, 407
on postural treatment of prolapsus of the funis, 524
Dyer, Mr. J. F. death of, 490
Dyke, Mr. on the treatment of cholera, 128
Dyspepsia, review of M. Beau's Treatise on, 678

E

Ear, prolonged residence of a foreign body in the, 497
Earle, Dr. on a new method of inducing premature labour, 32
Earth-closets, as substitutes for water-closets, 398
Edinburgh, letters from, 69, 236, 431, 563
University, rules and regulations of the, 282
Professors of the, 301
Medical School of the, Dr. Christison on the, 148, 236
Dr. Christison's address to the graduates of the, 236
Colleges of Physicians and Surgeons of, rules and regulations of the, 302
Royal Infirmary, officers and fees at the, 302
Edmonds, Mr. E. death of, 630
Edmunds, Dr. statements of, respecting mortality after childbirth, 195, 207
Education, Medical, *vide* Medical
Eggs of fish, protoplasmic movements of, Dr. Ransom on the, 349
Electrical room at the Hospital for the Epileptic, 583, 611
Elephantiasis Arabum, ligature of the external iliac in, Mr. Bryant's case of, 238
scroti, Mr. Meade's case of, 354
Elimination, Dr. Beale on the doctrine of, 336, 366
Ellis, Mr. on anæsthesia by mixed vapours, 183, 542
Embryology, comparative, Professor Owen on, 44
Enchondroma, cases of, 342, 544
Enteric fever, specimens from the intestine in, 20
Entozoa of the dog, Dr. Cobbold on the, 324
Epidemiological Society, meeting of the, 102
Epithelioma of the arm, Dr. Fayrer's case of, 581
Erichsen, Mr. Railway Injuries to the Nervous System, review, 430
Erysipelas, gangrenous, contracted from diphtheria, 443
Ethnology, archæology in relation to, Mr. Dunn on, 325
Ethnological Museum, proposed foundation of, by Mr. Peabody, 615
Euphorbiaceous seeds, purgative action of, 556
Evans, Dr. on Condy's fluid in diphtheria, 458
Mr. T. M. on a long splint, 465
Mr. G. death of, 462
Evanson, Dr. on the treatment of cholera, 214
Eves, Mr. on treatment of fracture of the neck of the femur, 181
Evidence, scientific, in courts of law, Professor Williamson on, 350
Medical, Justice Lush's new ruling concerning, 679
Examining Bodies, rules and regulations of the, 271
visitations of the, 421
Excision of the upper jaw, Dr. Fayrer on, 553
of the shoulder-joint, case of, 556
Expectation, treatment by, discussion on, 234
Extractum carnis, Messrs. Deane and Brady's analyses of, 504
Eye Dispensary, Nottingham, Dr. Taylor on points of practice from the, 673
Eyeball, growth within the, specimen of, 432
fibro-plastic melanoid tumour of the, 433

F

Fairmann, Dr. on workhouse infirmaries, 52
Farr, Dr. suggestions of, for improved registration, 62
on the necessity for Medical coroners, 543
Fayrer, Professor, case of amputation at the hip-joint, 3
case of osteomyelitis, 33
cases of stricture treated by Holt's dilator, 168
Clinical Surgery in India, review, 263
on the radical cure of hernia, 441
case of excision of the upper jaw, 553
case of amputation at the shoulder-joint, 581
Fecundity, fallacy of statistics of, Mr. Sargent on the, 77
of Scotch and English women compared, 226
Fees, tariff of, in Canada, 463
Female Medical Society, observations on the, 195
Dr. Edmunds on the, 207
Femur, dislocation of the, Dr. Van Buren's cases of, 510
on the ileum, Mr. Power's case of, 391
backwards and upwards, case of, 253
fracture of the, Mr. Curgenven's treatment of, 419
Femur, fracture of the, Mr. Orton's treatment of, 527
of the neck of the, Mr. Eves on, 181
Dr. Brown on, 128
Mr. Gabb on, 353
Fenwick, Dr. on lung-tissue in the expectoration in phthisis, 353
on investigation of pulmonary disease with the microscope, 397
Fergus, Dr. on preventive treatment of cholera, 259
Fever, enteric, specimen of intestine in, 20
yellow, on board the *Atrato*, 557, 591
quarantine for the, at Southampton, observations on, 591
Hospital for the East-end, the proposed, 503
Fick and Wislicenus, investigations of, on the Faulhorn, 459
Field, Mr. Octavius, address of condolence to, 70
Fillet, Dr. Sheraton's steel, 74, 484
Filson, Dr. A. B. death of, 572
Filter, Baker and Woodroffe's high-pressure, 103
Fincham, Dr. introductory lecture at the Westminster Hospital, 305
Fleas, observations on, 547
Flesh, extract of, Messrs. Deane and Brady's analyses of, 504
Flint, Dr. Physical Exploration of the Chest, review, 489
Fœtus, anatomical relations of the, to the mother, Dr. Madge on the, 650
Foley *v.* Poole, 189
Foods, the philosophy of, 449, 532
Liebig's division of, Dr. E. Smith on, 326
Force, vital, Dr. Beale on, 85
Forceps, Prof. Dyce's, 407
Forge, Mr. P. R. death of, 380
Fossil man, 491
Foster, Dr. on the application of the sphygmograph, 237, 606
introductory lecture at the Sydenham College, 404
on change of colour in a mulatto, 325
Fowell, Mr. S. death of, 601
Fowler, Dr. on the Griffin testimonial fund, 72
Fox, Dr. Wilson, report on appearances in the stomach and intestines in cholera, 460
Fracture of the femur, treatment of the, Mr. Curgenven's, 419
Mr. Orton's, 527
of the neck of the femur, Mr. Eves on, 181
Dr. F. Brown on, 128
Mr. Gabb on, 353
of the leg, Mr. Orton's treatment of, 527
of the patella, Mr. Cooke's case of, 484
treatment of the, at the London Hospitals, 418
of the ribs, with metallic resonance, Mr. Solly's case of, 682
Fractures, treatment of, report on the, at the London Hospitals, 418
Mr. Curgenven's, 419
by paraffin bandages, Mr. Tait on, 471
France, popular scientific lectures in, 16
statistics of insanity in, 10, 257
population question in, 464
condition of nurse-children in, 453, 480
Freeman, Mr. J. H. death of, 409
French, Dr. on averting the fatal collapse in cholera, 58
Friendly societies, Medical payments to, 346
Fry, Mr. Lodging-house Acts, review, 600
Fuller, Dr. on the causes and prevention of cholera, 571
Mr. obituary notice of, 327
Funis, prolapse of the, Dr. Dyce on postural treatment of, 524
Mr. Adams on the, 649
Furnari, Prof. death of, 47

G

Gabb, Mr. on the treatment of cholera, 188
on fracture of the neck of the femur, 353
case of poisoning by tartar emetic, 379
Gairdner, Dr. on desquamation of the epithelium in cholera, 352
introductory lecture of, at Glasgow, 563
Galway, Queen's College, Professors of, 303
Gamgee, Dr. on the action of carbonic oxide on the blood, 325
Prof. John, tribute to, 699
Gangrene of the skin, Dr. Cousins on, 472
Ganot's Elementary Treatise on Physics, by Dr. Atkinson, review, 627
Garrett, Dr. on the diagnosis of hysteria, 458
Gaskoin, Mr. on caries of the teeth, 632
Gastric juice, M. Vulpian on the, 518
George's (St.) Hospital Medical School, exhibitions and prizes at, 297
vide Hospital
Gerhardt's theory of chemical types, 320
German Hospital, Dalston, cases treated at the, 88, 117, 141, 171, 224
Germany, letter from, 680
Gibb, Dr. on variations in the origin of the great arteries, 325
Gibbon, Dr. on the withdrawal of the Vaccination Bill, 157
Gibert, Monsieur, death of, 158
Gibbs, Dr. John, death of, 265

Gibraltar, notes on, 357
Gilby, Mr. Charles Otter, death of, 158
Glasgow University, rules and regulations of, 284
  Professors and fees at the, 303
  Medical Schools of, 303
  Medical Association of, objects of the, 659
Glottis, œdema of, Dr. Bateman's case of tracheotomy in, 443
Godfray, Mr. of the Jersey Hospital, attempt to murder, by a patient, 686
Gold coast, topography and diseases of the, Dr. Moriarty on the, 633
Gordon, Mr. T. C. death of, 469
Gould, Mr. Richard, inquest on, 344
  Dr. Augustus, death of, 517
"Gout in the stomach," 569
Goyrand, M. (of Aix) death of, 22
Graefe, Prof. von, ophthalmology in its significance to Medicine, 577, 633
Greenhalgh, Dr. letter on clitoridectomy, 702
Greenhow, Dr. on the treatment of diarrhœa and cholera, 141
Greenup, Dr. killed in an asylum, 329
Greville, Dr. death of, 328
Griffin, Mr. note on Poor-law Medical reform, 106
  on the withdrawal of the Vaccination Bill, 157
  presentation of a testimonial to, 49, 51, 72
Griffith, Mr. cases of dislocation of the astragalus, 231
Grimshaw, Dr. on Typhus, review, 489
  Treatment of Typhus Fever by Tea, review, 685
Guards, Medical officers of the, 212
Guérin, M. on the subcutaneous method, 16
  on an apparatus for excluding the air, 548
Guillot, Professor Natalis, death of, 546
Guillotine, M. Dubois, on the true history of the, 427
Gunshot wounds in the American war, 99, 126
Guy's Hospital Medical School, prizes and scholarships at, 297
    Sir L. Peel's introductory lecture at, 361
  vide Hospital

H

Habershon, Dr. Diseases of the Stomach, review, 685
Hadow, Mr. Edward Ash, obituary notice of, 184
Hæmaturia, intermittent, case of, 544
Hæmorrhage, concealed uterine, Messrs. Dunn and Mitchell's cases of, 487
Haines, Dr. of Bombay, obituary notice of, 381
Hair, falling of the, query concerning, 574, 604
Halliday, Dr. J. death of, 355
Halt, Inspector-General, Dr. T. death of, 434
Hammond, Dr. Wakefulness, review, 326
Hanging, Professor Haughton on, 478
Harley, Professor, Albuminuria, review, 568
Harper, Dr. John, death of, 355
Harrison, Mr. Reginald, introductory lecture at Liverpool Infirmary School of Medicine, 405
  Mr. T. D. death of, 380
Hart, Mr. on Amaurosis, review, 594
Harvey, Professor William Henry, obituary notice of, 26
  Mr. W. death of, 212
Haslewood, Dr. W. death of, 704
Hastings, Sir Charles, obituary notice of, 122
  proposed memorial of, 346
Haughton, Professor, on hanging, 478
Haylehurst, Mr. Thomas, death of, 658
Hazard, Mr. case of monstrosity, 134
Head, injury to the, morphia injections in, Mr. Alcock on, 5
  gunshot wounds of the, in the American war, 99
Head, Dr. introductory lecture of, at the London Hospital, 362
Health, public, Dr. Farr's address on, 399
Hearn, Surgeon-Major, C. B. death of, 658
Heart, movements and sounds of the, Dr. Sibson on the, 350
  diseases of the, cases illustrating the use of the sphygmograph in, Dr. Foster on, 337, 606
    Hospital for, circular on a, 12
  cancer of the, specimen of, 544
Heat, animal, Dr. Warter on the effects of drugs on, 416
    variations of, in health, Dr. Hooper on, 483
    latent, Dr. Richardson on, 232
Heat-fever, Dr. Casey on a case of, 26
Hecker's Epidemics of Middle Ages, review, 16
Heise, Dr. W. death of, 462
Hemiplegia, Dr. Atkinson's cases of, 611
  with loss of speech, Dr. Jackson on, 210
Hernia, varieties and statistics of, 436
  congenital, Dr. Van Buren's cases of strangulated, 510
  inguinal, strangulated, in a man aged 81, 528
    operation for, on the seventh day, 527
    operation for, in a case of large, 343
    Mr. Hidke on a case of double oblique, 239
    radical cure of, fatal peritonitis after the operation for the, Mr. Wood on, 390
      post-mortem, after a successful case of, Dr. Fayrer on a, 441
Herpes circinatus, from favus in the cat, 544
Hewitt, Dr. case of menstruation during pregnancy, 182
Hewitt, Mr. on the cholera-mist, 161
  on the pathology of cholera, 214
Hey, Mr. introductory lecture at the Leeds School of Medicine, 405
Hicks, Dr. on anhydrous zinc, 182
Higgins, Dr. Charles, death of, 130
Hip-joint, amputation at the, Dr. Fayrer's case of, 3
    Dr. Van Buren's cases of, 509
Hirschfeld, Dr. Ludovic, Nervous System, review, 568
Holland, Sir H. anticipation of theory of contagion by, 256
Holt, Mr. J. death of, 462
Hooper, Dr. on variations of temperature in health, 483
Horgan, Mr. W. C. death of, 355
Horse, urticaria in the, 23
Hospital practice, reports on, 6, 33, 58, 87, 115, 140, 169, 194, 223, 251, 312, 341, 391, 418, 444, 472, 498, 527, 556, 582, 610, 637
  Birmingham General, cases treated at the, 393
  Calcutta Medical College, cases treated at the, 33
  Charing-cross, cases treated at, 89
  for Consumption, cases treated at the, 420
  Cottage, at Walsall, Drs. Burton on the, 627
  for the Epileptic, cases treated at the, 583
  German, at Dalston, cases treated at the, 88, 117, 141, 171, 224
  Great Northern, cases treated at the, 142
  for Diseases of the Heart, circular respecting a, 12
  King's College, cases treated at, 8, 115, 161, 171, 253, 343, 394, 556
  Leeds (General Infirmary), cases treated at the, 474
  Limehouse Cholera, cases treated at the, 224, 312
  Lincoln County, defective nursing at the, 451
  London, cases treated at the, 58, 86, 115, 140, 169, 194, 223, 252, 472, 527, 637
    presentations to the officers of the, 668
  Lying-in, the British, Medical officers and fees of the, 305
    the Queen's, scarlatina at the, 227
      Medical officers of the, 305
  Middlesex, cases treated at the, 8, 88, 116, 141, 223, 392, 444
  Nottingham, Dr. Richardson's account of the, 593, 644, 701
  Royal Free, cases treated at the, 252
  St. Bartholomew's, cases treated at, 7, 60, 89, 528
    Rochester, cases treated at, 610
  St. George's, cases treated at, 171, 194, 394, 474
  St. Marylebone Infirmary, cases treated at the, 445
  St. Mary's, cases treated at, 343
    the staff of, and Mr. Coulson, 670
  St. Pancras (Northern Dispensary), cases treated at the, 89
  Samaritan, cases treated at the, 341, 582
  Sheffield, cases treated at the, 610
  Sydney (Infirmary), cases treated at the, 9
  for Diseases of the Throat, cases treated at the, 445, 638
  University College, cases treated at, 391, 473
  Westminster, cases treated at the, 118, 493
  Whitechapel (Workhouse Infirmary), cholera cases treated at the, 118
Hospitals, influence of, on mortality, Dr. Sibson and Mr. Holmes on the, 233
  influence of Medical officers on the elections of the, 356
Houghton, Mr. W. death of, 462
Hulke, Mr. case of double oblique inguinal hernia, 239
Hull and East Riding School of Medicine, 300
Humphrey, Prof. address in physiology, 260
Hunter, Mr. George Yeates, obituary notice of, 515
  v. Sharpe, 612, 614, 616
Hunterian Society, flourishing condition of the, 534
Hutchinson, Staff Assistant-Surgeon, death of, 572
Hydatids of the liver, Dr. Pavy on the treatment of, 354
  of the uterus, simulating pregnancy, Mr. Ley's case of, 662
Hydrocyanic acid, supposed suicide of Dr. Warder with, 50
Hydrophobia, case of, 499
Hysteria, Mr. Skey's observations on, 107, 191, 307, 385
  Dr. Garrett on the diagnosis of, 458
  Dr. Poole on a case of, in the male, 520

I

Ibeson, Mr. R. death of, 572
Idiocy and its Treatment, M. Séguin on, review, 235
Infant, syphilitic liver in an, 45
  gangrene of the skin in the, Dr. Cousins on, 472
Infanticide, necessity of change in the law of, 643
Infants, great mortality among nursing, in France, 453, 480
  French Society for the Protection of, 589
  excessive mortality of, in England, 464
  weakly, Dr. Farr on, 25
  injury to, from prolonged suckling, 330
Inflammations, Mr. Skey on the stimulant treatment of, 1
  Mr. James on the distinctive characters of external, 469
    on diffuse, 635
Ingrafting, animal, M. Bert's researches on, 14
Ingram, Mr. W. death of, 22
Inman, Dr. on collapse in a hot bath in cholera, 383
Insanity, Dr. Blandford's notes of lectures on, 29, 81, 134, 217, 413, 467
  pathology of, 81
  causes of, 135
  in early life, 136
  impulsive and transitory, 217
  with delirium, 218
  definition of, 469
  in France, statistics of, 11, 257
  from the American war, 355
Intestinal obstruction, specimen of parts in, 19
Intussusception of the ileo-cæcal valve, specimen of, 629
Ireland, Medical Examining Bodies, Schools, and Hospitals of, 288, 303
  vide Dublin
Italian registration reports, 175
  Medical Association, 562

J

Jackson, Dr. Henry (of Sheffield) obituary notice of, 21
  Dr. Hughlings, on hemiplegia of the left side, 210
    on smoking and sex in relation to diseases of the nervous system, 219
  Mr. R. death of, 704
James, Mr. on the distinctive characters of external inflammations, 469
  on non-limited inflammation, 635
  M. Jules François, death of, 130
Jaw from the Belgian bone cave, a puzzle, 176
  lower, operation for tumour of the, 9
  upper, Dr. Fayrer's case of excision of the, 553
    Mr. Bird's case of operation for tumour of the, 650
Jeaffreson, Dr. obituary notice of, 642
Jewish and Christian races, comparative vitality of the, 349
Johnson, Dr. Charles (of Dublin) obituary notice of, 21
  Dr. George, theory of cholera of, criticised by Dr. Moxon, 415, 578
    note of Dr. Johnson on, 682
Johnstone, Dr. R. death of, 409
Joints, loose cartilages of the, Dr. Dick on the removal of, 230
  hysterical affections of the, Mr. Skey on, 309
Jones, Dr. Bence, on a substance in animal textures resembling quinine, 163
    on the relationship of chemical and mechanical diseases, 245, 333
    address in chemistry, 261
  Dr. Sydney, case of popliteal aneurism, 251
  Mr. Robert, death of, 546
Jordan, Mr. "The Elements," review, 568
Judd *v.* the Manchester and Sheffield Railway Company, 23
Julius, Dr. G. C. death of, 546
Junker, Dr. on night blindness, 71
  on the action of acetic acid on ovarian cysts, 543, 597, 682

K

Kidney, rupture of the, from external violence, case of, 253
King, Dr. on aloes as a prophylactic in cholera, 209
King and Queen's College of Physicians, Ireland, presentation of a statue of Sir H. Marsh to the, 540
King's College Medical School, scholarships and prizes at, 238
    presentation of prizes at, 48
  vide Hospital
Kingsford, Dr. New Theory of Cholera, review, 259
Kingsley, Mr. E. A. death of, 47
Knee-joint, traumatic inflammation of the, case of, 556
  wounds of the, Dr Chisholm on, 689
Kraft-Ebing, *Die Sinnesdelirien*, review, 542
Küchenmeister, Dr. Translation of Wells on Diseases of the Ovaries, review, 326

L

Labium, hypertrophy of the, Dr. Meadows' case of, 263
Labour, tedious, Dr. Thorburn on the treatment of, 233
  sudden death after, Dr. Nursey's case of, 85
  premature, Dr. Earle on a new mode of inducing, 32
Lachrymal gland, Mr. Laurence on the removal of the, 231
Lady Doctors, Dr. Storer on the failure of, 505
Land, Dr. W. death of, 265
Langdon, Mr. J. death of, 130
Langley, Mr. electioneering address of, 23
Lankester, Dr. on payment of fees by the coroner, 77
  Cholera, review, 348

Lardner, Dr. Handbook of Natural Philosophy, review, 263
Laryngitis, tracheotomy in, cases of, 7
Laryngoscope, Semeleder on, by Caswell, review, 406
  illustration of the value of the, 631
Larynx, paralysis of the vocal cords of the, cases of, 637, 638
  cancer of the, specimen of, 545
  bone impacted in the, Dr. Mackenzie's case of, 629
Laurence, Mr. on the removal of the lachrymal gland, 231
  Handbook, review, 516
Lead, poisoning by, new sources of, 671
Leared, Dr. Imperfect Digestion, review, 489
Lee, Dr. Edwin, Baths of France, review, 462
  Animal Magnetism, review, 545
  reply to reviewer, 574
  Homœopathy, review, 571
  Mr. J. death of, 328
Leeds General Infirmary, cases treated at the, 474
  School of Medicine, fees and prizes, 300
    Mr. Hey's introductory lecture at the, 405
Leet, Mr. John Knox, death of, 355
Leg, fractures of, treatment of by Mr. Curgenven, 420
    by Mr. Orton, 527
  improved wooden, 515
    Mr. Bigg on an, 549
Leonard, Mr. C. death of, 328
Leptothrix swarms, M. Hallier on the, 24
Leslie, Surgeon A., death of, 517
Leucorrhœa in relation to phthisis, Dr. Barnes on, 183
Ley, Mr. case of hydatids of the uterus, simulating pregnancy, 662
Liebig, doctrines of, on foods, 449
    criticised by Dr. E. Smith, 326
Limehouse Cholera Hospital, 224, 312
Lincoln County Hospital, defective nursing at the, 451
Lipoma, multiple case of, 464
Lithotomy, cases of, 498
Lithotrity, Mr. Wood's instrument for removing fragments in, 394
Liver, hydatids of the, Dr. Pavy on the treatment of, 354
  syphilitic cirrhosis of the, in an infant, 45
Liverpool, letter from, 647
  Royal Infirmary School of Medicine, 300
    Mr. Harrisson's introductory lecture at the, 405
Llewellyn, Mr. memorial to, 490
Lodging-house clauses of the Sanitary Act, 653
London, vital statistics of, 27, 53, 79, 106, 134, 161, 190, 215, 243, 269, 330, 358, 383, 412, 437, 465, 493, 521, 550, 575, 604, 632, 660, 688, 704
  supply of water for, *vide* Water
  Hospital Medical School, prizes and appointments at the, 298
    Dr. Head's introductory lecture at the, 362
    vide Hospital
  Medical Society, meeting of the, 426
  University, rules and regulations of the, 273
    pass-lists of the, 129, 265, 572, 600, 657
Lothian's Medical Association, formation of the, 49, 69
Lovell, Mr. Francis, death of, 265
Ludlow, Dr. case of death from choloroform and ether, 378, 436
Lunacy, Medical fees in, 241
Lunatic, a Physician killed by a, 319
  ill treatment of a, 356
Lunatics in private houses, the law on, 698
Lung, abscess of the, from a foreign body, Dr. Croucher's case of, 460
  cancer of the, Mr. Blake's case of, 330
    Dr. Day on secondary, 220
  myeloid transformation of the, Dr. Allbutt's case of, 18
Lush, Mr. Justice, ruling of, as to Medical evidence in a charge of murder, 670
Lyon, Dr. H. death of, 409

M

M'Carthy, Dr. Timothy, death of, 490
MacCormac, Dr. on sulphuric acid as a propylactic in cholera, 57
  on animal temperature after death in cholera, 636
Macgowan, Dr. Malaria as a Cause of Cholera, review, 259
Mackenzie, Dr. case of bone impacted in the larynx, 628
  on paralysis of the vocal cords, 637, 638
Mackinlay, Dr. J. death of, 47
Macleod, Dr. Acholic Diseases, review, 541
M'Loughlin, Dr on the eliminative treatment of cholera, 331
Macnamara, Dr. on striped muscle, 526
Macpherson, Dr. travelling notes, 485
Madden, Dr. W. death of, 434
Madge, Dr. on the anatomical relations between mother and fœtus, 650
Magenta dust, poisoning by, Mr. Whalley's case of, 222
Malaga, notes on, 357
Manchester School of Medicine, 301
Mania, Dr. Blandford on, 413
Mankind, colour of, Dr. Davy on the, 324
Markham, Dr. appointed a Poor-law Inspector, 146
  on change of type in disease, 69, 128, 157, 368, 514
Marriages, consanguineous, effects of, controversy on the, 573
Marsh, Sir Henry, statue of, 540
Martin, Staff-Surgeon Henry Clinton, death of, 76
Mary's (St.) Hospital Medical School, prizes and appointments at, 298
    Mr. Walton's introductory lecture at, 363
  vide Hospital
Massachusetts registration returns, 398
Maysmor, Dr. on Dr. Stevens' treatment of cholera, 161
  query concerning Surgeons Extraordinary, 520
Meade, Mr. case of elephantiasis scroti, 354
Meadows, Dr. case of hypertrophy of the labium, 263
Medical Club, meeting in favour of the projected, 547
  Defence Fund, Dr. Richardson's objections to a, 569
  Education, Dr. Bence Jones on the defects in, 261
    the monopoly in, 507
  Examining Bodies, rules and regulations of the, 271
  Provident Society of the British Medical Association, Mr. Clay on the, 211
  Practitioners, mortality among, from typhus, 152, 642
  Schools, tabular view of the, 293
    number of students at the, during 1850-1866, 479
    introductories at the, 359, 395, 403, 507
    provincial, opening of the, 403
      number of students at the, 547
    private, and the College of Surgeons, 506
  Society, the Female, 197, 205
  Students, registration of, 271
    address to, 291
    number of, during 1850-66, 479
    alleged ill-conduct of, 588
    provincial, number of, 547
Medicine, present state of the science and art of, Prof. Bennett on the, 177
Medicines, action of, on oxidation, Dr. Bence Jones on the, 245
  in relation to nutrition, 333
  effects of, on the temperature, 417
Medico-Chirurgical Society, *vide* Society
Melancholia, Dr. Blandford on, 413
Melbourne, trial at, *vide* Beaney, Dr.
Melier, Monsieur, death of, 370
Menstruation, premature, Dr. Allbutt's case of, 18
  during pregnancy, Dr. Hewitt's case of, 182
Mentone, climate of, observations on the, 502
Meredyth, Dr. Duality of the Venereal Ulcer, review, 242
  Mercury in Syphilis, review, 489
Microscope, employment of the, in pulmonary disease, observations on the, 396
Microscopes, American, 93
Middlesex Hospital Medical School, prizes and appointments of the, 298
  vide Hospital
Middleton, Mr. on panic during cholera, 330
Midwifery, employment of the spray-producer in, 150
Midwives, relative mortality in the practice of, observations on the, 195
    Dr. Edmunds on the, 207
  doggrel concerning, and the College of Surgeons, 268
Milk of the cat, nutritious quality of the, 491
Miller, Prof. Elements of Chemistry, review, 647
Mitral valve, destruction of the chordæ of the, specimen of, 432
Mitchell, Mr. case of detached placenta, 487
Morphia, poisoning by, treated by belladonna, case of, 673
Monsters, double, delivery of, Dr. Playfair on the, 489
Monstrosity with twin birth, Mr. Hazard's case of, 134
Moore, Dr. on oxalate of lime in alvine concretions, 407
  on casein in the urine, 525
Morgan, Mr. C. R. death of, 462
Moriarty, Dr. topography and diseases of the Gold Coast, Africa, 663
Morley, Mr. Thomas, death of, 380
Mortality in Europe, Dr. Farr on the, 400
Mouldiness, M. Hallier on the forms of, 24
Moxon, Dr. on the nature of vital force, 31
  on Dr. Johnson's theory of cholera, 415, 578
Mudd, Mr. F. D. death of, 240
Mudge, Dr. on turpentine in cholera, 181
Muhlig, Dr on disinfection, 429
Mulatto, change of colour in a, Dr. Foster on, 325
Mulok, Staff Assistant-Surgeon, death of, 355
Munich, letter from, 680
Murder, ruling of Mr. Justice Lush as to Medical evidence in cases of, 670
Murdock, Dr. William, death of, 409
Murray, Dr. Emotional Diseases, review, 489
Muscle, striped, Mr. Macnamara on, 526
Muscles, hysterical contraction of the, Mr. Skey on, 386
  action of electricity on the, 584
  atrophy of the, from disease of the spinal cord, Mr. Cooper on, 73
Muscular force, Prof. Humphrey on, 260
    Prof. Playfair on, 325
  irritability, Dr. Norris on, 324
Mushet, Dr. Treatise on Apoplexy, review, 508
Muter, Mr. on chemical remedies in cholera, 189
  on the purification of a sick room, 437
Myeloid transformation of the lung, Dr. Allbutt's case of, 18

N

Nail, in-growing, Staff-Surgeon Nicholson on, 222
"Nature" in relation to Medicine, 10
Navy, Medical department of the, rules and regulations of the, 281
    "A Surgeon, R.N." on reforms in the, 72
    new regulations respecting the, 120
      "P. P." on the, 129
    unsatisfactory condition of the, 448
    "Nauticus" on the doings of the, 485
    "R.N." on the unjust promotions in the, 682
    "Everything about them" on the, 685
Nayler, Mr. Diseases of the Skin, review, 545
Naylor, Mr. illegal reception of a lunatic by, 703
Neale, Dr. on the primary cause of cholera, 5
Neilson, Dr. T. death of, 685
Nelson, Dr. introductory lecture at Queen's College, Birmingham, 403
  on cold in cholera, 535
Nervous irritability, Mr. Skey on, 167, 191
  system, sex and tobacco-smoking as influencing the diseases of the, Dr. Jackson on, 219
Neuralgia, subcutaneous injection in, Mr. Roberts on, 521
  of the arm, frequent subcutaneous injections in, 474
Nevins, Dr. on the treatment of acute rheumatism, 231
  Prescriber's Manual, review, 351
Newcastle-on-Tyne, School of Medicine of, 301
Nice, climate of, observations on the, 502
Nicholas, Dr. case of Asiatic cholera, 193
Nicholson, Staff-Surgeon, on in-growing nail, 222
Night-blindness, Dr. Junker on, 71
Noel, Mr. V. E. death of, 704
Norris, Dr. on muscular irritability, 324
Norton, Mr. Osteology for Students, review, 489
Nottingham, Medical History of, Dr. Richardson on the, 564, 593, 644, 673, 700
Nunn, Mr. on stricture from constitutional syphilis, 238
Nunneley, Mr. case of removal of the tongue, 232
  on reduction of dislocations by manipulation, 232
Nurses, lady, rejected at Netley, 132
Nurse-children in France, unfortunate condition of, 453, 480
Nursey, Dr. case of sudden death after labour, 85
Nutrition, action of medicines in relation to, Dr. Bence Jones on the, 333
  changes in, from perverted nerve-power, Dr. Ogle on the, 475

O

Obstetrical Society, *vide* Society
Odling, Dr. Lectures on Animal Chemistry, review, 455
Œsophagus, dilatation of the, specimen of, 45
  stricture of the, specimen of, 629
Ogle, Dr. on changes in nutrition from perverted nerve-power, 475
  extract from introductory lecture of, 492
Oke, Dr. W. S. death of, 76
Oncology, modern, 501
Operation, death from fear of an, 93
Ophthalmology, significancy of, to Medicine, Professor von Graefe on, 577, 633
Ophthalmoscope, employment of the, in relation to diseases of the nervous system, 594
Opium and belladonna, poisoning by, case of, 473
Oppert, Dr on the wet sheet in cholera, 268
  on Melanosis of the Lungs, review, 685
Optic nerve, growth around the, specimen of, 432
Orbit, cancerous tumour of the, specimen of, 432
Orton, Mr. on the treatment of fractures, 527
Osborne, Dr. query as to the accumulative power of chloroform, 25
Osteomyelitis after amputation, Dr. Fayrer's case of, 33
Outhwaite Convalescent Fund at Harrogate, 380
Ovariotomy, Mr. Wells' cases of, 340, 582
  performed twice in the same subject, Mr. Wells' case of, 569
  tabular view of cases of, by Kuchenmeister, 327
  supposed case of, in Paris, 699
  uterine epistaxis after, Mr. Wells on, 237
  actual cautery in, Mr. Brown on the employment of the, 229
    discussion on the, 570
Ovary, Diseases of the, Küchenmeister's translation of Wells on the, review, 327
  dermoid cyst of the, specimen of, 544

Ovary, cyst of the, emptied through the intestines, specimen of, 433
action of acetic acid on the cysts of the, Dr. Junker on the, 543, 597
Dr. Broadbent on the, 568, 649
Owen, Prof. Comparative Anatomy and Physiology of the Vertebrates, review, 44
Oxen, British fossil, Mr. Dawkins on, 603
Oxford University, rules and regulations of the, 271
Oxidation, Medicines which promote, Dr. Bence Jones on the, 245
Oxygen absorption during sleep and waking, Prof. Pettenkofer on, 680

P

Pacchionian bodies, Dr Bastian on the, 24
Palate and velum, Mr. Ramsay's artificial, 684
Paraffin as a material for stiff bandages, Mr. Tait on, 471
Paraplegia, hysterical, Mr. Skey on, 387
Paralysis, general, of the insane, Dr. Blandford on, 457
Paris, mortality in, for 1865, 93
general Hospitals of, 143
critical positon of the Medical Faculty of, 505, 535, 589
Parkes, Dr. Manual of Practical Hygiene, review, 235, 483
on detachment of the intestinal epithelium in cholera, 210
on uterine discharge in cholera, 210
Parkin, Dr. Antidotal Treatment of Cholera, review, 127
note on review of his book, 160
Parliamentary intelligence, 16, 64, 93, 124, 149
Part, Dr. and the inquest on Mr. Golding, 344
Patella, fracture of the, treatment of, in the London Hospitals, 418
Mr. Cooke's case of, 484
sloughing of the bursa of the, Dr. Cousins' case of, 498
Paterson, Dr. on diphtheria of a wounded surface, followed by paralysis, 603
Pavy, Dr. on the treatment of hydatids of the liver, 554
Peabody, Mr. proposed foundation of an Archæological and Ethnological Museum by, 615
Peel, Sir Laurence, address at Guy's Hospital Medical School, 361
Pericardium, paracentesis of the, Dr. Allbutt's clinical observations on the, 474
Periostitis, resection in, question of priority regarding, 176
Permanganates, properties of the, 145, 156
in cholera, Mr. Muter on the, 189
Perston, Dr D. death of, 76
Petch, Mr. E. death of, 380
Peters, Dr. Asiatic Cholera, review, 657
Phagedænic type of syphilis, observations on the, 226, 243
Pettenkofer, Prof. on the absorption of oxygen during sleep and waking, 680
Pharmacopœia, the new French, 585
Pharynx, pouching of the, specimen of, 46
Phillips, Mr. on the withdrawal of the Vaccine Bill, 189
Phlegmon, distinctive characters of, Mr. James on the, 469
diffuse, Mr. James on, 635
Phosphatic urine, Mr. Blake on the use of iron in, 408
Phthisis, long-tissue in the expectoration of, Dr. Fenwick on, 353
employment of the microscope in, observations on the, 396
value of thermometrical observations in, Dr. Bateman on the, 442
leucorrhœa in relation to, Dr. Barnes on, 183
with aneurism of a branch of the pulmonary artery, 420, 629
complicated with œdema glottidis, tracheotomy in a case of, 442
Physicians, Royal College of, rules and regulations of the, 274
pass-lists of the, 22, 47, 75, 409, 434, 462, 685, 703
observations on the elections into the Fellowship of the, 36 667
report on the examinations of the, 422
and Surgeons, Royal Colleges of, Edinburgh, rules and regulations of the, 285
pass-lists of the, 158, 545
King and Queen's College of, Ireland, rules and regulations of the, 289
pass-lists of the, 129, 462
presentation of a statue of Sir H. Marsh to the, 540
Pickles, new mode of preparing, 658
Piesse, Mr. Des Odeurs, review, 351
Pigs, nuisance from, prosecution for a, 187
Pinel, M. Jean Pierre Casimir, death of, 658
Placenta, Mr. Mitchell's case of detached, 487
Dr. Suckling on the management of retained, in abortion, 31
prævia, Mr. Roper's case of, 650
Plants, indigenous, Prof. Bentley on the importance of, 463
Playfair, Prof. on muscular force, 325
Playfair, Dr. on delivery in cases of double monstrosity, 489
Plombières, mineral waters of, Dr. Macpherson on the, 486
Podophyllin, Dr. Wilmot on the properties of, 215
Poison, the Boundon, 548
Poisoning, accidental, the *Times* on, 374
arsenical, by magenta dust, case of, 222
by belladonna and opium, case of, 473
by sulphate of copper, case of, 435
by the fumes of cyanide of potassium, 187
by hydrocyanic acid, Warder's suicidal, 50
by lead, new sources of, 671
by morphia, treated by belladonna, case of, 673
by strychnine, case of accidental, 375
by tartar emetic, Mr. Gabb on, 379
by veratria, Prof. Rodgers on a supposed case of, 599
Poole, Dr. case of hysteria in the male, 520
Poor-law Medical Officers' Vade Mecum, Mr. Walsh's, review, 236
do they ever resign? 214
Association of the Metropolitan, meetings of the, 76, 519
and Dr. Edward Smith's strictures, 347, 507
a "Citizen's" criticism on the, 425
Medical Reform, Mr. Griffin's note on, 106
Popliteal artery and vein, rupture of the, case of, 6
Population, growth of, in England, Dr. Farr on the, 401
question of, in France, 464
Porter, Mr. on a substitute for the forceps, 549
Power, Mr. R. case of dislocation of the femur, 391
Mr. James Joseph, death of, 409
Pregnancy, early diagnosis of, M. Mattei on, 38
menstruation during, Dr. Hewitt's case of, 182
Prince, Dr. Orthopædics, review, 489
Pring, Mr. F. B. death of, 409
Prize questions of the Académie de Médecine, 672
of the College of Surgeons, 518
on embolism, 65
Sir Gilbert Blanc's, 602
Prizes, distribution of, at the Académie de Médecine, 672
University College Medical School, 159
at the Westminster Hospital Medical School, 159
at King's College Medical School, 48
at the Charing-cross Medical School, 185
at Dr Steevens' Hospital Medical School, Dublin, 508
and scholarships offered at the Medical Schools, 296
Procter, Dr. on the organic impurities of water, 249
Prostitution, effects of regulation of, in France, 64
Psoriasis in relation to the puerperal state, Dr. Squire on, 18
Puerperal fever, outbreak of, at Maidenhead, Mr. Radcliffe's report on the, 208
insanity, Dr. Blandford on, 414
state, influence of chronic diseases of the skin on the, Dr. Squire on the, 19
Purgatives, routine employment of, Mr. Skey on the, 55
Purpura and meningeal apoplexy, case of, 46
Pusey, Dr. statements of, Dr. Beale's strictures on the, 681
Pyæmia, discussion on the origin of, 234

Q

Quarantine for the yellow fever, enforcement of, at Southampton, 557, 591, 672
Queen Charlotte's Lying-in Hospital, scarlatina in the, 227
Queen's University, Ireland, rules and regulations of the, 289
degrees conferred by the, 436
supplementary charter of, judgment of the Master of the Rolls on the, 631
Quekett Microscopical Society, notices of meetings of the, 133, 241, 601
Quicklime as a disinfectant, query on, 643
Quinine, substance resembling, in the animal textures, Dr. Bence Jones on a, 163
Quinlan, Assistant-Surgeon Thomas, death of, 490

R

Rabies canina, conclusions respecting, 199
Radcliffe, Mr. on the Medical application of electricity, 583
report on the puerperal fever at Maidenhead, 209
Mr. H. J. death of, 434
Radford, Mr. on laceration of the uterus, 20
Radius, tumour of the, specimen of, 629
Bae, Mr. H. death of, 212
Railway, Manchester and Sheffield, Judd *v.* the, 23
Railways, Justice Keating on Medical men acting as agents for, 132
Injuries to the Nervous System from, Mr. Erichsen on, review, 430
Ramsay, Mr. artificial velum and palate of, 684
Rann, Mr. G. death of, 601
Ransom, Dr. on protoplasmic movements in the egg of fishes, 349
Rats, destruction of, by sulphuret of carbon, 187
Registration of deaths, Dr. Farr's proposed improvements in the, 62
observations on the, 224
returns for Berlin, 427
for Brussels, 228
for Italy, 175
for Paris, 93
for the United States, 308
for Vienna, 644
of Medical students, regulations for the, 271
Reichenhall, mineral waters of, Dr. Macpherson on, 485
Religious mendicancy, gems of, 121
Respiration, Professor Pettenkofer's researches on, 680
Retina, detachment of the, Mr. Walton on, 311
Rheumatism, acute, Dr. Nevins on the treatment of, 231
Visceral, Dr. Ball on, review, 567
Ribs, fracture of the, with metallic resonance, Mr. Solly's case of, 682
Richardson, Dr. B. W. on the origin, cause, and prevention of cholera, 102
physiological formula and treatment of cholera, 110
apparatus of, for transfusion, 113
on latent heat of animal bodies, 232
projected testimonial for, 121, 147
spray-producer of, in stricture, Dr. Clymer on the, 149
in midwifery, 150
demonstrations of local anæsthesia by, 349
on the comparative vitality of the Jewish and Christian races, 349
Medical History of England, 564, 593, 644, 673, 700
objections of, to a Medical defence fund, 569
Dr. E. note of, concerning cholera cases, 161
Ringer and Rickards, Drs. on the influence of alcohol on the temperature, 354
"Rising of the lights," query concerning the, 569
Risk Allah Effendi, trial of, for murder, 425, 476
Rivers, how not to pollute them, 398
Roberts, Mr. on injection of morphia in neuralgia, 521
Robertson, Dr. John, death of, 572
Robinson, Dr. R. R. W. death of, 355
Rodgers, Prof. on toxicological discrepancies, 597
Rogers, Dr. controversy of, with Dr. Edward Smith, 242
Roper, Mr. case of placenta prævia, 650
Roseola cholerica, 143
Rostan, Prof. death of, 409
Ross, Dr. Thomas Parker, obituary notice of, 74
Rotheln, what is it? 574
Routh, Dr. on bromine in cancer of the uterus, 488
Rowand, Dr. on santonine in cholera, 411
Rugg, Mr. on the bromide of potassium, 704
Rymer, Mr. on Dentistry and Medicine, 688

S

Saint Bartholomew's, *vide* Bartholomew's
Gothard Hospice, report on, 539
Salamandrine, poisonous effects of, 631
Samaritan Hospital, cases treated at the, 307, 341
Sampson, Mr. on the treatment of diarrhœa, 156
Sanderson, Dr. researches of, on the cattle plague, observations on the, 13
Mr. Suggestions on the Cholera, review, 348
Sandwith, Dr. testimonial to, 355
Sanitary Act of 1866, provisions of the, 173, 382, 694
put into operation, 198
report on the carrying out of the, 653
San Remo, notice of Mr. Aspinall's work on, 503
Sansom, Dr. on the accumulative property of chloroform, 52
on the pathology of cholera, 188
suggestions for the treatment of cholera, 554
Sargant, Mr. T. death of, 601
Saunders, Dr. report on house-to-house visitations, 260
Saurians of South Africa, Professor Huxley on the, 603
Savory, Mr. introductory lecture of, at St. Bartholomew's, 359
Scandinavian remains in England, Professor Stevens on the, 160
Scarlatina, chronic, albuminuria in, Dr. Weber on, 353
in Queen Charlotte's Lying-in Hospital, 227
Schools, Medical, *vide* Medical
Schunk, Mr. researches of, on the urine, 665
Scotland, the assumed greater fertility of women in, 226
Medical Examining Bodies in, rules and regulations of the, 282
Medical Schools of, 301
vide Edinburgh
Scott, Mr. John, of Hanley, obituary notice of, 74
Scurvy, prevalence on board merchant vessels, 463
Sea salt in seaside air, 399
Sedgwick, Dr. Nature of Cholera, review, 259
Seeley, Mr. on a new theory of the skull, 519
Seguin, Dr. Idiocy and its Treatment, review, 235
Selwyn, Professor, Latin verses of, on his recovery, 669

Semeleder, Dr. Rhinoscopy and Laryngoscopy by Dr. Caswell, review, 406
Sewing machine, alleged ill effects of the, 452
Shaw, Dr. Norton, consular appointment of, 355
Sheffield Medical School, 301
Sheraton, Dr. rotatory steel fillet of, 74, 484
Shooter, Mr. Charles, death of, 462
Shoulder, amputation at the, fatal case of, 394
Dr. Fayrer's case of, 581
excision of the, case of, 556
Shrimpton, Dr. on Cholera, review, 489
Sibson, Dr. note of, on the case Wight *v.* Field, 70
on the movements, structure, and sounds of the heart, 350
Sick-room, purification of the, Mr. Simpson on the, 356, 383
Mr. Muter on the, 437
Simpson, Mr. on the purification of a sick-room, 356, 383
Skey, Dr. Joseph, death of, 328
Mr. Lectures on some Medical Subjects, 1, 55, 107, 191, 307, 385
Skin, chronic diseases of the, influence of the puerperal state on, Dr, Squire on the, 18
Skinner, Dr. on subcutaneous injection of cancer, 648
Mr. G. W. death of, 130
Skull and skeleton, Mr. Seeley's new theory of the, 519
Sky, cause of the redness of the, 574
Sleep and waking, absorption of oxygen during, Prof. Pettenkofer on the, 680
Smeathman, Mr. L. death of, 686
Smith, Dr. A. Treatment of Pneumonia, review, 104
Dr. E. report on workhouse infirmaries, 67, 97
and Dr. Rogers, 242
and the Poor-law Medical Officers, 347, 507
on the cubic space required in workhouse infirmaries, 539
researches of, on foods, observations on the, 449
Dr. Peter, death of, 328
Snow, Dr. proposed pension for the sisters of, 425
Society, Abernethian, meeting of the, 435
Epidemiological, meeting of the, 102
Female Medical, observations on the, 195
Dr. Edmunds on the, 207
Hunterian, flourishing condition of the, 534
London Medical, meeting of the, 426
Medico-Chirurgical, meetings of the, 18, 73, 237, 353, 569, 682
Obstetrical, meetings of the, 20, 182, 263, 487, 650
Pathological, meetings of the, 19, 45, 143, 426, 432, 460, 514, 628
Western Medical and Surgical, meeting of the, 511
Solly, Mr case of fracture of the ribs with metallic resonance, 682
Sparrow, Dr. R. P. death of, 462
Specialties, Mr. Bowman on, 205
in the United States, 687
Species, production of, by derivation, Prof. Owen on the, 44
Spencer, Mr. Qualitative Analysis, review, 263
Sphygmograph, Dr. Foster on the application of the, in diseases of the heart, 337, 606
Spinal cord, disease of the, with muscular atrophy, Mr. Cooper on, 73
softening of the specimens of, 46
Spine, hysterical affections of the, Mr. Skey on, 308
gunshot wounds of the, in the American war, 100
cervical, supposed partial luxation of the, 213
dorsal, fracture of the, case of, 528
Spleen, rupture of the, from external violence, case of, 253
Splint, Dr. Braidwood on an improved, 352
Mr. Evans on an improved, 465
Spray-producer, Richardson's, employment of, in Midwifery, 150
utility of, in stricture, 149
Squire, Dr. on the influence of the puerperal state on diseases of the skin, 18
Stallard, Dr. Female Casuals, review, 426
Statham, Mr. action of Absolon against, 530, 598
meeting to sympathise with, 656
Steele, Dr. George, Remarks on Cholera, review, 348
Mr. A. B. on Dr. Sheraton's rotatory fillet, 485
Steinhaeuser, Surgeon-Major J. F. death of, 159
Stephen, Prof. on Scandinavian monuments in England, 160
Stewart, Dr. of Dumfries, testimonial to, 329
Stimulants, employment of, Mr. Skey on the, 1, 56
Stiven, Dr. W. S. death of, 76
Stomach, ulcer of the, treated by hypodermic injections, Dr. Willis's case of, 6
Storer, Dr. Horatio, on the failures of lady Doctors, 505
Stricture with complications, Mr. Callender's case of, 237
from constitutional syphilis, Mr. Nunn's case of, 238
treated by Holt's dilator, Dr. Fayrer's cases of, 168
Stricture, utility of the spray-producer in, 149
Strong, Mr. Oswald Henry Baker, death of, 76
Strychnine, accidental poisoning by, case of, 375
Students, Medical, *vide* Medical
Subcutaneous method, M Guérin on the principles of the, 16
Suckling, the mischief to children from prolonged, 330
Suckling, Dr. on the management of retained placenta in abortion, 31
Suicides in Vienna in 1865, 644
Surgeons, Royal College of, rules and regulations of the, 276
pass-lists of the, 47, 75, 104, 129, 158, 516, 545, 572, 601
Licentiates of Midwifery of the, 657
admission of Fellows of the, 12, 184, 409, 657
questions for the Fellowship Examination of the, 573
prize questions of the, 518
action of the Fellows at the election into the Council of the, 640
question of resignations in the Court of Examiners of the, 643
examinations of the, shortcomings of the, 9
report of the visitors on the, 422
report on the museum of the, 77, 410
curiosities of the calendar of the, 381
opposition of the, to private schools of Medicine, 506
anniversary dinner of the Fellows of the, 37
of Edinburgh, rules and regulations of the, 285
pass-lists of the, 158, 546
vide Physicians
in Ireland, rules and regulations of the, 290
professors of the, 304
Sutheria, Mr H. death of, 22
Swain, Mr. Recent Improvements in Surgery, review, 685
"Swallow, swallow flying south," 502
Sydney Infirmary, cases treated at the, 9
Symonds, Dr. on change of type in disease, 368
Symons, Mr. Rainfall Investigations, review, 572
Syphilis, Duality of, Dr. Meredyth on the, review, 242
rough notes on, 226, 423, 558
the phagedænic type of, 226, 423
cirrhosis of the liver from, in an infant, specimen of, 45
vaccinal, outbreak of, 562

T

Tait, Mr. on paraffin for stiff bandages, 471
Mr. R. death of, 704
Tanner, Dr. on excision of the clitoris, 650
Dr. John, death of, 265
Tape-worms, notice of Dr. Cobbold's work on, 145
Tartaremetic, poisoning by, Mr. Gabb's case of, 379
Tatlocke, Mr. on the treatment of chemical diseases, 356
Taylor, Dr. Charles, points of practice from the Nottingham Eye Infirmary, 673
Teeth, caries of, from change of temperature, Mr. Gaskoin on, 632
Telegraph, private, from the London Hospital, 699
Temperature of the body, effects of drugs on the, Dr. Warter on the, 416
variations of the, in health and disease, Dr. Hooper on the, 483
latent, Dr. Richardson on the, 232
Thermometer, observations with the, Drs. Warter and Hooper's, 416, 483
Thomas's Hospital (St) prizes and appointments at, 299
Dr. Barker's introductory lecture at, 365
Thompson, Dr John, death of, 517
Mr. George Septimus, death of, 328
Thorburn, Dr. on the treatment of tedious labour, 233
Thorowgood, Dr. on acids in choleraic diarrhœa, 156
notes of, on Gibraltar and Malaga, 357
"Thou, Nature, art my goddess," 10
Thunder storms, personal protection in, 123
Thuston, Mr. on popular quacks, 659
Thyroid gland, blood cyst of the, case of, 343
Tilt Dr. on undue Surgical tendencies in diseases of the uterus, 263
Tinctures, spirit value of, 505
Tobacco-smoking as a cause of diseases of the nervous system, Dr. Jackson on, 219
Toe-nail, in-growing, Staff-Surgeon Nicholson on, 222
Tongue, removal of, Mr. Nunneley's case of, 232
congenital fibro-cellular tumour of the, specimen of, 629
Toynbee, Mr. Joseph, biographical sketch of, 46
Tracheotomy, Dr. Van Buren's cases of, 509
Mr. Worthington's new instrument for, 8
in laryngitis, cases of, 7
in œdema of the glottis, case of, 443
Trades' Reform Demonstration, physical condition of the members of the, 613
Transfusion, Dr. Richardson's apparatus for, 113
Trials, Medical, Foley *v.* Poole, 189
Absolon *v.* Statham, 530, 550, 598
Trismus nascentium, case of, 549
Tubercle, inoculation of, M. Villemin on the, 518, 631
Professor Lebert on the, 562
Tumour, enchondromatous, specimen of, 544
fibro-plastic melanoid, of the eyeball, specimen of, 433
fibro-cystic, of the lower jaw, operation for a, 9
Tumours, multiple lipomatous, case of, 464
malignant, modern doctrines on, 501
Tylecote, Dr. E. death of, 240
Type in disease, change of, *vide* Disease
Typhus, great mortality of Medical men from, 152, 643
treatment of, by tea, Dr. Grimshaw on the, 685

U

University College Medical School, scholarships and prizes at the, 299
distribution of prizes at the, 159
vide Hospital
Urine, casein in, Dr. Moore on, 525
phosphatic, Mr. Blake on the use of iron in, 408
Mr. Schunk's researches on the, 665
Urticaria in the horse, 24
Uterus, undue Surgical tendencies in the treatment of diseases of the, Dr. Tilt on the, 263
peculiar elongation of the, specimen of, 46
cancer of the, Dr. Routh on bromine in, 488
laceration of the, Dr. Radford on, 20
discharge from the, in cholera and after ovariotomy, Dr. Parkes and Mr. Wells on, 210, 237
hydatids of the, simulating pregnancy, Mr. Ley's case of, 662

V

Vaccination, question of registration of, 14, 70
present state of, in England, Mr. Steele on the, 233
conveyance of syphilitic poison by, 562
spurious, in the Confederate army, 468
Act, prosecution under the, 357
Bill, withdrawal of the, Dr. Gibbon and Mr. Griffin on the, 157
Mr. Phillips on the, 189
Van Buren, Dr. Contributions to Practical Surgery, review, 509
Veasey, Mr. on the Medical Provident Society, 268
Veratria, supposed case of poisoning by, Prof. Rodgers on a, 597
Vermiform appendix, ulceration of the, specimen of, 432
Vertebrates, Comparative Anatomy and Physiology of the, Prof. Owen on the, review, 44
Vesico-vaginal fistula, Mr. Wells on the use of the catheter after operations for, 514
Vienna, deaths and suicides at, in 1865, 644
Villemin, M on inoculation of tubercle, 518, 631
Visitation of Medical examinations, 421
Vital force, nature of, Dr. Moxon on the, 31
Dr. Beale on the, 85

W

Wakefulness, Dr. Hammond on, review, 326
Walker, Dr. Mary, lecture of, 561
services of, 631
Dr. G. death of, 409
Walne, Mr. H. death of, 434
Walsh, Mr. Poor-law Surgeon's Vade Mecum, review, 236
Walton, Mr. on detachment of the retina, 311
introductory lecture at St. Mary's Hospital Medical School, 363
Mr. S. K. death of, 601
Ward, Mr. on the cholera mist, 188
Warder, Dr suicide of, 50, 64
Waring, Dr. Tropical Resident at Home, review, 627
Warter, Dr. on the temperature of the body, 416
obituary notice of, 461
Warwick, Mr. on nitric acid in cholera, 162
Water, organic impurities of, Dr. Procter on the, 249
pollution of, by paper mills, trial for, 186
butts, how to clean, 174
metropolitan, qualities and composition of, 53, 186, 266, 410, 447, 548, 658
reports of the Medical Officers of Health on the, 316
in relation to the cholera, 143, 254, 321, 329, 402, 602, 640, 692
new plan for the supply of, 122
Watmough, Dr. on the treatment of choleraic diarrhœa, 161
Watson, Sir Thomas, presentation of a testimonial to, 515
Weber, Dr. on the treatment of cholera, 141
on chronic albuminuria in scarlatina, 353
Wells, Dr. William C. Essays on Dew, review, 571
Mr. Spencer, on uterine epistaxis in cholera and fever, 237
Diseases of the Ovaries, translation by Dr. Küchenmeister, review, 326
on the use of the catheter after operations for vesico-vaginal fistula, 514
cases of ovariotomy continued, 340, 582
case of ovariotomy performed twice on the same patient, 569

Wells, Mr. Soelberg, lectures on cataract, 439, 495, 551, 605, 661
Western Medical and Surgical Society, meeting of the, 511
Westminster Hospital Medical School, prizes and appointments of the, 299
    distribution of prizes at the, 159
    Dr. Fincham's introductory lecture at the, 365
  vide Hospital
Whalley, Mr. case of poisoning by magenta dust, 222
  on the treatment of cholera by opiate enemata, 268
Whitechapel Workhouse Cholera Hospital, 118
Whitehead, Dr. on the treatment of cholera, 189
Wight *v.* Field, Dr. Sibson's note on, 70
Wilkinson, Dr. W. death of, 240
Wilks, Dr. on Addison's disease, 313
Williamson, Prof. on scientific evidence in courts of law, 350
Willis, Dr. case of gastric ulcer treated by hypodermic injections, 6
Wills, Dr. Caleb Sherar, irregular reappointment of, in the army, 378
  connexion of, with Dr. Hunter, 614
Wilmot, Dr. on podophyllin in cholera, 214
Wine, French, as a present to Hospitals, Mr. Bonus on, 51
    cheap, Mr. Bonus on, 575
Winslow, Dr. Uncontrollable Drunkenness, review, 685
Winterbottom, Mr. case of foreign body in the ear, 497
Witnesses, scientific, position of, in courts of law, Prof. Williamson on the, 350
  Medical, new ruling of Justtce Lush concerning, 670
Women, relative fecundity and morality of Scotch and English, 226
Wood, Dr. Practice of Medicine, review, 685
  Mr. case of fatal peritonitis following the radical cure of hernia, 390
  instrument of, for removing fragments after lithotrity, 394
Workhouse, female casuals in the, 426
  infirmaries, Medical responsibility relating to, 52
    Mr. Hardy on reform in, 65
    Dr. E. Smith's report on, 67, 97
    observations on reform in, 119
    cubic space required for, Dr. E. Smith on the, 539
Workmen, London, physical characters of the, 613
Worms, Prof. on reaction in cholera, 61
Wounds, absorption by, M. Demarquay on the, 562
  exclusion of air from, M. Guérin's apparatus for the, 548
  gun-shot, of the knee-joint, Dr Chisholm on, 689
Wright, Dr. J. A. death of, 658
Wyllie, Dr. D. R. death of, 434

Y

Yellow fever, quarantine enforced for, at Southampton, 557, 591
Yellow fever on board the *Tasmanian*, 672
Young, Mr. Edward, death of, 159

Z

Zinc, anhydrous, Dr. Hicks on, 182

LIST OF ILLUSTRATIONS.

1. Mr. Worthington's New Instrument for Tracheotomy, 8
2. Dr. Sheraton's Steel Fillet, 75
3. Dr. Earle's Instruments for the Induction o Premature Labour, 32
4. Messrs. Baker and Woodroffe's High-pressure Filter, 103
5. Dr. Richardson's Instrument for Injecting the Veins, 113
6. Microscopical Appearances in Cholera, 166
7. Dr. Braidwood's Improved Splint, 352
8. Condition of Intestinal Villi in Cholera, 389
9. Mr. Wood's Instrument for Removal of Fragments in Lithotrity, 394
10. Lung Tissue in the Expectoration, 397
11. Professor Dyce's Forceps, 407
12. Effects of Belladonna on the Pupil, 449
13. Peculiar Alteration in the Nail, 474
14. Changes in the Axis of the Uterus induced by position, 525
15. Striped Muscle, 527
16. Operation for Cataract, 552
17. Professor von Graefe's Cystotome, 553
18. Operation for Cataract, 605
19. Tracings with the Sphygmograph, 696

END OF VOLUME II. 1866.

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